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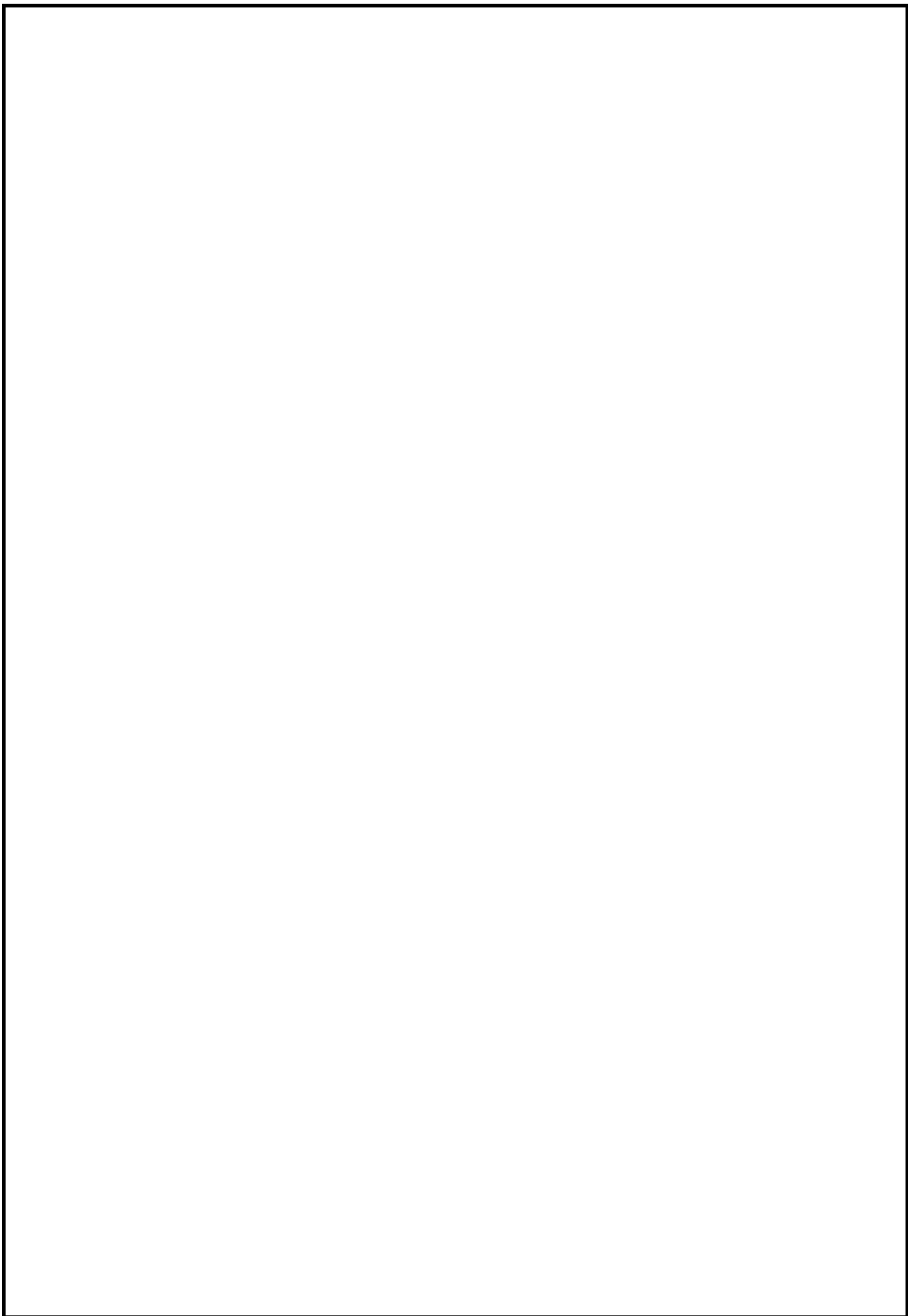
Ministry of Tourism

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Final Report on Study, Analysis and Development of Action Plan based on World Economic Forum Ranking System for Travel & Tourism Competitiveness for India

June, 2019



ACKNOWLEDGEMENT

Quality Council of India is grateful to Ministry of Tourism for giving us the opportunity to conduct “Study, Analysis and Development of Action Plan based on World Economic Forum Ranking System for Travel & Tourism Competitiveness Index for India (TTCI)”. Therefore, we devote our sincere gratitude to Shri Yogendra Tripathi, Secretary (Tourism), Smt. Meenakshi Sharma, Director General (Tourism), Shri P.C Cyriac, Additional Director General (Market Research), Smt. Mini Prasannakumar, Director (Market Research), Smt. Aqsa Illahi, Deputy Director (Market Research), Shri S.K Mohanta, Programmer (Market Research) and whole Market Research Division of Ministry of Tourism.

This study not only devise research based action plan on 90 plus indicators of different 14 sectors of economy impacting tourism directly or indirectly but it also consists of innovative action plans from young minds of Quality Council of India’s professionals that are aimed to strengthen India’s Travel and Tourism sector in near future.

We are pleased with the methodology adopted for the study by QCI in collaboration with the Ministry of Tourism. The exercise has resulted in a holistic research for numerous action plans to ameliorate tourism sector of India, which can enable identification of the best practices, gaps and subsequent improvement of our country’s ranking in forthcoming TTCI report.

It was heartening to observe the tremendous efforts of Ministry of Tourism in improving the tourism sector of India. The report highlights the success and also areas where further improvement could be planned and implemented.

Additionally, looking at the whole hearted support from various ministries during the sensitization workshops, we are thankful for the support we received and feel optimistic for a better tomorrow in terms of Travel and Tourism for the country.

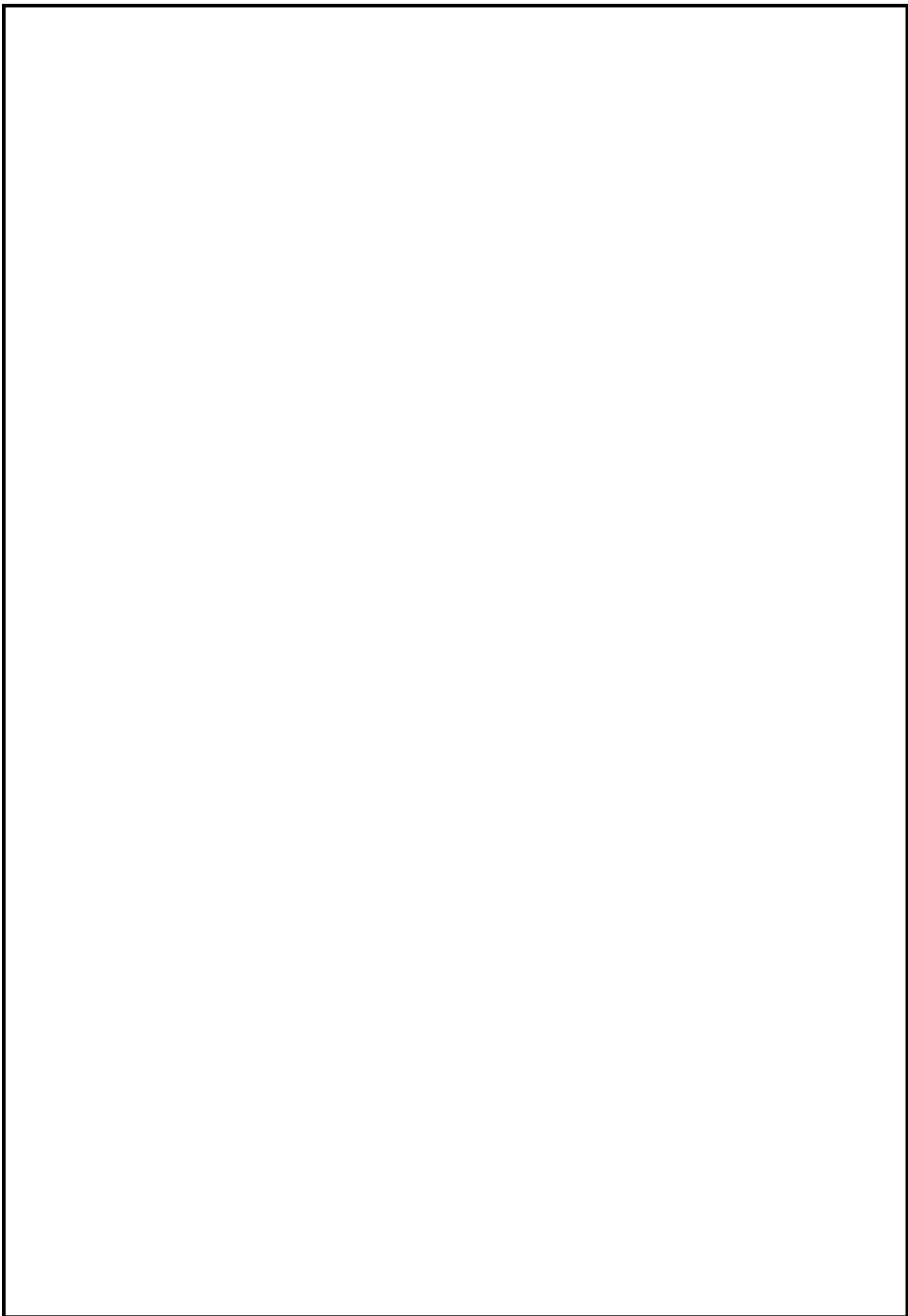


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Executive Summary

1. World Economic Forum (WEF) publishes the Travel and Tourism Competitiveness Index (TTCI) report biennially which measures the factors and policies that make a country a viable place to invest within the Travel and Tourism sector. The main aim of TTCI report is to create healthy competition in the travel and tourism sector of various economies by ranking them based on the performance, overall quality, future potential and long-term sustainability of each country's tourism sector.
2. In 2017, TTCI analyzed 136 countries and scored each according to four sub-indexes: Enabling Environment, T&T Policy and Enabling Conditions, Infrastructure, and Natural and Cultural Resources. These sub-indexes are, in turn, composed of 14 "pillars" which are further bifurcated into 90 "indicators" of Travel and Tourism Competitiveness.
3. Scores of these 14 pillars are calculated (i) On the basis of data derived from the Executive Opinion Survey (EOS), which accounts for 34% of the indicators. WEF's partner institute for India is LeadCap Ventures that conducts survey of leading business executives from private sector for the EOS and ranges in value from 1 to 7. (ii) On the basis of Quantitative data (Hard Data) that constitutes the balance 66% of the indicators. This data is collected from pre-published reports through various sources, which were further normalized on a 1-to-7 scale in order to align them with the EOS's results.
4. India is one of the nations to exhibit remarkable improvement, rising by 25 places since 2013 to reach the 40th position globally in 2017. India continues to charm international tourists with its vast cultural and natural resources (9th and 24th, respectively), and its price competitiveness advantage (10th). The country continues to enrich its cultural resources, protecting more cultural sites and intangible expressions through UNESCO World Heritage lists, and via a greater digital presence. International openness (55th, up 14 places as compared to 2015), through stronger visa policies achieved by implementing both visas on arrival and e-visas, has enabled India to rise through the ranks.
5. Health conditions are improving, though they remain inadequate (104th). Similarly, ICT readiness (112th), security concerns (114th) and human resources (87th) are improving, but remain weak. While further improvements are needed across these dimensions, India is taking small but important steps in the right direction. The Indian T&T sector presents significant opportunities that are yet to be tapped, especially in the provision of tourist service infrastructure (110th), and in terms of additional accommodation capacity, entertainment facilities and related services.

6. Ministry of Tourism has commissioned this study to Quality Council of India for analyzing the WEF's TCI 2017 report with a mandate to formulate detailed action plan for respective ministries with a focus on increasing India's performance in coming years.
7. The methodology adopted by QCI in decoding WEF's TCI report for suggesting action plans includes (i) Studying the framework of the report, (ii) Analyzing past 4 editions (2011, 2013, 2015 & 2017) of TCI report to understand evolution in methodology, (iii) Analyzing trend in change of weightages adopted by WEF over the years, (iv) Identifying countries that could serve as benchmark countries for India based on policy interventions and strategies adopted by such better ranking countries and finally (v) Comparing India's performance with (a) Asian peer(s) performing better than India, (b) Top performing country of the indicator, (c) Best global practices relevant to the particular indicator and (d) India's major competitors in the indicator.
8. For each indicator, the responsible ministry/department have been identified after extensive discussion with MoT officials. Action plan for **90 indicators** have been developed, varying from short term to long term plans which require major policy interventions. Experts/former officials with domain knowledge were consulted while formulating action plans. If the action plans were followed there is a likely possibility that improvements can be expected in India's rank in forthcoming TCI report.
9. Out of the 90 indicators, QCI recommends prioritization of 32 indicators as these action plans, if implemented, will provide higher possibility of improvement. Prioritization is based on the three criteria's given below:
 - i. Where WEF assign highest weightage (5 Pillars i.e. Pillar 10 to 14 accounts for 50% weightage)
 - ii. Areas where India's rank is falling
 - iii. Where India's rank is already low and showcasing relatively no improvement

The following table summarizes the action plan for those 32 prioritised indicators:

Pillar	Indicator	Ministry	Action Plan
Pillar 14: Cultural Resources and Business Travel	14.03: Number of large sports stadiums	Ministry of Youth Affairs and Sports	As per WEF's methodology, stadiums with a capacity larger than 20,000 seats are considered. India has 42 stadiums which have seating capacity exactly equal to 20,000 and these are not considered by WEF. Therefore, even increasing a single seat in these stadiums would increase India's rank in this indicator.
	14.02: Oral and Intangible cultural heritage	Ministry of Culture	UNESCO's Intangible Cultural Heritage (ICH) nomination committee give priority to elements which are registered under (i.) Urgent Safeguarding (ii.) Best Safeguarding Practise and (iii.) Multi-national elements. Hence, India should focus on registering more elements that lie under above-mentioned priorities as this would increase our chance to get more elements enlisted under UNESCO's ICH list.

	14.04: Number of international associations meetings	Ministry of Tourism	Destination marketing organizations (DMOs) and region level bureaus are important for Meeting, Incentives, Conferences and Exhibitions (MICE) tourism since they are responsible for promoting the country nationally and internationally as a business event destination. This helps in securing business events for the country/region. Hence, focus should be on assisting Indian Convention Promotion Bureau (ICPB) in gaining access to International Congress and Convention Association (ICCA) membership as DMO and establishing city/region level bureaus.
	14.05: Cultural and entertainment tourism digital demand		Subscribe to Digital Demand - D2 tool to gain access to cluster of touristic searches as it gives insights on the popularity of a tourist destination, what tourist are searching for at a particular destination, seasonality trend and target market. This tool would facilitate as a surveillance system in continuously measuring the impact of marketing campaign. The client list of this tool consists of national tourism organizations of Sweden, Portugal, Germany, Finland, Costa Rica, Norway, European Travel Commission etc.
Pillar 13: Natural Resources	13.04: Natural tourism digital demand	Ministry of Tourism	
Pillar 6: Prioritization of Travel and Tourism	6.06: Country Brand Strategy Rating		
Pillar 13: Natural Resources	13.02: Total known species	Ministry of Environment, Forest and Climate Change	WEF consider IUCN's database for this indicator. Upon comparing this with Zoological Survey of India (ZSI's) database, 181 species were found to be missing from India's list in IUCN's database. MoEF should contact IUCN to get clarification regarding the said disparity.
Pillar 11: Ground and Port Infrastructure	11.05: Railroad Density	Ministry of Railways	As per Indian Railway's methodology, urban rail transits (metro rail) are not considered while calculating railroad density. Hence, inclusion of growing metro rail tracks in this calculation would increase India's rank in this indicator.
	11.06: Quality of Port Infrastructure	Ministry of Shipping	Investment in infrastructure to reduce a vessel's Turn-Around-Time (TAT) should be made. This would improve the overall performance of the ports thereby improving ports' infrastructure quality.
	11.01: Quality of Roads	Ministry of Road Transport & Highways	To improve the construction quality of national highways, QCI in collaboration with MoRTH has developed a framework to rate construction companies, which would be utilized during future tendering process. Similarly, a rating framework could be developed for state highways that would further improve the quality of Indian roads.

	11.07: Ground Transport Efficiency		Vast majority of bus users make same type of commuting trips every day but India lacks in providing interstate passes. For example, a large chunk of people travels from Chandigarh to Delhi daily. An introduction of interstate bus pass will ease the travelling of people and also reducing the cost of daily commute.
Pillar 3: Health and Hygiene	3.01: Physician Density	Ministry of Health and Family Welfare	As of now, there are 7.63 lakhs AYUSH doctors who are not recognized as general practitioners by MCI/NMC. Hence, by recognizing these AYUSH doctors as medical practitioners, India can increase its overall value in this indicator from 0.7 to 1.27.
	3.04: Hospital beds		At present, India is only providing the database of government hospital beds for calculation of this indicator's value. Private hospital beds' quantity, which constitutes a large portion of the total strength, goes unaccounted. Hence, a centralized database should be developed for both government and private hospitals which can be done by following Australia's model where it is mandatory to register a private hospital under a central database system.
	3.03: Access to improved drinking water	Ministry of Drinking Water and Sanitation	Emulating Bihar State Government's scheme of "Har Ghar Nal Ka Jal", in other states of India which can significantly increase India's value while ensuring safe and clean drinking water to all residents.
Pillar 6: Prioritization of Travel and Tourism	6.01: Government prioritization of travel and tourism industry	Ministry of Tourism	Post analyzing the official Incredible India's website and mobile application, it can be concluded that both of them require immediate rework on their marketing strategy as they are unable to attract traffic. Both of them lack in providing a multi lingual feature and the website is in urgent need of search engine optimization.
	6.02: T&T government expenditure		A third party National Tourism Infrastructure Gap Assessment can be conducted to identify major scope of improvement at various tourist destinations and cities. This can help in prioritizing investment on tourism infrastructure.
Pillar 10: Air Transport Infrastructure	10.01: Quality of air transport infrastructure	Ministry of Civil Aviation	Formation of a centrally located Maintenance, Repair and Overhauling (MRO) hub within India with a balanced taxation regime that could help contain the cost of maintenance of aircrafts which otherwise are being serviced at foreign countries like Singapore.
	10.02: Available seat kilometers, domestic		
	10.03: Available seat kilometers, international		

	10.04: Aircraft departures		Incorporation of Aviation Turbine Fuel (ATF) that contributes a third of a carrier's costs within the ambit of the goods and services tax (GST) where ATF can be classified in the highest GST slab of 28 percent which is 12 percent less than the current 40 percent (including both central and state levies) tax on ATF. Thus, a policy intervention by GOI can create a brighter path for aviation industry.
	10.05: Airport density		
	10.06: Number of operating airlines		
Pillar 4: Human Resource and Labour Market	4.04: Treatment of Customers	Ministry of Consumer Affairs, Food and Publications Distribution	Reduction of the pendency rate of consumer dispute cases by establishing new circuit benches as only 13 circuit benches are currently operating in the country. Additionally, feedback from consumers who were victims of fraud or received improper service could be taken to analyze current loopholes in customer service provision in our country.
	4.05: Hiring and Firing Practices	Ministry of Labour & Employment	As per Glassdoor's economic research study of 25 countries globally, India has the shortest reported interview time of 16.1 days on an average, which has been achieved due to flexibility in hiring and firing practices and relaxed labour market regulations. There is an exigency to sensitize responders of the Executive Opinion Survey conducted by World Economic Forum by advertising the Ministry's achievement.
	4.06: Ease of Finding Skilled Employees	Ministry of Skill Development and Entrepreneurship	The entire skill training program can be aligned with demands of the industries by partnering with companies to provide training under Skill India. For this purpose, companies should be considered as training stakeholders under Skill India.
Pillar 7: International Openness	7.01: Visa requirements	Ministry of Home Affairs	Extension of e-visa facility to countries/territories that are providing exemption from visa/visa on arrival/e-visa facility to Indian passport holders. Countries such as Maldives, Northern Cyprus, Reunion, Svalbard and Jan Mayen, British Virgin Island, Ethiopia, Togo, Niue, Guinea-Bissau are providing visa on arrival to Indian passport holders. However, passport holders of these countries are still required to follow the traditional method of acquiring visa.
Pillar 12: Tourist Service Infrastructure	12.01: Hotel rooms	Ministry of Tourism	According to WEF's methodology, this indicator's score depends upon number of hotel rooms per 100 population. Currently there is no system in place to verify the total number of hotels in India. However, every hotel has to get itself registered at the local police station. Hence, a central database depository can be maintained with the help of State Police Departments through which actual count of hotel rooms can be identified.

Pillar 5: ICT Readiness	5.04: Broadband internet subscribers	Ministry of Communication	According to WEF's methodology, this indicator's score depends upon number of broadband subscribers per 100 population. As a consequence, Wi-Fi hotspots at tourist sites should be installed by adopting a phase wise strategy with an aim to cover all Tier-I towns in Phase 1, all Tier-II towns in Phase 2 and so on. This would significantly increase the total count of Broadband internet subscribers in India.
	5.07: Mobile network coverage	Ministry of Communication	Mobile network coverage is defined as percentage of inhabitants who are within range of a mobile cellular signal, irrespective of whether or not they are subscribers as stated by WEF. However, currently total penetration of towers in rural areas is only 58%. Hence, Boost Installation of telecom towers should be executed on government premises in rural areas. Additionally, incentive can be provided to Telecom Service Providers (TSPs) to encourage them to increase telecom towers in rural areas.
Pillar 9: Environmental Sustainability	9.04: Particulate matter (2.5) concentration	Ministry of Environment, Forest and Climate Change	Drafting and implementation of a scheme "Clean Air Mission" on similar lines as "Swachh Bharat Abhiyan" on the national level is required to combat air pollution. This Clean Air Mission [CAMINDIA] scheme will aim to implement government policies formed specifically for air pollution mitigation across several ministries dealing with transport, power, construction, agriculture, rural development, and environment, as well as across city and state jurisdictions.
	9.03: Sustainability of travel and tourism industry development	Ministry of Tourism	Promotion of sustainable rural tourism in India by taking advantage of Globally Important Agricultural Heritage sites (GIAHs) recognized by Food and Agriculture Organization (FAO) (For example: Darjeeling System, Sikkim Himalayan Agriculture, Saffron Heritage in J&K, Kottanad below sea farming in Kerala etc.) This would achieve two objectives at once: giving tourists an experience and memories to last for a lifetime and providing villagers with opportunities to improve their livelihoods.
	9.09: Wastewater Treatment	Ministry of Water Resources, River Development and Ganga Rejuvenation	There are 746 Sewage Treatment Plants (STPs) in India out of which 224 STPs are either non-operational or are under maintenance. India should resurrect those 224 STPs on urgent basis so more wastewater could be treated.

10. Apart from suggested action plan in report, the study has also made recommendations that ministry can take up with WEF to modify some of the indicators as mentioned below:

Pillar	Indicator	Definition	Recommendation
Pillar 12: Tourist Service Infrastructure	12.04: Automated teller machines per adult population	This indicator measures the number of automated teller machines per 100,000 adult population	Currently, majority of the countries are moving towards digital economy, hence the need of installing ATMs is reducing rapidly in order to encourage digital transactions. Therefore, instead of calculating the number of ATMs installed, this indicator should focus on calculating number of adults using digital cash as the mode of making payments to give a more global and recent picture.
	12.03: Presence of major car rental companies	This indicator measures the presence of seven below mentioned major car rental companies in any country. <ol style="list-style-type: none"> 1. Avis 2. Budget 3. Europcar 4. Hertz 5. National Car Rental 6. Sixt 7. Thrifty 	The car rental companies that are considered in this indicator are at a nascent stage in Asian countries. These companies are either based in Europe or North America and hence have major markets in these continents. Such disparity in the operations of these companies creates a bias against Asian countries. Moreover, India and other Asian countries have domestic car rental services catering to the need of people. Hence, in order to give an even-handed opportunity to all countries, domestic car rental companies should also be considered while scoring this indicator.
Pillar 1: Business environment	1.06: Cost to deal with construction permits	This indicator measures the cost associated with the procedures necessary for a business to build a warehouse (with respect to its value).	The value of a country for this indicator is calculated with the denominator being the value of warehouse multiplied with 50 times the per capita income of the country. Hence, despite of having equal or even lower cost of construction permits in low per capita income countries, lower rank/score is achieved in this indicator by those countries. The observed trend in this indicator's dataset is that countries in the first stage of development tend to be on the lower side of the score spectrum despite having considerably low cost of construction. Thus, having per capita income as a factor in the denominator obscures the true value of cost of construction permits. Hence, we recommend that either the true cost of the permits should be analysed or the per-capita income should be normalised into the slabs.

11. Conclusion

- i. The study has helped to decode WEF's Travel & Tourism Competitiveness Index report on the basis of which ranking of various countries are made.
- ii. Based on this, an action plan has been suggested. The action plan ranges from short term and easily doable to very major policy interventions needed at the highest levels.
- iii. In this process, action to be taken by various Ministry/Departments have been identified. Ministry/Departments will get sensitized to the parameters that require improvement and could lead to improved ranking of India in the various sectors.
- iv. The study has also revealed that Ministry of Tourism may need to take up the modification of some of the indicators with WEF which will benefit the ranking of India.

DATA SOURCE FOR HARD INDICATORS (2017)

In. No.	Parameters	WEF's Data Source	Intermediate Data Source	Data Source for India
1.05	Time required to deal with construction permits days	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
1.06	Cost to deal with construction permits % construction cost	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
1.08	Time to start a business days	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
1.09	Cost to start a business % GNI per capita	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
1.12	Total tax rate % profits	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
1.12a	Labour and contributions tax rate (% profit)*	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
1.12b	Profit tax rate (% profit)*	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
1.12c	Other taxes rate (%)	World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All	N/A	A questionnaire based survey is conducted by the Doing Business team with expert contributors (lawyers, accountants etc.) in 190 countries who deal with business regulations.
2.04	Index of terrorism incidence	National Consortium for the Study of Terrorism and Responses to Terrorism (START), Global Terrorism Database as on 17 January 2017	N/A	N/A
2.05	Homicide rate /100000 pop.	United Nations Office on Drugs and Crime (UNODC) 2014 or recent	United Nation - Crime Trend Survey (UN-CTS)	National Crime Records Bureau

3.01	Physician density /1	The World Health Organization, Global Health Observatory Data Repository 2012 or recent	N/A	Medical Council Of India
3.02	Access to improved sanitation % pop.	The World Health Organization, Global Health Observatory Data Repository 2015 or recent	Joint Monitoring Program (JMP)	-
3.03	Access to improved drinking water % pop.	The World Health Organization, Global Health Observatory Data Repository 2015 or recent	Joint Monitoring Program (JMP)	-
3.04	Hospital beds /10	The World Bank, World Development Indicators 2014 edition	N/A	National Health Profile
3.05	HIV prevalence % adult pop.	The World Bank, World Development Indicators	UNAIDS	-
3.06	Malaria incidence cases/100	The World Health Organization	World Malaria Report 2012 and 2015 edition	-
4.01	Primary education enrollment rate net %	UNESCO Institute for Statistics, Organization for Economic Co-operation and Development (OECD), UNICEF	N/A	Indian Standard Classification of Education - Ministry Of Human Resource & Development
4.02	Secondary education enrollment rate gross %	UNESCO Institute for Statistics	N/A	Indian Standard Classification of Education - Ministry Of Human Resource & Development
4.09	Female participation in the labor force ratio to men	International Labour Organization, Key indicators of labour markets	-	-
5.03	Internet users % pop.	International Telecommunication Union, World Telecommunication Indicators 2016	N/A	Telecom Regulatory Authority of India (TRAI)

5.04	Fixed-broadband Internet subscriptions /100 pop.	International Telecommunication Union, World Telecommunication Indicators 2016	N/A	Telecom Regularity Authority of India (TRAI)
5.05	Mobile-cellular telephone subscriptions /100 pop.	International Telecommunication Union, World Telecommunication Indicators 2016	N/A	Telecom Regularity Authority of India (TRAI)
5.06	Mobile-broadband subscriptions /100 pop.	International Telecommunication Union, World Telecommunication Indicators 2016	N/A	Telecom Regularity Authority of India (TRAI)
5.07	Mobile network coverage % pop.	International Telecommunication Union, World Telecommunication Indicators 2016	N/A	Telecom Regularity Authority of India (TRAI)
6.02	T&T government expenditure % government budget	World Travel & Tourism Council, Tourism Satellite Account Research 2016	-	-
6.04	Comprehensiveness of annual T&T data 0–120 (best)	World Tourism Organization (UNWTO) 2012 - 2016	N/A	Ministry of Tourism
6.05	Timeliness of providing monthly/quarterly T&T data 0–21 (best)	World Tourism Organization (UNWTO) 2015 - 2016	N/A	Ministry of Tourism
6.06	Country brand strategy rating 1–10 (best)	Bloom Consulting Country Brand Ranking	Digital Demand Tool	-
7.01	Visa requirements 0–100 (best)	World Tourism Organization (UNWTO)	Visa Openness Report 2015	Ministry of Tourism
7.02	Openness of bilateral Air Service Agreements 0–38 (best)	World Trade Organization, based on ICAO and IATA data 2011	-	-
7.03	Number of regional trade agreements in force number	World Trade Organization, Regional Trade Agreements Information System (RTA-IS) 2016	-	-

8.01	Ticket taxes and airport charges 0–100 (best)	International Air Transport Association	SRS Analyzer	N/A
8.02	Hotel price index US\$	Deloitte-STR Global and Smith Travel Research Inc. 2015	They collect data from chain headquarters, management companies, owners and directly from independent hotels	N/A
8.03	Purchasing power parity PPP \$	The World Bank, World Development Indicators 2016	PPP figures are extrapolated from the 2011 International Comparison Program (ICP) benchmark	N/A
8.04	Fuel price levels US\$ cents/litre	The World Bank, World Development Indicators 2016	Calculated using data compiled by their own resources	N/A
9.04	Particulate matter (2.5) concentration µg/m3	Yale Center for Environmental Law & Policy (YCELP) and the centre for International Earth Science Information Network (CIESIN) at Columbia University, Environmental Performance Index 2014	Data derived from Satellite Imagery and Tropospheric Emissions Monitoring Internet Service (TEMIS)	N/A
9.05	Environmental treaty ratification 0–27 (best)	International Union for Conservation of Nature (IUCN), Environmental Law Centre ELIS Treaty Database 2016	N/A	Ministry of Environment, Forest and Climate Change and 41 Non-governmental Organizations member of IUCN India contributes to database
9.06	Baseline water stress 5–0 (best)	World Resource Institute, Aqueduct 2015	N/A	Central Ground Water Board (CGWB), India Meteorological Department (IMD), Ministry of Water Resources (MWR), and Central Pollution Control Board (CPCB)
9.07	Threatened species % total species	International Union for Conservation of Nature (IUCN) 2016	N/A	Ministry of Environment, Forest and Climate Change and 41 Non-governmental Organizations member of IUCN India contributes to database
9.08	Forest cover change % change	Yale Center for Environmental Law & Policy (YCELP) and the centre for International Earth Science Information Network (CIESIN) at Columbia University, Environmental Performance Index	N/A	This data set, a collaboration between the GLAD (Global Land Analysis & Discovery) lab at the University of Maryland, Google, USGS, and NASA, measures areas of tree cover loss across all global land (except Antarctica and other Arctic islands) at approximately 30 × 30 meter resolution. The data was generated using multispectral satellite imagery from the Landsat 5 thematic mapper (TM), the Landsat 7 thematic

				mapper plus (ETM+), and the Landsat 8 Operational Land Imager (OLI) sensors.
9.09	Wastewater treatment %	Yale Center for Environmental Law & Policy (YCELP) and the centre for International Earth Science Information Network (CIESIN) at Columbia University, Environmental Performance Index	N/A	Ministry of Statistics and Programme Implementation to United Nations Statistics Division, EPI supplements these sources with data from publically available and country-specific reports to form a more comprehensive dataset
9.1	Costal shelf fishing pressure tonnes/km2	Yale Center for Environmental Law & Policy (YCELP) and the centre for International Earth Science Information Network (CIESIN) at Columbia University, Environmental Performance Index	N/A	Department of Fisheries, Ministry of Agriculture and Farmers Welfare provides data to FishstatJ software given on FAO fisheries and Agriculture Department
10.02	Available seat kilometres domestic millions	International Air Transport Association, SRS Analyser	SRS Analyser	N/A
10.03	Available seat kilometres international millions	International Air Transport Association, SRS Analyser	SRS Analyser	N/A
10.04	Aircraft departures /1000 pop.	The World Bank, World Development Indicators 2016	International Civil Aviation Organisation	N/A
10.05	Airport density airports/million pop.	International Air Transport Association, SRS Analyser 2016	SRS Analyser	N/A
10.06	Number of operating airlines Number	International Air Transport Association, SRS Analyser	SRS Analyser	N/A
11.02	Road density % total territorial area	IRF Geneva, World Road Statistics WRS	*	*
11.03	Paved road density % total territorial area	IRF Geneva, World Road Statistics WRS	*	*
11.05	Railroad density km of roads/land area	The World Bank, World Development Indicators	International Union of Railways	Ministry Of Railways

12.01	Hotel rooms number/100 pop.	World Tourism Organization (UNWTO) 2015 or recent	N/A	Ministry of Tourism
12.03	Presence of major car rental companies	WEF's calculation based on individual rental car websites 2016	N/A	N/A
12.04	Automated teller machines number/thousand adult pop.	The World Bank, World Development Indicators 2016	International Monetary Fund	Reserve bank Of India
13.01	Number of World Heritage natural sites number of sites	UNESCO World Heritage List	N/A	N/A
13.02	Total known species number of species	International Union for Conservation of Nature (IUCN)	N/A	Ministry of Environment, Forest and Climate Change and 41 Non-governmental Organizations member of IUCN India contributes to the database
13.03	Total protected areas % total territorial area	United Nations Statistics Division	N/A	Ministry of Statistics and Programme Implementation
13.04	Natural tourism digital demand 0–100 (best)	Bloom Consulting Country Brand Ranking	Digital Demand Tool	N/A
14.01	Number of World Heritage cultural sites number of sites	UNESCO World Heritage List	N/A	N/A
14.02	Oral and intangible cultural heritage number of expressions	UNESCO World Heritage List	N/A	N/A
14.03	Sports stadiums number of large stadiums	Worldstadiums.com	-	-
14.04	Number of international association meetings 3-year average	The International Congress and Convention Association (ICCA)	-	-
14.05	Cultural and entertainment tourism digital demand 0–100 (best)	Bloom Consulting Country Brand Ranking	Digital Demand Tool	N/A

N/A	Not Applicable
-	Exact data sources were not available
*	Data for these indicators was not calculated by WEF

STRUCTURE OF TTCI REPORT

The TTCI report, which analyzes the performance of various economies through the Travel & Tourism Competitiveness Index (TTCI), provides unique insight into the strengths and areas for development of each country to enhance its industry competitiveness. This report is published by World Economic Forum (WEF) every alternate year with different themes as follows:

S.No.	Year	Economies covered	Theme
1	2011	139	Beyond the Downturn
2	2013	140	Reducing Barriers to Economic Growth and Job Creation
3	2015	141	Growing through Shocks
4	2017	136	Paving the Way for a More Sustainable and Inclusive Future

TTCI report allows for cross-country comparison, for benchmarking countries' policy progress and for making investment decisions related to business and industry development. The Report not only provides a platform for multi-stakeholder dialogue at the country-level to formulate appropriate policies and actions. It also takes a global approach through the analysis of industry trends and offers the unique perspectives of global leaders from industry, international organizations and government on critical issues to address to ensure the long-term travel & tourism competitiveness.

The TTCI reports measures four broad factors of competitiveness. These factors are known as sub-indexes. It comprises four sub-indexes, 14 pillars, and 90 individual indicators, distributed among the different pillars. Each of the pillars has been calculated as an un-weighted average of the individual indicator. The sub-indexes are then calculated as un-weighted averages of the included pillars. The overall TTCI is then the un-weighted average of the four sub-indexes. The structure of the report is described below:

Sub-Indexes	Pillars	Indicators
Enabling Environment	Business Environment	Property rights
		Impact of rules on FDI
		Efficiency of legal framework in settling disputes
		Efficiency of legal framework in challenging regulations
		Time required to deal with construction permits
		Cost to deal with construction permits
		Extent of market dominance
		Time required to start a business
		Cost to start a business
		Extent and effect of taxation on incentives to work
		Extent and effect of taxation on incentives to invest
		Total tax rate

	Safety and Security	Business costs of crime and violence
		Reliability of police services
		Business costs of terrorism
		Index of terrorism incidence
	Health and Hygiene	Homicide rate
		Physician density
		Access to improved sanitation
		Access to improved drinking water
		Hospital beds
		HIV prevalence
	Human Resources and Labour Market	Malaria incidence
		Primary education enrolment rate
		Secondary education enrolment rate
		Extent of staff training
		Treatment of customers
		Hiring and firing practices
		Ease of finding skilled employees
		Ease of hiring foreign labour
		Pay and productivity
	Female labour force participation	
	ICT Readiness	ICT use for business-to-business transactions
		Internet use for business-to-consumer transactions
		Individuals using the internet
		Broadband internet subscribers
		Mobile telephone subscriptions
		Mobile broadband subscriptions
		Mobile network coverage
		Quality of electricity supply
T&T Policy and Enabling Conditions	Prioritization of Travel & Tourism	Government prioritization of the T&T industry
		T&T government expenditure
		Effectiveness of marketing to attract tourists
		Comprehensiveness of annual T&T data
		Timeliness of providing monthly/quarterly T&T data
		Country Brand Strategy rating
	International Openness	Visa requirements
		Openness of bilateral Air Service Agreements
		Number of regional trade agreements in force
		Ticket taxes and airport charges

	Price Competitiveness	Hotel price index
		Purchasing power parity
		Fuel price levels
	Environmental Sustainability	Stringency of environmental regulations
		Enforcement of environmental regulations
		Sustainability of travel and tourism industry development
		Particulate matter (2.5) concentration
		Number of environmental treaty ratifications
		Baseline water stress
		Threatened species
		Forest cover change
		Wastewater treatment
		Coastal shelf fishing pressure
Infrastructure	Air Transport Infrastructure	Quality of air transport infrastructure
		Available seat kilometres, domestic
		Available seat kilometres, international
		Aircraft departures
		Airport density
		Number of operating airlines
	Ground and Port Infrastructure	Quality of roads
		Road density
		Paved road density
		Quality of railroad infrastructure
		Railroad density
	Tourist Service Infrastructure	Quality of port infrastructure
		Hotel rooms
		Quality of tourism infrastructure
		Presence of major car rental companies
Natural and Cultural Resources	Natural Resources	Automated teller machines per adult population
		Number of World Heritage natural sites
		Total known species
		Total protected areas
		Natural tourism digital demand
	Cultural Resources and Business Travel	Attractiveness of natural assets
		Number of World Heritage cultural sites
		Number of oral and intangible cultural heritage expressions
		Number of sports stadiums

		Number of international association meetings
		Cultural and entertainment tourism digital demand

RANKS OF 136 ECONOMIES (TTCI 2017)

In year 2017 TTCI has evaluated 136 economies on basis of 14 pillar which comprise of 90 indicators and hence produced travel and tourism competitiveness index/score on scale of 1-7. These economies are then ranked based on the score.

The ranks along with score for each economy is given below:

Country/Economy	Rank	Score
Spain	1	5.43
France	2	5.32
Germany	3	5.28
Japan	4	5.26
United Kingdom	5	5.2
United States	6	5.12
Australia	7	5.1
Italy	8	4.99
Canada	9	4.97
Switzerland	10	4.94
Hong Kong SAR	11	4.86
Austria	12	4.86
Singapore	13	4.85
Portugal	14	4.74
China	15	4.72
New Zealand	16	4.68
Netherlands	17	4.64
Norway	18	4.64
Korea, Rep.	19	4.57
Sweden	20	4.55
Belgium	21	4.54
Mexico	22	4.54
Ireland	23	4.53
Greece	24	4.51
Iceland	25	4.5
Malaysia	26	4.5
Brazil	27	4.49
Luxembourg	28	4.49

Country/Economy	Rank	Score
Taiwan, China	30	4.47
Denmark	31	4.43
Croatia	32	4.42
Finland	33	4.4
Thailand	34	4.38
Panama	35	4.37
Malta	36	4.25
Estonia	37	4.23
Costa Rica	38	4.22
Czech Republic	39	4.22
India	40	4.18
Slovenia	41	4.18
Indonesia	42	4.16
Russian Federation	43	4.15
Turkey	44	4.14
Bulgaria	45	4.14
Poland	46	4.11
Qatar	47	4.08
Chile	48	4.06
Hungary	49	4.06
Argentina	50	4.05
Peru	51	4.04
Cyprus	52	4.02
South Africa	53	4.01
Latvia	54	3.97
Mauritius	55	3.92
Lithuania	56	3.91
Ecuador	57	3.91

United Arab Emirates	29	4.49
Slovak Republic	59	3.9
Bahrain	60	3.89
Israel	61	3.84
Colombia	62	3.83
Saudi Arabia	63	3.82
Sri Lanka	64	3.81
Morocco	65	3.81
Oman	66	3.78
Vietnam	67	3.78
Romania	68	3.78
Jamaica	69	3.71
Georgia	70	3.7
Azerbaijan	71	3.7
Montenegro	72	3.68
Trinidad and Tobago	73	3.67
Egypt	74	3.64
Jordan	75	3.63
Dominican Republic	76	3.62
Uruguay	77	3.61
Bhutan	78	3.61
Philippines	79	3.6
Kenya	80	3.59
Kazakhstan	81	3.59
Namibia	82	3.59
Cape Verde	83	3.55
Armenia	84	3.53
Botswana	85	3.52
Guatemala	86	3.51
Tunisia	87	3.5
Ukraine	88	3.5
Macedonia, FYR	89	3.49
Honduras	90	3.49
Tanzania	91	3.45
Nicaragua	92	3.44
Iran, Islamic Rep.	93	3.43
Lao PDR	94	3.4
Serbia	95	3.38

Barbados	58	3.91
Rwanda	97	3.36
Albania	98	3.35
Bolivia	99	3.34
Kuwait	100	3.33
Cambodia	101	3.32
Mongolia	102	3.31
Nepal	103	3.28
Venezuela	104	3.28
El Salvador	105	3.28
Uganda	106	3.2
Tajikistan	107	3.18
Zambia	108	3.18
Côte d'Ivoire	109	3.16
Paraguay	110	3.15
Senegal	111	3.14
Gambia, The	112	3.12
Bosnia and Herzegovina	113	3.12
Zimbabwe	114	3.11
Kyrgyz Republic	115	3.1
Ethiopia	116	3.1
Moldova	117	3.09
Algeria	118	3.07
Gabon	119	3.06
Ghana	120	3.04
Madagascar	121	2.99
Mozambique	122	2.91
Malawi	123	2.91
Pakistan	124	2.89
Bangladesh	125	2.89
Cameroon	126	2.88
Benin	127	2.84
Lesotho	128	2.84
Nigeria	129	2.82
Mali	130	2.78
Sierra Leone	131	2.69
Mauritania	132	2.64
Congo, Democratic Rep.	133	2.64

Lebanon	96	3.37
Chad	135	2.52

Burundi	134	2.57
Yemen	136	2.44

SNAPSHOT OF INDIA'S RANK OVER YEARS

2 new pillars, namely, "Business Environment" and "International Openness" were introduced in 2015, while pillars "Affinity of Travel & Tourism" and "Policy Rules & Regulations" were dissolved in the year 2015

S. No.	Pillar	2011 (Out of 139)	2013 (Out of 140)	2015 (Out of 141)	2017 (Out of 136)
1	Business Environment	NA	NA	107	89
2	Safety and security	78	74	129	114
3	Health and hygiene	112	109	106	104
4	Human resources	96	96	111	87
5	ICT Readiness	111	111	114	112
6	Prioritization of Travel & Tourism	91	98	96	104*
7	International Openness	NA	NA	69	55
8	Price competitiveness in the T&T industry	28	20	8	10*
9	Environmental sustainability	107	107	139	134
10	Air transport infrastructure	39	39	35	32
11	Ground & Port transport infrastructure	43	42	50	29
12	Tourist Service Infrastructure	89	95	109	110*
13	Natural resources	8	9	17	24*
14	Cultural Resources & Business Travel	24	24	10	9
15	Policy Rules & Regulations	128	125	NA	NA
16	Affinity of Travel & Tourism	116	111	NA	NA
	India's Global Rank	68	65	52	40

*There has been a decline in the rank of India (as compared from 2015) in following 4 pillars:

1. Prioritization of Travel & Tourism
2. Price competitiveness in the T&T industry
3. Tourist Service Infrastructure
4. Natural resources

INDIA'S SCORE CARD – INDICATOR WISE

Indicator/Pillar	Rank	Value
Business environment	89	4.3
Property rights	99	3.9
Business impact of rules on FDI	71	4.6
Efficiency of legal framework in settling disputes	32	4.6
Efficiency of legal framework in challenging regulations	29	4.4
Time required to deal with construction permits (days)	98	190
Cost to deal with construction permits (% construction cost)	134	25.9
Extent of market dominance	31	4.2
Time to start a business (day)	110	26
Cost to start a business (% GNI per capita)	89	13.8
Effect of taxation on incentives to work	36	4.4
Effect of taxation on incentives to invest	24	4.5
Total tax rate (% profits)	123	60.6
Safety and security	114	4.1
Business costs of crime and violence	80	4.4
Reliability of police services	53	4.7
Business costs of terrorism	120	4
Index of terrorism incidence	126	1
Homicide rate (/100,000 pop.)	69	3.2
Health and hygiene	104	4.4
Physician density (/1,000 pop)	94	0.7
Access to improved sanitation (% pop.)	119	39.6
Access to improved drinking water (% pop.)	80	94.1
Hospital beds (/10,000 pop.)	116	7
HIV prevalence (% adult pop.)	60	0.3
Malaria incidence (cases/100,000 pop.)	109	1312.4
Human resources and labour market	87	4.4
Primary education enrolment rate (net %)	100	90
Secondary education enrolment rate (gross %)	99	74.3
Extent of staff training	30	4.6
Degree of customer orientation	70	4.6
Hiring and firing practices	15	4.8
Ease of finding skilled employees	49	4.5
Ease of hiring foreign labour	57	4.2
Pay and productivity	33	4.5
Female participation in the labour force (ratio to men)	128	0.35

ICT readiness	112	3.2
ICT use for biz-to-biz transactions	84	4.5
Internet use for biz-to-consumer transactions	64	4.6
Internet users (% pop.)	101	26
Fixed-broadband Internet subscriptions (/100 pop.)	105	1.3
Mobile-cellular telephone subscriptions (/100 pop.)	121	78.1
Mobile-broadband subscriptions (/100 pop.)	126	9.4
Mobile network coverage (% pop.)	114	93.5
Quality of electricity supply	87	4.3
Prioritization of Travel & Tourism	104	3.9
Government prioritization of travel and tourism industry	102	4.1
T&T government expenditure (% government budget)	125	1
Effectiveness of marketing and branding to attract tourists	94	3.8
Comprehensiveness of annual T&T data	114	39
Timeliness of providing monthly/quarterly T&T data	3	22
Country brand strategy rating	81	72.6
International Openness	55	3.7
Visa requirements	49	37
Openness of bilateral Air Service Agreements	28	14.6
Number of regional trade agreements in force	47	20
Price competitiveness	10	5.8
Ticket taxes and airport charges	25	88
Hotel price index (US\$)	16	84.5
Purchasing power parity (PPP \$)	1	0.3
Fuel price levels (US\$ cents/litre)	35	91
Environmental sustainability	134	3.1
Stringency of environmental regulations	51	4.4
Enforcement of environmental regulations	43	4.4
Sustainability of travel and tourism industry development	78	4.2
Particulate matter (2.5) concentration ($\mu\text{g}/\text{m}^3$)	135	32.9
Environmental treaty ratification	31	24
Baseline water stress	106	3.7
Threatened species (% total species)	126	13.5
Forest cover change (% change)	34	0
Wastewater treatment (%)	93	2.2
Costal shelf fishing pressure (tonnes/km ²)	86	0.6
Air transport infrastructure	32	3.9
Quality of air transport infrastructure	63	4.5

Available seat kilometres, domestic (millions)	7	1763.4
Available seat kilometres, international (millions)	17	2013.8
Aircraft departures (/1,000 pop.)	108	0.6
Airport density (airports/million pop.)	133	0.2
Number of operating airlines	18	89
Ground and port infrastructure	29	4.5
Quality of roads	50	4.4
Road density (% total territorial area)	22	-
Paved road density (% total territorial area)	28	-
Quality of railroad infrastructure	23	4.5
Railroad density (km of roads/land area)	40	2
Quality of port infrastructure	48	4.5
Ground transport efficiency	28	4.7
Tourist service infrastructure	110	2.7
Hotel rooms (number/100 pop.)	133	0
Quality of tourism infrastructure	76	4.5
Presence of major car rental companies	102	3
Automated teller machines (number/thousand adult pop.)	100	18.1
Natural resources	24	4.4
Number of World Heritage natural sites (number of sites)	6	8
Total known species (number of species)	10	1889
Total protected areas (% total territorial area)	115	5.3
Natural tourism digital demand	45	23
Attractiveness of natural assets	113	4
Cultural resources and business travel	9	5.3
Number of World Heritage cultural sites (number of sites)	6	28
Oral and intangible cultural heritage (number of expressions)	8	13
Sports stadiums (number of large stadiums)	5	87
Number of international association meetings	30	140.7
Cultural and entertainment tourism digital demand	13	51

HISTORIC TREND OF TTCI REPORT

In the year 2011 and 2013, there were 3 sub-indexes which were converted into 4 sub-indexes in the year 2015 and 2017. Equal weightages are given to the sub-indexes. Since there were 3 sub-indexes in 2011 and 2013, each sub-index had a weightage of 33.33%. The number of sub-indexes increased in 2015 and 2017 to 4 sub-indexes. Therefore, each sub-index now has a weightage of 25%. Each of the pillars has been calculated as an un-weighted average of the individual indicator. The sub-indexes

are then calculated as un-weighted averages of the included pillars. The overall TTCI is then the un-weighted average of the four sub-indexes.

SUB-INDEXES

Change in Sub-Indexes

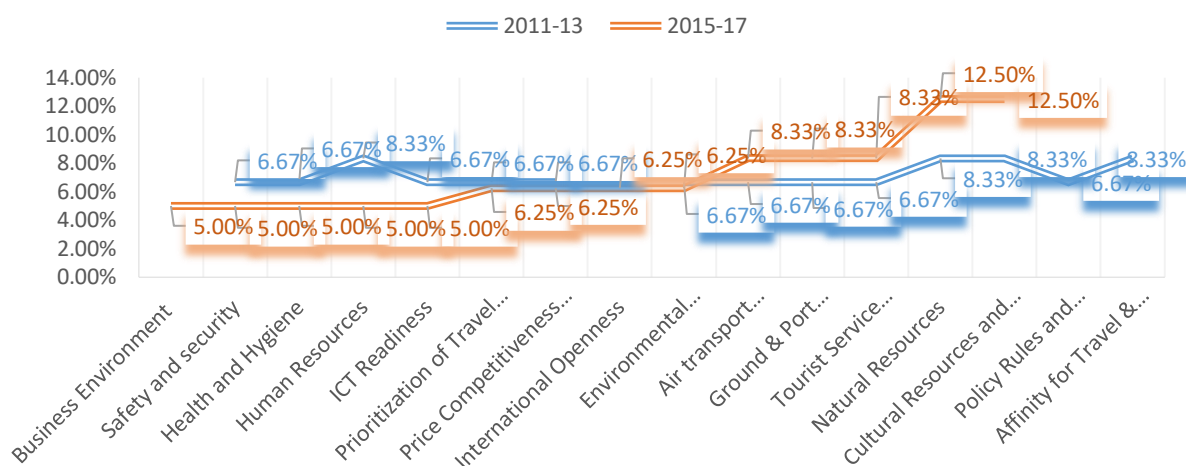
2011 – 2013		2015 - 2017	
Sub-Indexes	Weightage	Sub-Indexes	Weightage
T&T regulatory framework	33.33%	Enabling Environment	25%
T&T business environment and infrastructure	33.33%	T&T Policy and Enabling Conditions	25%
T&T human, cultural, and natural resources	33.33%	Infrastructure	25%
		Natural and Cultural Resources	25%

PILLAR

Shift of weightages in Pillars

Pillar	2011-13	2015-17	Change in percentage of weightage shift
Business Environment		5.00%	-
Safety and security	6.67%	5.00%	-25%
Health and Hygiene	6.67%	5.00%	-25%
Human Resources	8.33%	5.00%	-40%
ICT Readiness	6.67%	5.00%	-25%
Prioritization of Travel & Tourism	6.67%	6.25%	-6%
Price Competitiveness in the T&T Industry	6.67%	6.25%	-6%
International Openness		6.25%	-
Environmental Sustainability	6.67%	6.25%	-6%
Air transport infrastructure	6.67%	8.33%	25%
Ground & Port transport Infrastructure	6.67%	8.33%	25%
Tourist Service Infrastructure	6.67%	8.33%	25%
Natural Resources	8.33%	12.50%	50%
Cultural Resources and Business Travel	8.33%	12.50%	50%
Policy Rules and Regulations	6.67%		-
Affinity for Travel & Tourism	8.33%		-

SHIFT OF WEIGHTAGE IN PILLAR



The 14 pillars are divided among 4 sub-indexes (as explained above). Each pillar is given equal weightage in the sub-index they are included in. For example, first sub-index consists of 5 pillars. Therefore, 25% of the first sub-index is divided equally among the 5 pillars, each having a weightage of 5%. The shift in weightage of each pillar is shown in graph above. Percentage change in the weightage shift is given in the table for each pillar.

INDICATORS

There are two approaches adopted by WEF to collect data used in the report which are explained as follows:

- **Executive Opinion Survey:** These indicators are calculated from a survey which is conducted by WEF.
- **Hard Indicators:** These indicators have been sourced from pre-published reports of various sources.

The percentage of Executive Opinion Survey (EOS) indicators have seen a decline. The percentage of weightage of EOS indicators have also decreased (i.e.) hard indicators are given more weightage as explained below –

Number of Indicators over years

Years	2011	2013	2015	2017
Total number of indicators	75	79	90	90
Percentage of EOS indicators	37%	38%	34%	34%
Percentage of Hard indicators	63%	62%	66%	66%
Percentage of weightage of EOS indicators	40%	36%	27%	28%
Percentage of weightage of Hard indicators	60%	64%	73%	72%

METHODOLOGY

Quality Council of India was engaged by the Ministry of Tourism (MoT) to study the Travel and Tourism Competitiveness Index (TTCI) report of World Economic Forum Report 2017 on the following aspects:

- To study the pillars in detail and identify the relevant indicators of TTCI report
- To study and identify weightages assigned to each indicator
- To identify all data sources and data collection procedures
- In-depth study of the methodology followed by the World Economic Forum for calculation of TTCI report

Following steps were followed by QCI for the study of the report –

Step 1: Detailed analysis of report

TTCI reports for 4 years, 2011,2013,2015 and 2017, were studied for analysis purpose. Change in sub-indexes, pillars and indicators from year 2011 till 2017 will be identified.

Step 2: Estimation of weightages

Weightages for 90 indicators and 14 pillars has been estimated by applying unweighted average formula.

Step 3: Ministry Identification

Ministry responsible for indicators is identified.

Step 4: Benchmarks Identification

Key benchmarks countries are identified against various key indicators.

Step 5: Calculation of each Indicator score

Normalization of each indicator's score was done and by using unweighted average formula the countries score was arrived at.

Step 6: Trend Analysis

Analysis of the trend through study of historic surveys of World Economic Forum with focus on evolution of methodology, change of indicators, change in weightages, change of sampling techniques, calculations to arrive at scores etc. was done to bring out action plans for each indicator.

Step 7: Expert Consultation

Below is the list of experts that were consulted for various aspects of this report –

List of Experts		
Sr. No.	Name	Designation
1	Mrs. Dipali Khanna	<ul style="list-style-type: none">Former-Additional Secretary, Ministry of TourismFormer -Additional Secretary, Ministry of Information and BroadcastingFormer -Additional Secretary, Ministry of Law and JusticeFormer -Joint Secretary, Ministry of DefenceAdditional Member(Finance), Railways
2	Mr. Vivek Anand Chourey	<ul style="list-style-type: none">General Manager (Operation), Airport Authority of India
3	Mr. Danish Hashmi	<ul style="list-style-type: none">Director, Economics Head, Ease of Doing Business, Confederation of Indian Industry (CII) – Co-ordinating with WEF for Executive Opinion Survey
4	Dr. Harish Nadkarni	<ul style="list-style-type: none">Chief Executive Officer, National Accreditation Board for Hospitals and Healthcare Providers (NABH)
5	Dr. Aishvarya Raj	<ul style="list-style-type: none">Senior Director, Zero Effect Zero Defect
6	Mrs. Madhu Ahluwalia	<ul style="list-style-type: none">Senior Advisor, National Accreditation Board for Education and Training (NABET)
7	Mr. D. K. Singh	<ul style="list-style-type: none">Founder, Heritage Institute of Hotel & Tourism

Step 7: Detailed and Focused Action Plan

Detailed and Focused Action Plans with the objective of improving India's rank in the forthcoming TTCI report were studied indicator wise and improvement expected from the proposed interventions are highlighted.

Methodology for Hard Indicators

Hard indicators are calculated from pre-published reports of various sources. These are normalized to a 1-to-7 scale to align them with the Executive Opinion Survey's results.

The standard formula considered by WEF for converting each hard data indicator to the 1-to-7 scale is

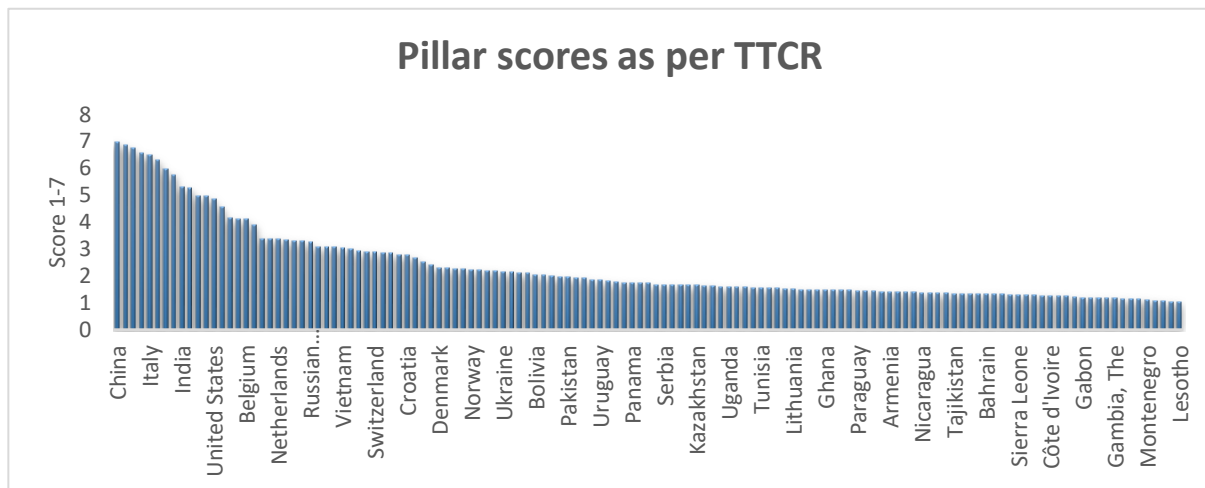
$$6 \times \left(\frac{\text{country score} - \text{sample minimum}}{\text{sample maximum} - \text{sample minimum}} \right) + 1$$

The sample minimum and sample maximum are the lowest and highest scores of the overall sample, respectively. For those hard data indicators for which a higher value indicates a worse outcome (e.g. fuel price levels), we rely on a normalization formula that, in addition to converting the series to a 1-to-7 scale, reverses it, so that 1 and 7 still correspond to the worst and best, respectively:

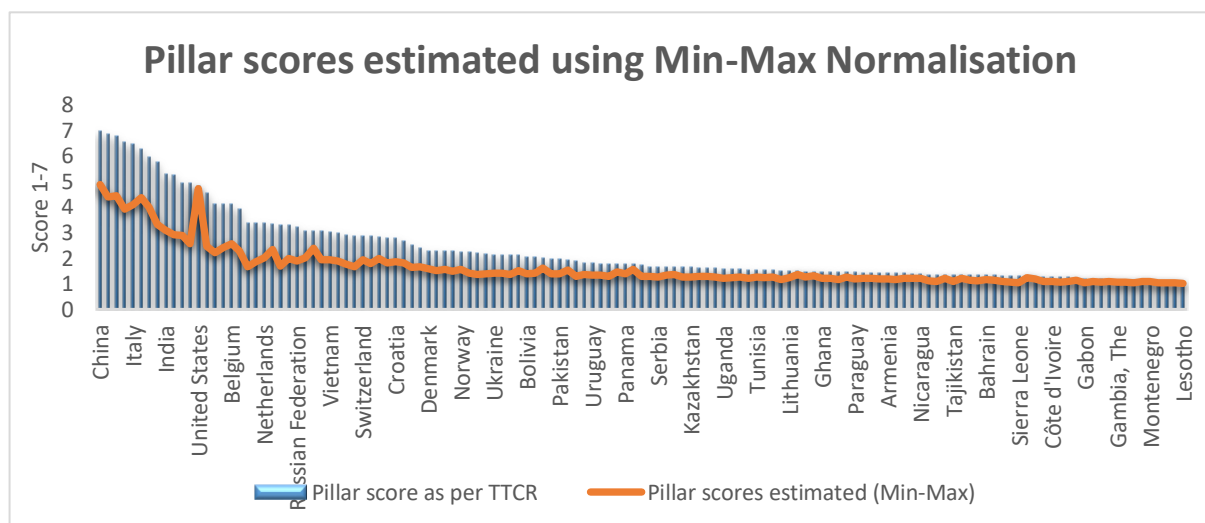
$$-6 \times \left(\frac{\text{country score} - \text{sample minimum}}{\text{sample maximum} - \text{sample minimum}} \right) + 7$$

In some instances, adjustments were made to account for extreme outliers in the data and process for the same is defined as follows :-

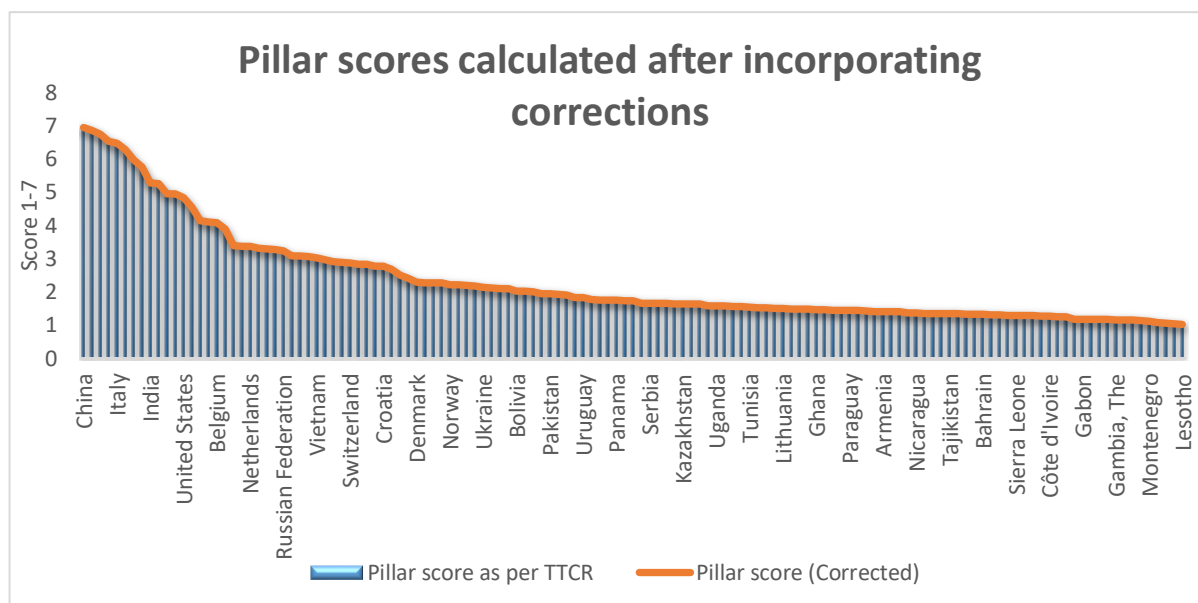
1. In order to find the impact of a change in the un-normalised score of an indicator on the score of its respective pillar, various computation models were run for all the indicators for each of the 14 pillars considered in the report.



2. The pillar scores of the countries were plotted in descending order. These scores are an aggregation of discrete values of each indicator after normalisation on a scale of 1-7.



3. Such discrete values were normalised using Minimum and Maximum values of the sample as per the formula given in the TTCR report: $\{6 * [(Score - Min)/(Max - Min)] + 1\}$. However, a significant deviation from stated scores can be observed which is attributed the existence of outliers in the data.



4. Analytics driven optimization scripts were then executed to arrive at the accurate formulae-specific parameters used hitherto, by the WEF in normalizing indicators' scores to a scale of 1-7.

Once a relation between the indicator scores and pillar scores was rationalized, a direct impact of change in the score of all given indicators on the country's score was computed, respectively & action plan was developed accordingly.

The following table shows the sample minimum and sample maximum values for all hard indicators along with India's value:

Sample Maximum and Sample Minimum of Hard Indicators

Indicator	Indicator Name	India's Value	Sample Minimum	Sample Maximum
1.05	Time required to deal with construction permits (days)	190	28	652
1.06	Cost to deal with construction permits (% construction cost)	25.9	0.1	42.4
1.08	Time to start a business (day)	26	0.5	230
1.09	Cost to start a business (% GNI per capita)	13.8	0	159.8
1.12	Total tax rate (% profits)	60.6	11.3	106
1.12a	Labour and contributions tax rate (% profits)	20	0	53.5

1.12b	Profit tax rate (% profits)	20.9	0	38.9
1.12c	Rate of other taxes (%) of profits	15.7	0	108.1
2.04	Index of terrorism incidence	1	1	7
2.05	Homicide rate (/100,000 pop.)	249.4	237.6	2325.3
3.01	Physician density (/1,000 pop)	0.702	0.019	7.739
3.02	Access to improved sanitation (% pop.)	39.6	12	100
3.03	Access to improved drinking water (% pop.)	94.1	50.8	100
3.04	Hospital beds (/10,000 pop.)	7	1	137
3.05	HIV prevalence (% adult pop.)	0.3	0.02	25.2
3.06	Malaria cases (/100,000 pop.)	1312.4	0.00	42724.9
4.01	Primary education enrolment (net %)	90.04	55.72	100
4.02	Secondary education enrolment (gross %)	74.28	22.4	164.81
4.09	Female participation in the labour force (ratio to men)	0.35	0.22	1.11
5.03	Internet users (% pop.)	26	2.5	98.2
5.04	Fixed-broadband Internet subscriptions (/100 pop.)	1.3	0.00	45.1
5.05	Mobile-cellular telephone subscriptions (/100 pop.)	78.1	37.9	231.8
5.06	Mobile-broadband subscriptions (/100 pop.)	9.4	1.4	144.0
5.07	Mobile network coverage (% pop.)	93.5	0	100
6.02	T&T government expenditure (% government budget)	1	0.3	22
6.04	Comprehensiveness of annual T&T data	39	8	116
6.05	Timeliness of providing monthly/quarterly T&T data	22	3	22.5
6.06	Country brand strategy rating	72.7	28.9	98.8
7.01	Visa requirements	37	1	89
7.02	Openness of bilateral Air Service Agreements	14.6	0.2	35.6
7.03	Number of regional trade agreements in force	20	1	53
8.01	Ticket taxes and airport charges	88.0	3.8	100
8.02	Hotel price index (US\$)	84.5	68.2	283.5
8.03	Purchasing power parity (PPP \$)	0.3	0.3	1.3
8.04	Fuel price levels (US\$ cents/litre)	91	0.8	211
9.04	Particulate matter (2.5) concentration (µg/m3)	32.9	0.6	47.2
9.05	Environmental treaty ratification	24	14	30

9.06	Baseline water stress	3.7	0	5
9.07	Threatened species (% total species)	13.5	1.6	37.2
9.08	Forest cover change (% change)	0.03	0.00	1.01
9.09	Wastewater treatment (%)	2.2	0	100
9.10	Costal shelf fishing pressure (tonnes/km2)	0.6	0.0	12.3
10.02	Available seat kilometres, domestic (millions)	1763.4	0.0	22812.2
10.03	Available seat kilometres, international (millions)	2013.8	0.3	12994.45
10.04	Aircraft departures (/1,000 pop.)	0.6	0.0	147.1
10.05	Airport density (airports/million pop.)	0.2	0.1	25.7
10.06	Number of operating airlines	89	1	220
11.05	Railroad density (km of roads/land area)	2.0	0.4	11.9
12.01	Hotel rooms (number/100 pop.)	0.01	0.00	4.27
12.03	Presence of major car rental companies	3	1.0	7.0
12.04	Automated teller machines (number/thousand adult pop.)	18.1	0.4	290.7
13.01	Number of World Heritage natural sites (number of sites)	7.5	0.0	14.0
13.02	Total known species (number of species)	1889	96	3287
13.03	Total protected areas (% total territorial area)	5.3	0.2	53.9
13.04	Natural tourism digital demand	22.5	0.2	97.3
14.01	Number of World Heritage cultural sites (number of sites)	27.5	1	47
14.02	Oral and intangible cultural heritage (number of expressions)	13	1	39
14.03	Sports stadiums (number of large stadiums)	87	1	367
14.04	Number of international association meetings	140.6	0.3	926
14.05	Cultural and entertainment tourism digital demand	50.69	0.4	91.95

Methodology for Survey Indicators

These indicators are calculated from a survey which is conducted by WEF. The Survey provides a yearly evaluation of critical aspects of competitiveness for which statistical data is missing because it is either impossible or extremely difficult to measure on a global scale. The aim of the Survey is to capture

reality as best as possible, and business leaders are arguably the best positioned to assess these aspects.

The administration of the Survey is supervised by the World Economic Forum and conducted at the national level by the Forum's network of Partner Institutes. Partner Institutes are typically universities or other research organizations, business associations, competitiveness councils, or survey companies. These organizations have the private sector network for reaching out to leading business executives and a firm commitment to improving the competitiveness of their respective economies. The Partner Institutes also play an active and essential role in disseminating the findings of The TTCI Report published by the World Economic Forum by holding press events and workshops to highlight the results at the national level to the business community, the public sector and other stakeholders. Confederation of Indian Industry (CII) was the Partner Institute for India till 2017. From 2018, LeadCap Knowledge Solutions Pvt Ltd (LeadCap Ventures) is the Partner Institute for India.

WEF uses stratified sampling procedure including randomization. Final sample should compose of minimum 80 responses per country (for BRICS countries minimum 300 responses per country). Respondents must hold the position of Chief Executive Officer or any of the top five management positions in the firm. The target sample of respondents should not include public officials from government agencies and/or ministries.

The partner institute should use the overall response rate of last year to calculate a target sample size in each stratum. For example, if once response rate last year was 25% (i.e. you received one survey for every four you sent out), divide the number of responses desired in each stratum (20) by 25%. To be conservative, increase the result by 40%. This can be seen as follows:

Number of responses desired = $20 / 0.25 = 80$

Target sample size in each stratum = $80 * 1.40 = 112$

Hence, one would target 112 firms in each stratum, 224 in total (meaning 112 small firms and 112 large firms).

The sample should be divided into two sections:

1. **Repeat respondents sample section** – Approach last year's respondents with the overall aim of reaching a 50% response rate for repeat respondents.
2. **Random respondents sample section** – Prepare a target list of potential new respondent firms.

The sample frame should reflect the sectorial composition of the economy. Specifically, surveys received should reflect the contribution to GDP in percent of agriculture, manufacturing industry, non-manufacturing industry and services.

The sample frame of firms by sector of activity should be separated into two strata as follows:

1. A large firm stratum for firms with 500 or more employees in your country.

2. A small firm stratum for firms with less than 500 employees but more than 20 employees in your country. The minimum 20 employee criteria can be ignored for representative offices or subsidiaries of major international firms.

Weightage of each section i.e. repeat respondents (previous year) and random respondents (present year) is calculated every year using the formula mentioned below:

For any given Survey question i , country c 's final score, $q_{ic}^{2016-17}$, is given by:

$$q_{ic}^{2016-17} = w_c^{2016} \times q_{ic}^{2016} + w_c^{2017} \times q_{ic}^{2017} \quad (1)$$

where

q_{ic}^t is country c 's score on question i in year t , with $t = 2016, 2017$, as computed following the approach described in the text; and

w_c^t is the weight applied to country c 's score in year t (see below).

The weights for each year are determined as follows:

$$w_c^{2016} = \frac{(1-\alpha) + \frac{N_c^{2016}}{N_c^{2016} + N_c^{2017}}}{2} \quad (2a) \quad \text{and} \quad w_c^{2017} = \frac{\alpha + \frac{N_c^{2017}}{N_c^{2016} + N_c^{2017}}}{2} \quad (2b)$$

where N_c^t is the sample size (i.e., the number of respondents) for country c in year t , with $t = 2016, 2017$. α is a discount factor. Its value is set at 0.6. That is, the 2016 score of country c is given 2/3 of the weight given to the 2017 score.

Plugging Equations (2a) and (2b) into (1) and rearranging yields:

$$q_{ic}^{2016-17} = \frac{1}{2} \times \underbrace{\left[(1-\alpha) \times q_{ic}^{2016} + \alpha \times q_{ic}^{2017} \right]}_{\text{discounted-past weighted average}} + \frac{1}{2} \times \underbrace{\left[\frac{N_c^{2016}}{N_c^{2016} + N_c^{2017}} \times q_{ic}^{2016} + \frac{N_c^{2017}}{N_c^{2016} + N_c^{2017}} \times q_{ic}^{2017} \right]}_{\text{sample-size weighted average}}. \quad (3)$$

In Equation (3), the first component of the weighting scheme is the discounted-past weighted average. The second component is the sample-size weighted average. The two components are given half-weight each. One additional characteristic of this approach is that it prevents a country sample that is much larger in one year from overwhelming the smaller sample from the other year.

Bucketing of Countries

A table which describes the performance of countries is mentioned in all indicators. Bucketing of countries, against which rank of India over the years is compared, are described below.

- 1. Top performer:** These countries are considered because they are among the top 5 countries in their respective indicators
- 2. Asian Peers:** These countries are benchmarked because they are performing remarkably well as compared to India despite having the same demographics
- 3. Best Practices:** These countries are benchmarked based on their exceptional performance because of adoption of some distinctive initiative practiced in the country
- 4. Major Competitor:** These countries are benchmarked because these countries are immediate competition to India

SUB-INDEX A

ENABLING ENVIRONMENT

The Enabling Environment sub-index, captures the general settings necessary for operating in a country. The pillars in this sub-index are directly linked to economic growth and important for business development, including but not exclusively for the T&T sector.

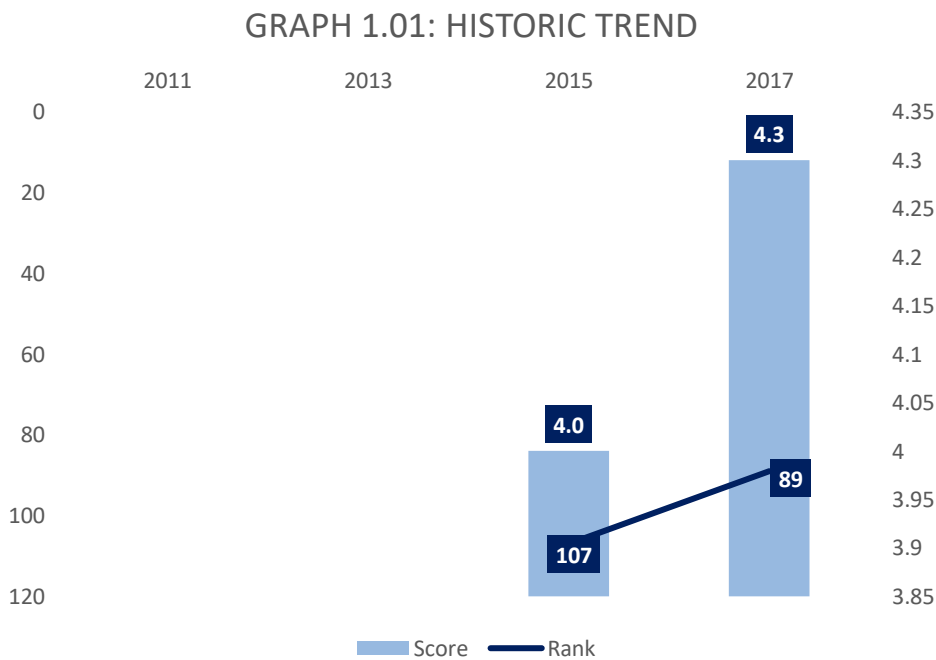
This Sub-index comprises 5 pillars:

- 1. Business Environment (12 indicators)**
- 2. Safety and Security (5 indicators)**
- 3. Health and Hygiene (6 indicators)**
- 4. Human Resources and Labour Market (9 indicators)**
- 5. ICT Readiness (8 indicators)**

Pillar 1: Business Environment

Definition: This pillar captures the extent to which a country has in place a conducive policy environment for companies to do business. **Pillar 1** has a total of **12 indicators** stated below -

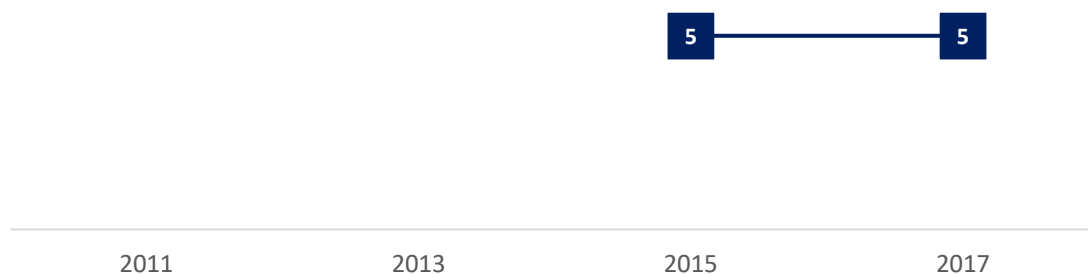
1. Property rights
2. Business impact of rules on FDI
3. Efficiency of legal framework in settling disputes
4. Efficiency of legal framework in challenging regulations
5. Time required to deal with construction permits
6. Cost to deal with construction permits
7. Extent of market dominance
8. Time to start a business
9. Cost to start a business
10. Effect of taxation on incentives to work
11. Effect of taxation on incentives to invest
12. Total tax rate



Graph 1.01 indicates the historic trend of India's rank and value in Pillar 1. This pillar was introduced in year 2015. India's rank has increased from 107th position in 2015 to 89th position in 2017.

Weightage Shift:

GRAPH 1.02: WEIGHTAGE SHIFT



Graph 1.02 indicates the overall contribution of Pillar 1 i.e. Business Environment in India's score. At present, 5% weightage is given to this pillar.

TABLE 1.01: INDICATOR WISE WEIGHTAGE

Indicator	2011-2013 (%)	2015-2017 (%)	Change in Weightage (%)
Property rights	0.74	1	35.13
Business impact of rules on FDI	0.74	1	35.13
Efficiency of legal framework in settling Disputes	N/A	0.12	N/A
Efficiency of legal framework in challenging regulations	N/A	0.12	N/A
Time required to deal with construction permits	N/A	0.12	N/A
Cost to deal with construction permits	N/A	0.12	N/A
Extent of market dominance	N/A	1	N/A
Time to start a business	0.74	0.12	-83.78
Cost to start a business	0.74	0.12	-83.78
Effect of taxation on incentives to work	N/A	0.12	N/A
Effect of taxation on incentives to invest	N/A	0.12	N/A
Total Tax Rate	N/A	1	N/A

NA = Not Applicable, the indicator was not introduced in that year

Table 1.01 shows the percentage of contribution that each indicator has on the overall score of India

Disclaimer:

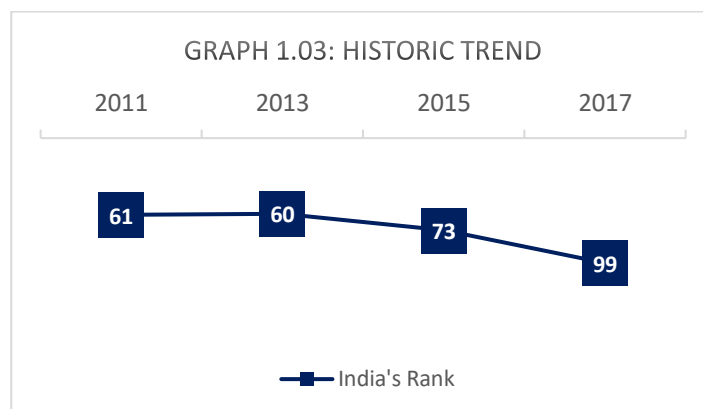
With regard to the Pillar 1 which deals with Business Environment, there are 12 indicators that are of specialised nature and include parameters such as total tax rate, property rights, business impact of rules on FDI etc. These are based on various government policy level interventions and lie solely under the purview of the Ministry of Finance & Ministry of Commerce. It has also been observed that most of these indicators, in fact, fall in the 'Ease of Doing Business' index. During the course of research, through expert sources, it was found that KPMG is conducting a detailed study on Ease of Doing Business in India for the Department of Industrial Policy and Promotion. If the Ministry of Tourism is able to obtain the Report of this study, the data could be used by QCI to give more definitive Action Points for the indicators under Pillar 1. Meanwhile, for the purpose of this Study, an attempt has been made to provide some recommendations based on the research undertaken by QCI.

Indicator 1.01: Property Rights

Definition: “How strong is the protection of property rights, including financial assets in your country?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1= extremely weak, 7= extremely strong)



Graph 1.03 indicates the historic trend of India's rank in indicator 1.01. In 2017, India's rank decreased by 26 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 1.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	3	6.23	1	6.49	Best Practice
Finland	1	6.38	2	6.47	Top Performer
Sweden	18	5.69	3	6.32	Top Performer
India	73	4.06	99	3.94	

Property rights – The property rights index measures the degree to which a country laws protect private property rights, and the degree to which its government enforces those laws. The Global Property Guide considers protection of property rights as a significant factor affecting the desirability of a residential real estate investment. Property rights is a key indicator of economic success and political stability.

Government Initiatives

- **Benami Transactions Act¹**

- Due to the investment of black money in the real estate market, the price of properties usually remains artificially high and thus slows down the growth of real estate sector. People with

¹ https://www.livemint.com/Money/qS3VHjAvKWG1KzIDxHG6i8N/How-new-benami-law-can-penalise-genuine-deals.html?utm_source=scroll&utm_medium=referral&utm_campaign=scroll

surplus black money keep it hidden from the government by buying property under fictitious names, thus on paper they are not owners but enjoy all the benefits.

- To curb this problem Parliament of India initiated **Benami Transactions (Prohibition) Amendment Act** that came into effect from November 1, 2016. A Benami Transaction is one where the property is held in one person's name, but the funds for acquisition have been provided by another person. Therefore, the property is not held in the name of the real owner, but in someone else's name.
 - The intention of the law is to deter persons from acquiring undisclosed properties in the name of their relatives or friends. This act is one of the key weapons for attack against black money and corruption as it will bring transparency and professionalism in the sector and help the government in its plan of affordable housing for poor. It will also boost lenders confidence who are currently fighting the bad debt.
- **RERA The Real Estate (Regulation and Development) Authority**
 - Land buyers have complained that real estate transactions were lopsided and heavily in favour of the developers. RERA and the government's model code, aims to create a more equitable and fair transaction between the seller and the buyer of properties, especially in the primary market².
 - The Real Estate (Regulation and Development) Act, 2016 (RERA), intends to protect the interests of home buyers and enhance transparency in the real estate sector. It seeks to address issues like delays, price, quality of construction, title and other changes as delays in projects is the biggest issue faced by buyers. The reasons include diversion of funds to other projects, changes in regulations by authorities like the environment ministry, National green tribunal etc. and other bodies like those involved in infrastructure development and governing transport. Errant builders often sell projects to investors without the approval of plans, unauthorized increase in Floor Area Ratio (FAR), bad quality of construction, projects stuck in litigation etc.
 - RERA will make real estate purchase simpler by bringing in better accountability and transparency. The Act makes it mandatory for each state and union territory to form its own regulator and frame rules that will govern the functioning of the regulator¹.

Proposed Action Plan

Ministry: Ministry of Housing and Urban affairs, Ministry of Law and Justice

Short Term Plan

- **Digital Lockers** - Under Digital India program, provision of digital lockers to Indian citizens is being implemented. In this all the legal document can be stored under a personal space of online cloud

² <https://indianexpress.com/article/what-is/what-is-rera-and-how-will-it-help-homebuyers-4635705/>

which will be under government's purview and will ensure the safety of official documents. Documents related to owning a property once stored under digital locker will automatically secure the authenticity of the document and will help in any further cases of fraud.

Medium Term Plan

- **Need for Complaint Redressal Mechanism**

- According to Deccan Chronicle, in India more than 22 million cases are pending in district courts, as per the government data. Of these, 7.5 million are civil cases. As per a study by Bengaluru-based NGO Daksh, matters related to land and property make up about two-thirds of all civil cases in the country.³ Thus, Government of India can establish a strong complaint redressal mechanism by following examples of countries as given below:
- The Singapore Land Authority recently introduced a web portal to file complaints about any issue related to their services.
- The Swedish Land and Cadastral Authority introduced a new mechanism for filing complaints regarding errors identified on maps of land plots.
- In 2014 Vanuatu appointed the first Land's Ombudsman, an official responsible for following up on all complaints, whose duty is to report to the Ministry of Land as well as the client within 30 days.⁴
- **Ministry of Housing and Urban Affairs can keep their stakeholders engaged by collecting and publishing statistics on land transactions. Transaction statistics can benefit regulators as well as the real estate sector, serving as a data analysis tool for policy makers to monitor the real estate market.**

Long Term Plan

- **Land Acquisition**

- The Government's acquisition of land for projects has been facing protests across the country. In Jalandhar⁵, nearly 170 acres of the farmers' land had been acquired for the Surya Enclave Scheme in 2003 and they had challenged the acquisition award in various courts since that time. While the farmers had been compensated at Rs.20 lakhs per acre in 2003, they are still awaiting the adjusted amount which is to be given with interest for 15 years. Another such example is of Kancheepuram farmers who are demanding compensation for the land they gave to the government for Kancheepuram bypass.⁶The farmers have still not received dues of over Rs.2.80 crores.

³ <https://www.deccanchronicle.com/nation/current-affairs/090816/millions-of-land-property-cases-stuck-in-indian-courts.html>

⁴ <http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2018-Full-Report.pdf>

⁵ <https://www.tribuneindia.com/news/jalandhar/pay-dues-or-appear-before-court-on-sept-12-sc-to-jit/641421.html>

⁶ <https://www.thehindu.com/news/cities/chennai/dues-not-paid-for-land-acquisition->

- The Swiss Federal Constitution has three important characteristic elements: The institutional guarantee, the guarantee of existence and the guarantee of property value. The institutional guarantee protects property rights in their function as fundamental rights. The function of the guarantee of existence assures ownership against national interference. **The guarantee of property value ensures that dispossession has to be fully compensated.**
- Swiss Federal Constitution article contains two clauses: The first clause provides the right to own property and the second clause defines further, that dispossession and property restrictions, which correspond to compulsory purchase, have to be fully compensated. The ownership guarantee protects moveable and immovable items of the property law.⁷
- **Ministry of Housing and Urban affairs in collaboration with Ministry of Law and Justice can adopt similar strategies as Switzerland to ensure timely and adequate compensation to the land owners.**

farmers/article4432768.ece

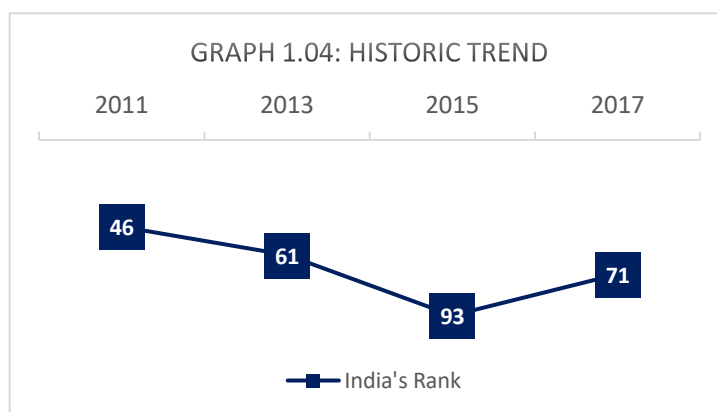
⁷<https://knoema.com/IPRI2018/international-property-rights-index?location=1001430-switzerland>

Indicator 1.02: Impact of rules on FDI

Definition: “In your country, to what extent do rules and regulations encourage or discourage foreign direct investment (FDI)?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1=strongly discourage FDI, 7=strongly encourage FDI).



Graph 1.04 indicates the historic trend of India’s rank in indicator 1.02. In 2017, India’s rank increased by 22 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 1.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Ireland	1	6.58	1	6.43	Best Practice
Hong Kong SAR	3	6.23	2	6.39	Top Performer
Singapore	2	6.34	3	6.10	Top Performer
Sweden	25	4.99	4	6.05	Best Practice
India	93	4.18	71	4.60	

- **Government Initiatives**

- In 2017, the Government of India pushed the states to focus on **strengthening single window clearance system** for fast-tracking FDI approval processes, in order to increase Japanese investments in India⁸.
- Government of India has eased the approval mechanism for foreign direct investment (FDI) proposals by mandating clearance of all proposals requiring approval within 10 weeks after the receipt of application⁹.

⁸ <http://www.fifp.gov.in/>

⁹ <https://www.ibef.org/economy/foreign-direct-investment.aspx>

- Government of India is in talks with stakeholders to further ease foreign direct investment (FDI) in defense under the automatic route to 51 per cent from the current 49 per cent, in order to give a boost to the Make in India initiative and to generate employment².
- In January 2018, Government of India allowed 100 per cent FDI in single brand retail through automatic route¹⁰.

Disclaimer: There are several factors which affect FDI inflows in a country. Therefore, it would not be feasible to comment on any policy. However, based on our research, some point which might affect the FDI inflow are given as an action plan.

Proposed Action Plan

Ministry: Ministry of Commerce and Industry

Short Term Plan

- **Reducing Corporate Taxes to enhance FDI inflows**
 - It has been observed that high corporate taxes directly impact the FDI of the country. India has very high corporate tax which lies between 30% and 35%. **Sweden** has lowered the corporate tax rate since 2009, which stood at 28%, among the highest in Europe Union (EU). The present Swedish corporate income tax rate of 22% would be reduced to 21.4% in 2019 and then further reduced to 20.6% in 2021¹¹ through strong political will.

TABLE 1.04: FDI (IN MILLION \$) AND CORPORATE TAXES IN COUNTRIES^{12 13}

Country	Corporate tax rate (2018)	FDI (Million USD) 2016	FDI (Million USD) 2017
Ireland	12.50%	22,300	39,104
Sweden	22%	11,933	18,612
India	35%	5,048	11,090

Source: OECD and KPMG Report

- **Ireland** have decreased their corporate tax rates which is a major point of attraction for FDI¹⁴. The advantage to the government in greater FDI is that the tax revenue collected can be used for infrastructure development. It will also be beneficial to the consumers since the revenue collected could be redistributed among different sectors.

¹⁰ <https://en.portal.santandertrade.com/establish-overseas/ireland/foreign-investment>

¹¹ [https://www.ey.com/Publication/vwLUAssets/Sweden_proposes_draft_bill_with_major_corporate_income_tax_changes/\\$FILE/2018G_01830-11Gbl_Sweden%20proposes%20major%20corporate%20income%20tax%20changes.pdf](https://www.ey.com/Publication/vwLUAssets/Sweden_proposes_draft_bill_with_major_corporate_income_tax_changes/$FILE/2018G_01830-11Gbl_Sweden%20proposes%20major%20corporate%20income%20tax%20changes.pdf)

¹² <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

¹³ <https://data.oecd.org/fdi/fdi-flows.htm>

¹⁴ <https://www.thejournal.ie/ireland-corporate-tax-rate-davos-stealing-3817678-Jan2018/>

- **Ministry of Commerce and Industries through Department of Industrial Policy and Promotion may revise guidelines to encourage FDI in India based on global best practices and their impact on the respective economies.**

Medium Term Plan

- **Increasing awareness by publishing reports to increase outreach of data.**
 - According to IBM's 2017 Global Locations Trends report¹⁵, India took the top spot for attracting foreign investment, replacing the US which had led for the past four years. Mexico was awarded third spot after FDI inflows jumped by almost 25 per cent. China and Thailand round out the top five.
 - As per a recent market attractiveness survey conducted by Emerging Market Private Equity Association (EMPEA)¹⁶, India has become the most attractive emerging market for global partners (GP) investment for the year 2018. **Ministry of Commerce and Industry and Ministry of Information and Broadcasting can collaborate to publish such reports to improve people's perception.**
 - The World Bank has stated that private investments in India is expected to grow by 8.8 per cent in FY 2018-19¹⁷ to overtake private consumption growth of 7.4 per cent, and thereby drive the growth in India's gross domestic product (GDP) in FY 2018-19. **Such reports can be published to change the view of the people.**

Long Term Plan

Indian government launched **Make in India** initiative in 2014 under which FDI policy for 25 sectors was liberalized. Key sectors that have been opened up for FDI include Defence Manufacturing, Food Processing, Telecommunications, Agriculture, Pharmaceuticals, Civil Aviation, Space, Private Security Agencies, Railways, Insurance and Pensions and Medical Devices.

- There are several factors which affect and get affected due to FDI. Therefore, it would not be right to comment on any FDI policy made by the Government. However, there are few recommendations that the sectors which do not have 100% FDI through Automatic route or Government route, might be considered for allowing 100% FDI as given in Table 1.05
- **Government should make rules to attract investments in these sectors to increase FDI inflow in the country. For e.g. the proposal has been cleared by Government for allowing 100 per cent FDI in Railway infrastructure, apart from operations, through automatic route. Similarly, the Government of India is encouraging foreign investment in the automobile sector and allowing 100 per cent FDI under the automatic route.**

¹⁵ <https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?htmlfid=GBE03868USEN>

¹⁶ https://www.empea.org/app/uploads/2017/03/EMPEA.LP_.Survey.2010.US_.web_.pdf

¹⁷ <https://www.worldbank.org/en/news/press-release/2018/03/14/india-growth-story-since-1990s-remarkably-stable-resilient>

- Ministry of Commerce and Industry can collaborate with Ministry of Finance to study the unexplored sectors where FDIs can make a direct and prominent impact.

TABLE 1.05: GDP AND FDI CONTRIBUTION SECTOR WISE

Sector	GDP (inflows in USD Million)	FDI (%)
Communication and Telecommunication Services	8,809	100%
Manufacturing	7,066	100%
Retail & Wholesale Trade (Single Brand)	4,478	100%
Financial Services (Banking)	4,070	74 % Private 20% Public
Computer Services	3,173	100%
Business services	3,005	100%
Electricity and other energy Generation, Distribution & Transmission	1,870	49%
Construction	1,281	100%
Transport	1,267	100%
Miscellaneous Services	835	–
Restaurants and Hotels	452	100%
Real Estate Activities	405	100%
Education, Research & Development	347	100%
Mining	82	100%
Trading (Multi Brand Trading)	0	51%
Agriculture Sector	3,370	100%
Mining and Quarrying	437	100%

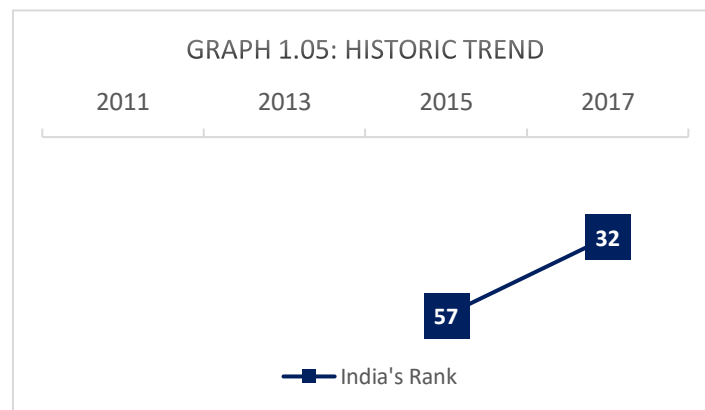
Note:- Indicator 1.03 and 1.04 are shown as single Indicator as both these indicators are interdependent and depends on the similar criteria.

Indicator 1.03: Efficiency of legal framework in settling disputes

Definition: “In your country, how efficient is the legal framework for private business in settling disputes.”

Source: World Economic Forum, Executive opinion Survey

Value: On 1 to 7 scale (1 = extremely inefficient, 7 = extremely efficient)



Graph 1.05 indicates the historic trend of India’s rank in indicator 1.03. This indicator was introduced in 2015. In 2017, India’s rank increased by 25 positions as compared to year 2015. This indicator contributes 0.125% to the country score.

TABLE 1.06: PERFORMANCE OF COUNTRIES

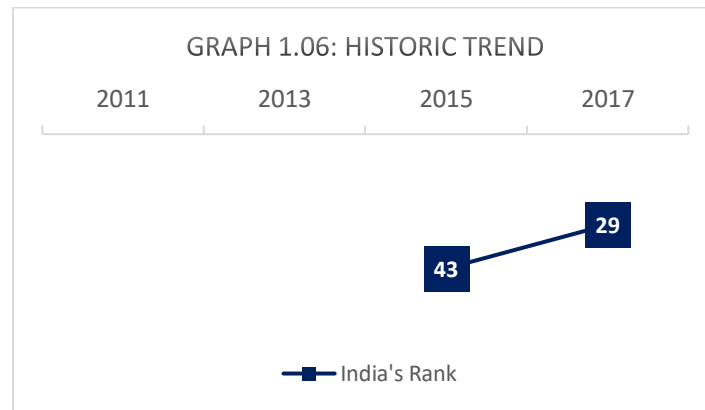
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Singapore	1	6.16	1	6.23	Asian Peer
Hong Kong	3	5.93	2	5.99	Asian Peer
Switzerland	8	5.55	3	5.75	Top Performer
India	57	3.84	32	4.59	

Indicator 1.04: Efficiency of legal framework in challenging regulations

Definition: “In your country, how easy is it for private businesses to challenge government actions and/or regulations through the legal system?”

Source: World Economic Forum, Executive opinion Survey

Value: On 1 to 7 scale (1 = extremely difficulty, 7 = extremely easy)



Graph 1.06 indicates the historic trend of India’s rank in indicator 1.04. This indicator was introduced in 2015. In 2017, India’s rank increased by 14 positions as compared to year 2015. This indicator contributes 0.125% to the country score.

TABLE 1.07: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	8	4.93	1	5.84	Top Performer
Finland	1	5.56	2	5.76	Top Performer
Hong Kong	3	5.39	3	5.55	Asian Peer
UAE	15	4.70	20	4.72	Best Practice
India	43	3.76	29	4.43	

Government Initiatives

- **Facilitating Arbitration**

India has seen a growth of approximately 200 percent in the number of disputes referred to arbitration, as most companies prefer ad hoc arbitration over the institutional route. The Arbitration and Conciliation Act, 2015, addresses the increased number and complexity of commercial disputes which rose over the last five years. The new law addresses one of the biggest problems with the arbitration system i.e. inordinate delays in settlement of awards. Under the old law, if one party had an interest in delaying arbitration proceedings, that party was able, through employing various tactics, to derail the entire process that could drag on for years but by imposing

a time limit of 12 months within which the proceedings will be completed, the government expects to make the process of alternate dispute resolution for businesses simpler and quicker¹⁸.

- **Establishment of Commercial Courts:**

The Commercial Courts, Commercial Division and Commercial Appellate Division of High Courts Act, 2015, extends the improvements made through the Arbitration and Conciliation Act by authorizing the creation of commercial divisions in the Indian high courts, and specialized commercial courts at the district level. It aims to provide a mechanism to ensure speedy disposal of high value “commercial disputes,” and, like the arbitration law, facilitate smooth and prompt resolution of commercial disputes.

Proposed Action Plan

Ministry: Ministry of Corporate Affairs, Ministry of Law and Justice

Medium Term Plan

- **Need for Strengthening Arbitration and its Enforcement in India**

- According to a study by Niti Aayog, India takes as much as 1,420 days and 39.6% of the claim value for dispute resolution. The table below shows comparative data on both the time and cost for resolving disputes for other countries.¹⁹

TABLE 1.09: NO OF DAYS AND COST REQUIRED TO RESOLVE A COMMERCIAL DISPUTE IN INDIA

Countries	Time (Days)	Cost (% of Claim)
Bangladesh	1442	66.08
India	1420	39.06
Regional Average South Asian Countries	1077	30.05
OECD	538.03	27.01
China	452.08	16.02
Russia	307	16.05

- Arbitrations in India has been plagued by high costs and terrible delays, which keeps arbitrations out of the reach of common citizen. Big corporations prefer to take their arbitration to jurisdictions like Dubai and Singapore and do not prefer India for the aforementioned reasons. Compared to the countries like Singapore or US, where one could enforce a contract in a matter of a week or a few months’ maximum in jurisdictions like Dubai, Singapore and Hong Kong a large arbitration can be wrapped up in a single day. The

¹⁸ <https://www.india-briefing.com/news/government-passes-bills-improve-dispute-resolution-ease-business-11591.html/>

¹⁹ https://niti.gov.in/writereaddata/files/document_publication/Arbitration.pdf

threat of enforcement stops people from opportunistically breaching contracts, thus keeping the business ecosystem reliable and trustworthy.²⁰

- **Ministry of Law and Justice in collaboration with Ministry of Corporate Affairs should establish a stable and vibrant eco-system for the arbitral institution that is credible, independent, efficient and transparent. Further, it should be strengthened with library, well-trained support staff for qualitative arbitration, apart from physical and technological infrastructure. Linking the system with Digital India campaign so as to introduce Effective use of Technology such as e-filing, e-office, e-locker, creating database of cases, big data analytics, Online Dispute Resolution etc, will reduce cost of process of arbitration as it would speed up the process of resolving corporate disputes.**

Long Term Plan

- **Background and future requirement of Judges on Dispute Resolution in India²¹**
 - According to National Judicial Data Grid (NJDG) India has 3.3 crore cases pending in various courts. Of all the pending cases, 60% are more than two years old, while 40% are more than five-year-old. In the Supreme Court, more than 30% of pending cases are more than five years old. The five states which account for the highest pendency are Uttar Pradesh (61.58 lakh), Maharashtra (33.22 lakh), West Bengal (17.59 lakh), Bihar (16.58 lakh) and Gujarat (16.45 lakh).

TABLE 1.08: NUMBER OF PENDING CASES

Courts	No of Pending cases
Supreme Court	57,987
High Courts	43 Lakhs
Subordinate courts	2.84 crores

²⁰ <https://thewire.in/business/how-does-india-plan-on-solving-its-crippling-contract-enforcement-problem>

²¹ <https://www.businesstoday.in/current/economy-politics/3-3-crore-cases-pending-indian-courts-pendency-figure-highest-cji-dipak-misra/story/279664.html>

- The pendency of commercial disputes in courts across the country has gone up by more than 123% in 2017 compared to 2015. According to the latest data by the Law Ministry, the pendency of commercial disputes in courts have risen from 17,539 cases in 2015 to 39,141 in 2017.

- Delhi has emerged as the top ranking state having the highest number of commercial disputes pending in the designated courts with 16,267 cases pending in 2017 which is an increase of 152% over 2015. Country's most populous state UP ranks second with 11,793 commercial disputes and Jammu & Kashmir with more than 6,200 commercial cases pending at the end of year 2017 which ranks higher than states like Tamil Nadu, Gujarat, Maharashtra and Karnataka in the pendency list.²²

- Government of India has 19 judges per 10 lakh people on an average, according to a Law Ministry data which also states that the judiciary faces a combined shortage of over 6,000 judges, including over 5,000 in the lower courts itself. According to the data, part of a document prepared in March, 2018 for discussion in Parliament, the judge-population ratio is 19.49 per million (10 lakh) people.²³

- As per former Chief Justice of India TS Thakur (CJI)/Law Commission there are 16,119 judges as of January 2016 and 20,312 judges require to clear cases older than 2 years, 24,839 judges require to clear all pending cases and 60,476 judges are required as per CJI/Law Commission.

JUDICIAL VACANCIES

In some states, the current strength and rate of disposal is enough to dispose of all cases more than two years old within the next three years, whereas in others, the sanctioned strength of judges needs to be increased dramatically.

	Current strength (as on 1 Jan 2016)	to clear cases older than two years	Judges required	
			to clear all pending cases	as per CJI/Law Commission
Bihar	1,067	2,896	3,581	5,190
Uttar Pradesh	1,825	2,489	2,936	9,964
Maharashtra	1,917	1,989	2,531	5,619
Gujarat	1,170	1,548	1,795	3,019
Madhya Pradesh	1,215	1,405	1,622	3,630
West Bengal and Andaman and Nicobar	868	1,167	1,493	4,567
Andhra Pradesh and Telangana	786	983	1,253	4,234
Rajasthan	985	949	1,094	3,431
Tamil Nadu	969	945	1,041	3,607
Karnataka	820	921	1,095	3,057
Odisha	598	878	1,093	2,097
Jharkhand	466	664	810	1,648
Delhi	490	525	1,019	838
Haryana	474	479	577	1,268
Punjab	490	469	552	1,385
Kerala	442	468	575	1,669
Chhattisgarh	341	372	446	1,277
Assam	319	289	340	1,558
Jammu and Kashmir	220	213	233	627
Uttarakhand	206	196	224	506
Himachal Pradesh	134	138	150	343
Tripura	68	79	93	184
Goa	48	50	63	73
Mizoram	30	33	37	55
Manipur	34	32	34	136
Meghalaya	30	30	32	148
Nagaland	25	27	32	99
Chandigarh	30	22	24	53
Arunachal Pradesh	15	19	24	69
Puducherry	14	13	15	62
Sikkim	14	12	14	30
Daman and Diu	6	6	8	29
Lakshadweep	3	3	4	3



²² <https://timesofindia.indiatimes.com/india/number-of-pending-commercial-disputes-has-arisen-by-123-in-2017/articleshow/65168645.cms>

²³ <https://www.thehindubusinessline.com/news/india-has-19-judges-per-10-lakh-people-data/article25030009.ece>

Above statistics clearly state the requirement of judges to fill the vacancies in different states as mentioned in “**Judicial Vacancies**”.²⁴

Hence, there is a need to address the problem and take up immediate measures so as to tackle the situation. Ministry of Law and Justice in collaboration with Ministry of Corporate Affairs should aim to fill up the huge gap which will not only reduce vacancies but will also increase the dispute resolving rate in India by greater pace.

²⁴ <https://www.livemint.com/Politics/OdHaDzBHLpvG8M2Wj4pAoJ/Narendra-Modi-assures-CJI-Thakur-of-govt-support-in-increasi.html>

Note – Indicator 1.05 & 1.06 are merged as both are interdependent and both rely on time and cost to deal with construction permit.

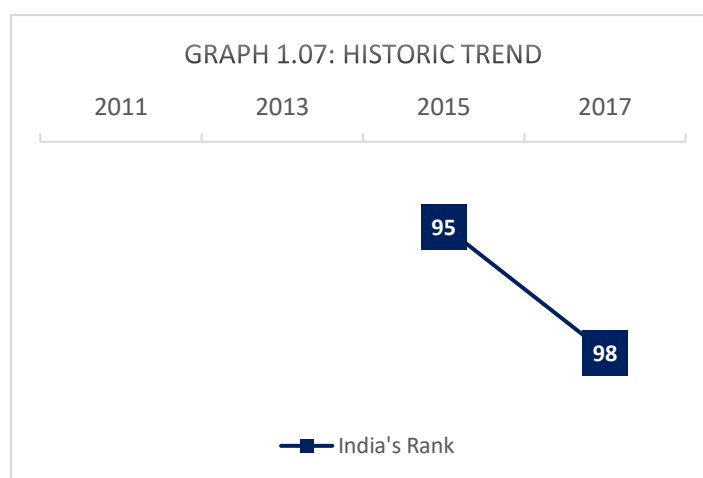
Indicator 1.05: Time required to deal with construction permits

Definition: This indicator refers to total number of days required to deal with procedures necessary to build a warehouse. It measures the median duration (in number of days) that local experts indicate is necessary in practice for a business to build a warehouse. The duration takes into account the following procedures:

- Obtaining and submitting all relevant project-specific documents to the authorities.
- Hiring external third-party supervisors, engineers or inspector
- Obtaining all necessary clearances, licenses, permits and certificates
- Submitting all required notifications
- Requesting and receiving all necessary inspections as well as all procedures for obtaining connections for water and sewerage

Source: World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for All

Value of country = Total number of days required to deal with procedures necessary to build a warehouse



Graph 1.07 indicates the historic trend of India’s rank in indicator 1.05. This indicator was introduced in year 2015. In 2017, India’s rank decreased by 3 positions as compared to year 2015. This indicator contributes 0.125% to the country score.

TABLE 1.10: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Korea, Rep.	2	29	1	28	Asian Peer
Georgia	11	68.5	2	48	Top Performer
Singapore	1	26	2	48	Asian Peer
India	95	185.9	98	190	

Indicator 1.06: Cost to deal with construction permits

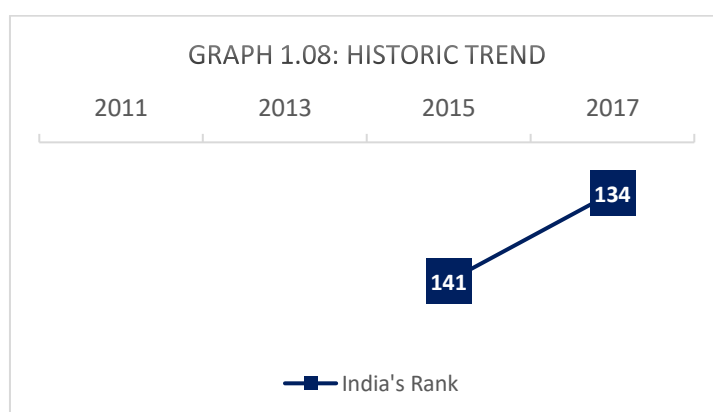
Definition: This indicator refers to cost that is recorded as a percentage of the warehouse value. It measures the cost associated with the procedures necessary for a business to build a warehouse (respect to its value)

This cost is related to the following procedures:

- Obtaining and submitting all relevant project-specific documents (for example, building plans, site maps and certificates of urbanism) to the authorities
- Hiring external third-party supervisors, engineers or inspectors
- Obtaining all necessary clearances, licenses, permits and certificates
- Submitting all required notifications; and
- Requesting and receiving all necessary inspections as well as all procedures for obtaining connections for water and sewerage.

Source: World Bank/International Finance Corporation, Doing Business

Value of Country = Cost is recorded as a percentage of the warehouse value



Graph 1.08 indicates the historic trend of India's rank in indicator 1.06. This indicator was introduced in year 2015. In 2017 India's rank increased by 7 positions as compared to year 2015. This indicator contributes 0.125% to country score

TABLE 1.11: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Thailand	3	0.1	1	0.1	Asian Peer
Hungary	6	0.2	5	0.2	Top Performer
Czech Republic	11	0.3	9	0.3	Top Performer
Australia	25	0.5	18	0.5	Best Practice
Burundi	130	10.1	124	10.4	Best Practice
India	141	28.2	134	25.9	

Proposed Action Plan

Ministry: Ministry of Housing & Urban Affairs, Ministry of Commerce, Department of Industrial Policy & Promotion

Short Term Plan

TABLE 1.12: CONSTRUCTION PERMITS VALUES FOR DELHI & MUMBAI

Economy	Years	Number of Procedures	Time (Days)	Procedures Cost in lakhs (% of Warehouse value)
Delhi	2016	24	213	27.5
Mumbai	2016	42	164	25.3
Delhi	2017	29	213	26.2
Mumbai	2017	42	164	25
Delhi	2018	24	157.5	23.9
Mumbai	2018	37	128.5	22.5

The number of procedures and days for construction of permit has increased from 56 days in year 2016 to 144 days in year 2018. Also, number of procedures has increased from 36 in year 2015 to 38.8 in year 2017.

• Single Window Licensing

- According to TMF Global Research Group²⁵, India was ranked 185 among 190 nations surveyed by the World Bank in 2017 in the time it takes to receive a construction permit after filing an application. Previously, it took 164 days and 42 processes to get a construction permit in Mumbai, and 213 days and 29 processes in Delhi¹. It can take anywhere between one and four months to complete all the required procedures, with fees and add-on costs dependent on the size and type of business being registered.
- In **Thailand**, a single Construction Permit or license is needed for both, new construction and adding/modifying existing construction. The process of getting Construction Permit takes 45 days (maximum 135 days). It costs a mere 20 Thai Bhat (approximately Rupees 50) as the Government Fee for New Construction/Change of usage. The process and details regarding which authority, depending on the Simplicity or Complexity or Jurisdiction of the Construction²⁶, is clearly defined.
- All permits could be applied for on one platform, a **single window approval for projects via Electronic Licensing System** has been implemented so that documents (for example, building plans, site maps and certificates of urbanism) can be unified and projects could be approved within a week.
- **Hence, Ministry of Housing and Urban Affairs in collaboration with Ministry of Commerce and Industry can consider implementing single window licensing in India on similar lines as Thailand.**

²⁵ <https://www.tmf-group.com/en/news-insights/articles/top-challenges/doing-business-in-india/>

²⁶ <http://www.doingbusiness.org/content/dam/doingBusiness/country/t/thailand/THA.pdf>

Medium Term Plan

- **Reducing Cost of Construction Permit**

- According to Doing Business report published by World Bank Group²⁷, India is among the worse rated countries to deal with cost of construction permit. It takes on an average Rupees 23.2 Lacs to deal with the construction permit as given in table 1.13. It costs 1,631% of income per capita. In Burundi, it takes approximately BIF 29,87,000 (Approximately Rs. 1,17,000) to deal with construction permit.
- **Burundi** changed the fee structure for geotechnical studies, reducing the cost of dealing with construction permits by 1,968% of income per capita²⁸.
- **Ministry of Commerce and Industry can consider changing the fee structure for the procedures which are same as Burundi to deal with cost of construction permits.**

TABLE 1.13: COST OF CONSTRUCTION PERMIT

Country	Rank (2017)	Cost (in Rs. Lacs)	No. of procedures
Thailand	1	0.1	18
Hungary	5	0.6	20
Australia	18	0.9	11
Burundi	126	1	15
India	134	23.2	30

Long Term Plan

- **Proper Awareness of Permit Procedure**

- According to TMF group construction permits are also a costly pursuit, involving 34 procedures and taking 196 days. Obtaining Intimation of Disapproval from the Building Proposal Office and paying fees takes around a month, and NOCs must be sought from the Tree Authority, the Storm Water and Drain Department, the Sewerage Department, the Electric Department, the Environmental Department, the Traffic & Coordination Department and the CFO.
- **Australia**, on the other hand, has also gone through a very structured approach to most of the constructions. Their handbooks share complete flowcharts of the process and responsibility matrix from stages of Pre-Permit to Post-Permit with clear directions. The country follows a common standard called **Building Code of Australia (BCA)** to which each Builder needs to adhere, thus removing the grey areas²⁹. Authority has set a time limit of 10 business days for certified applications while uncertified applications have been given a time limit of 25 business days. The building permit for any project begins at around \$600³⁰.

²⁷ <http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB12-Chapters/Dealing-with-construction-permits.pdf>

²⁸ <http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB12-Chapters/Dealing-with-construction-permits.pdf>

²⁹ <https://hia.com.au/business-information/standards-regulations/building-standards>

³⁰ <https://ablis.business.gov.au/service/wa/building-permit/23126>

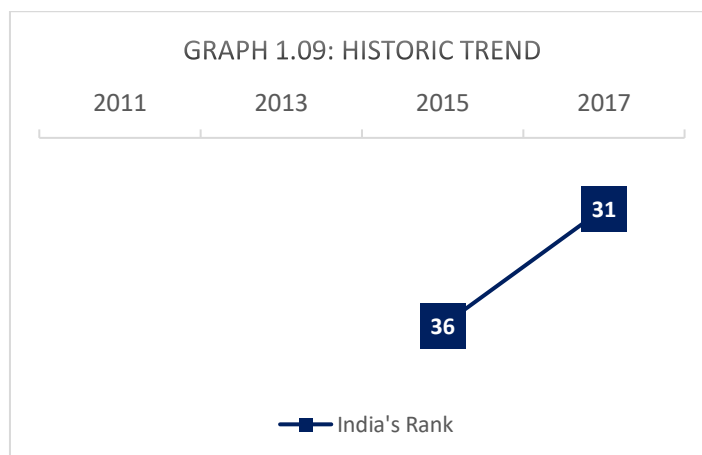
- **Ministry of Commerce and Industry can develop a building code in India which will apprise citizens about the detailed procedure of dealing with construction permits.**

Indicator 1.07: Extent of market dominance

Definition: “In your country, how would you characterize corporate activity?”

Source: World Economic Forum, Executive opinion Survey

Value: On 1 to 7 scale (1 = dominated by a few business groups, 7 = spread among many firms)



Graph 1.09 indicates the historic trend of India’s rank in indicator 1.07. This indicator was introduced in year 2015. In 2017, India’s rank increased by 5 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 1.14: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Japan	2	5.73	1	5.89	Asian Peer
Switzerland	1	5.97	2	5.84	Top Performer
Germany	3	5.65	3	5.29	Top Performer
India	36	4.22	31	4.21	

• **Market Dominance in India Sector-Wise:**

- India namely has three sectors:
 - Agricultural Sector (Primary)
 - Industrial Sector (Secondary)
 - Service Sector (Tertiary)
- Market is majorly dominated by service sector which includes financial, real estate & professional services, public administration, defence and other services, trade, hotels, transport, communication and services related to broadcasting and also known as the **backbone of the Indian economy and contributing around 53.66% to the Indian GDP³¹**.

National schemes like Make in India, Start Up India, MSME strengthening through CBT and easily available financial help along with programs such as Zero Defect Zero Effect are helping newer/smaller

³¹ <http://statisticstimes.com/economy/sectorwise-gdp-contribution-of-india.php>

firms in establishing solid ground in the market. These initiatives will aid the extent of market dominance in India to remain spread among many firms and as these initiatives will be in effect for a long period of time, India will be able to retain and grow its rank in this indicator on a sustainable basis.

Below mentioned are few of the sectors in which India is growing.

- **Contribution of Service Sector to Market:**

- **Tourism & Hospitality Industry**

- The Indian tourism and hospitality industry have emerged as one of the key drivers of growth among the service sector. During January-September 2018 foreign exchange earners (FEEs) from tourism increased 12.1% year-on-year to US\$ 17.09 billion. Foreign Tourist Arrivals (FTAs) increased 6.70% year-on-year to 7.47 million in the same period. Foreign tourist arrivals for medical purpose increased from 427,014 in 2016 to 495,056 in 2017. During January-September 2018, arrivals through e-visa increased 47.90% year-on-year to 1.58 million³².

- **Market Dominance in Hospitality and Tourism sector**

- Indian hotel industry has supply of approximately 210,000 rooms³³. **Marriott**, with more than 22,000 rooms, has taken the top slot in India in terms of room inventory, overshadowing local peers Taj, Oberoi, ITC and The Leela. Taj, with 14,400 rooms, is already a distant second³⁴.

Top Hotel Brands In India In Terms Of Inventory

Marriott International 22,000	IHCL (including budget brand Ginger) 14,400	Radisson Hotel Group 10,400	ITC Hotels 9,500
Accor Hotels 9,000	Hyatt Hotels 7,000	Sarovar Hotels (Majority stake owned by Louvre Hotels Group, a part of Chinese conglomerate Jin Jiang International Holdings, since 2017) 6,000	
Intercontinental Hotels Group 5,991	Lemon Tree Hotels 4,900	Oberoi Hotels & Resorts 4,500	

- International hotel chains are increasing their presence in India, as it will account for around 47% in the Tourism & Hospitality sector of India by 2020 & 50% by 2022³
- In 2002, international brands accounted for under 20% of the 25,000 branded rooms in India. In 2018, international chains account for about 50% of the current supply of 1,23,000 branded rooms and by 2020, they will account of 76% of supply.³
- Overall, five of the eight biggest hotel brands in India in terms of room inventory are global brands. In 2016, international hotel brands signed up 11,831 keys, compared to 4,781 keys

³² <https://www.ibef.org/industry/indian-tourism-and-hospitality-industry-analysis-presentation>

³³ <https://www.ibef.org/download/Tourism-and-Hospitality-January-2018.pdf>

³⁴ <https://economictimes.indiatimes.com/industry/services/hotels/-/restaurants/with-global-hospitality-firms-scaling-up-in-india-will-homegrown-hotels-survive-the-chain-effect/articleshow/63980838.cms>

by domestic brands. In 2017, international brands signed up 8,868 rooms, compared to 7,152 by the domestic chains.

○ **Market dominance in Airlines Sector**

- **Indigo** dominates the airline sector with 39% of Market share (2017) based on passenger transported on domestic flights which is followed by Jet Airways with less than half of the market share of Indigo i.e. 15.4%⁵.

TABLE 1.15: MARKET SHARE OF AIRLINES³⁵

Airlines	Market share (%)
Indigo	39%
Jet Airways	15.4%
Air India	13%
Spicejet	13.2%
Go Air	8.5%
Air Asia	3.7%
Vistara Airlines	3.5%
Jet Lite	2.4%
Trujet	0.4%
Air Costa	0.1%

- Air travel is the biggest contributor to the domestic travel market and is expected to grow at 15% to \$30 billion.³⁶

○ **Market dominance in IT-BPM (Information Technology-Business Process Management) Sector.**

- There are a number of Information Technology (IT) companies in India. The list includes giants like TCS, Infosys, Wipro, Tech Mahindra, HCL. TCS tops the list with highest Market Capitalization³⁷.

³⁵ <https://www.statista.com/statistics/575207/air-carrier-india-domestic-market-share/>

³⁶ <https://www.thehindubusinessline.com/economy/logistics/indias-travel-market-to-reach-48-billion-by-2020-google-bcg/article9745424.ece>

³⁷ <https://www.trendrr.net/1942/top-10-best-largest-companies-in-india-by-market-capital-famous/>

TABLE 1.16: MARKET CAPITAL OF COMPANIES⁷

Company	Market Capitalization (in Cr)
TCS	4,87,919
Infosys	2,21,528
Wipro	1,32,380
HCL Technologies	1,29,933
Tech Mahindra	58,621
Oracle Financial Services	29,538
Mindtree	11,148
Mphasis	8,132

○ **Market dominance in Retail Sector**

- The Indian retail industry is one of the fastest growing in the world. Retail industry in India is expected to grow to US\$ 1.2 trillion by 2020 from US\$ 680 billion in 2017³⁸.
- Table 1.17 shows that Reliance group dominates the market in terms of revenue earned in year 2018⁸.

TABLE 1.17: REVENUE GENERATED BY COMPANIES

Company	Revenue (Billion \$)
Reliance Retail	7
Future Group	3.5
Trent	2.5
Aditya Birla Retail	2
Titan	1.8
Shoppers Stop	0.3
The Raymond Group	3
Avenue supermarts ltd	1.9

○ **Market Dominance in Telecom industry**

- India is the world's second-largest telecommunications market, with over 1.17 billion subscribers as of June 2018. Strong policy support from the government has been crucial to the sector's development. Foreign Direct Investment (FDI) cap in the telecom sector has been increased to 100% from 74% in year 2018. Airtel dominates the Telecom Market with 24.85% of share³⁹. Big players like Idea and Vodafone decided to merge because of the investment done by largest group Reliance in giving free voice calls⁹.

³⁸ <https://www.ibef.org/industry/retail-india.aspx>

³⁹ <https://www.ibef.org/industry/telecommunications.aspx>

TABLE 1.18: MAJOR TELECOM COMPANIES AND THEIR MARKET SHARE⁴⁰

Company	Customer Base (In Million)	Revenue(In billion \$)	Market share(%)	Ownership
Airtel	303	15	24.85%	Bharti Enterprises (64%) and Sing Tel (36%)
Idea	200	5.5	16.83%	Aditya Birla Group and Axiata
Vodafone	208	6.6	18.23%	Vodafone Group plc
JIO	186	0.8	13.71%	Reliance Industries
Tata teleservices	86	0.49	2.1%	Tata Group
Telenor	40	0.18	5.1%	Bharti Airtel
Reliance Communications	12	3.5	0.06%	Reliance ADAG (90%) and SSTL (10%)
BSNL	100	5.1	9.24%	Government of India
MTNL	4	0.5	0.5%	Government of India

- **Contribution of Agriculture Sector to Market:**
 - Agriculture is the primary source of livelihood for about 58% of India's population. Gross Value added by agriculture, forestry and fishing is estimated at Rupees 17.67 trillion (US\$ 274.23 billion) in FY18. It can be seen in Table 1.19 that **UPL LTD has the major market share** in Indian fertilizers, pesticides market, it alone enjoys the market share of more than 40%. However, others companies also managed to get some share in market⁴¹.

⁴⁰ <https://telecom.economicstimes.indiatimes.com/news/airtel-leads-telecom-market-with-25-85-share-rjio-sees-highest-growth-in-wireless-subs-trai-dec-data/62947738>

⁴¹ <https://www.ibef.org/industry/agriculture-india.aspx>

TABLE 1.19: MAJOR AGRO-CHEMICAL COMPANIES AND THEIR SALES

Companies	2017-18 Sales (mn INR)	2016-17 Sales (mn INR)	2015-16 Sales (mn INR)
UPL LTD	1,50,060.00	144610	126768
Gharda Group	23,363.00	19650	17070
Indofil Industries	17,490.00	16683	13525
Bharat Group	15,678.00	14200	10850
Crystal Crop protection	13,649.00	12,856	12000
Coromandel international	15,060.00	13,980	12040
Rallis India	12,117.00	12,302	11232
Sharda Cropchem Ltd	14,881.00	11,988	10265
PI industries	12,050.00	11,400	10,326
Krishi Rasayan Group	12780	11,170	9546

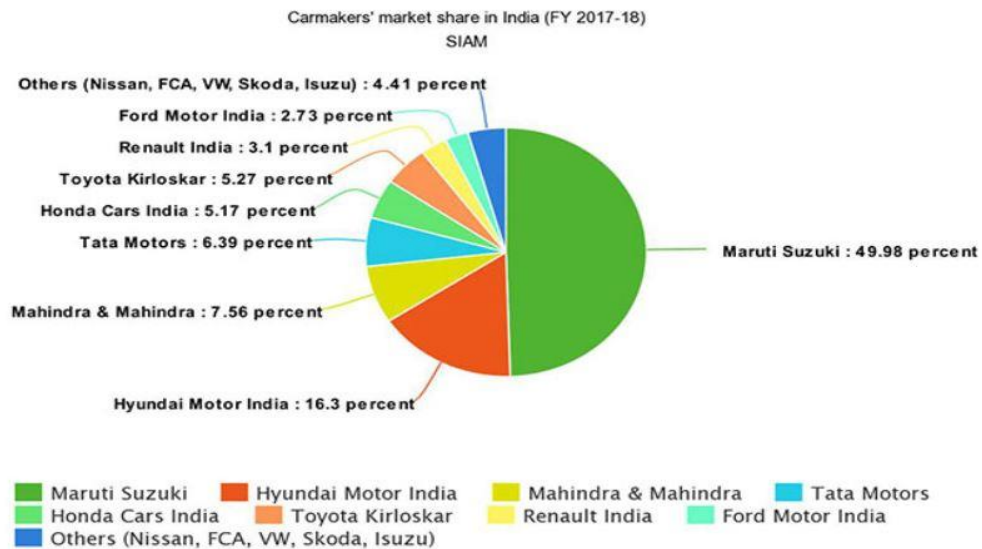
- **Contribution of Manufacturing Sector to Market**

- **Automobile sector**

- The Indian auto industry became the 4th largest in the world with sales increasing 9.5% year-on-year to 4.02 million units (excluding two wheelers) in 2017. It was the 7th largest manufacturer of commercial vehicles in 2017⁴².
- Maruti Suzuki dominates the market with 49.98%. India is also a prominent auto exporter and has strong export growth expectations for the near future. Automobile exports grew 26.56% during April-July 2018⁴³.

⁴² <https://economictimes.indiatimes.com/industry/auto/india-pips-germany-ranks-4th-largest-auto-market-now/articleshow/63438236.cms>

⁴³ <https://www.ibef.org/industry/india-automobiles.aspx>



Proposed Action Plan

Ministry: Ministry of Commerce and Industry

Short Term Plan

- **Random Checks on products and Services**
 - Quality of various products and services should be checked for adherence to claimed specifications on a random basis, to discourage market dominance of firms providing substandard products and services.

Medium Term Plan

- **Need for a Regulatory body for every sector**
 - The Ministry of Commerce and Industry should mandate and consider to bring a regulatory body in all the major sectors of Indian Economy such as Automobile Sector, Agricultural Sector etc. For e.g. IRDA (Insurance Regulatory and Development Authority) and TRAI (Telecom Regulatory Authority of India). Also, the present regulatory bodies should be given more authority to take sufficient steps for controlling of major corporate firms in dominance over market by unethical practices.

Long Term Plan

- **Promote Start-ups and MSMEs (Micro Small Medium Scale Enterprises)**
 - The government/regulating body should take keen efforts to promote start-ups and MSMEs (Micro Small Medium Scale Enterprises) so that they can scale up their existing businesses to compete against well-established market players.

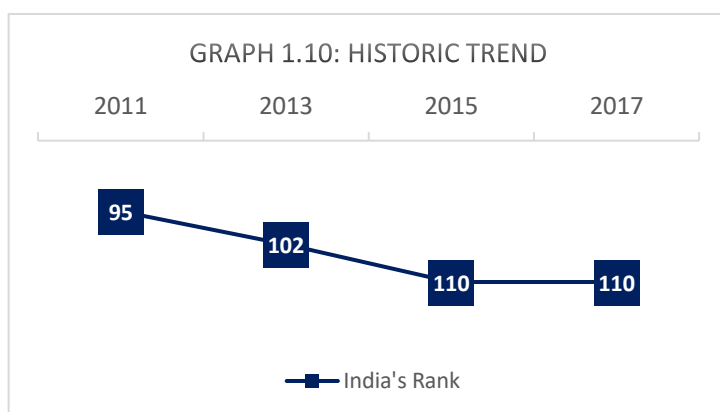
Note – Indicator 1.08 & 1.09 are being shown as single indicator as both are interdependent and depends on same criteria.

Indicator 1.08: Time required to start a business

Definition: This indicator refers to number of days required to start a business. It measures the median duration that incorporation lawyers indicate is necessary to complete a procedure with minimum follow-up with government agencies and no extra payments.

Source: World Bank/ International Finance Corporation, Doing Business 2017

Value of country: Number of days required to start a business.



Graph 1.10 indicates the historic trend of India’s rank in indicator 1.08. In 2017, India’s rank remained consistent at 110th position as compared to year 2015. This indicator contributes 0.12% to the country score.

TABLE1.20: PERFORMANCE OF COUNTRIES

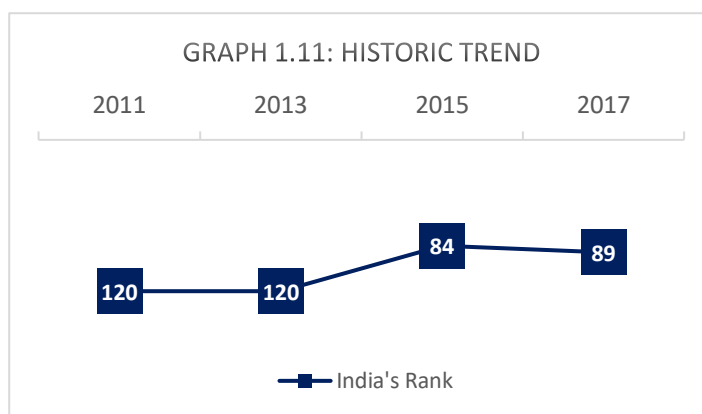
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
New Zealand	1	0.5	1	0.5	Top Performer
Hong Kong	4	2.5	2	1.5	Asian Peer
Macedonia	2	2	4	2	Top Performer
Singapore	4	2.5	5	2.5	Asian Peer
United Kingdom	27	6	20	4.5	Best Practice
India	110	28.4	110	26	

Indicator 1.09: Cost to start a business

Definition: The indicator refers to cost to start a business as a percentage of the economy’s income (GNI) per capita. It measures all official fees for legal or professional services if such services are required by law.

Source: The World Bank/International Finance Corporation, Doing business 2018 Equal Opportunity for all.

$$\text{Value of the Country} = \frac{\text{Cost to Start a Business} \times 100}{\text{Economy's Income per capita (GNI)}}$$



Graph 1.11 indicates the historic trend of India’s rank in indicator 1.09. In 2017, India’s rank decreased by 5 positions as compared to year 2015. This indicator contributes 0.125% to the country score.

TABLE 1.21: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Slovenia	1	0	1	0	Top Performer
United Kingdom	3	0.3	2	0.1	Best Practice
South Africa	3	0.3	4	0.2	Top Performer
India	84	12.2	89	13.8	

Proposed Action Plan

Ministry: Ministry of Corporate Affairs

Long Term Plan

- According to TMF group, the cost of starting a business in India is astronomical, and the procedures involved can be daunting without local knowledge. There are 13 procedures which one needs to complete to initially set up any business as shown in table 1.22. It takes almost a

month (27 days) to complete all the tasks on average, which is well above the Organisation for Economic Co-operation Development (OECD) average of 12 days.⁴⁴

- Within India, metropolitan cities such as Delhi takes approximately 38 days to complete the process as given in table 1.24 and Mumbai takes approximately 40 days as given in table 1.23. This number seems to be very high when compared to United Kingdom and Singapore where someone takes only 3-6 days to start any business (given in table 1.25 and 1.26). **Thus, Ministry of Corporate Affairs can take examples from these countries and can further ease the procedure to start a business in India.**⁴⁵
- **Single Window Clearance (SWC)**
 - While some procedures such as obtaining a director identification number and reservation of the company name are electronic and takes only 1-2 days to complete, there are various other processes like obtaining tax account number, that take more than a week to complete because of the requirement of some specific documents.
 - **Therefore, Ministry of Corporate Affairs** with the help of **Ministry of Finance** can provide provisional data for things like PAN and TAN so that the person can start its business without waiting for 10 days to get PAN. Moreover, if the single window clearance system is implemented, it will reduce the time and cost by significant amount.

TABLE 1.22: STEPS INVOLVED IN STARTING BUSINESS IN INDIA

S.No.	Procedure	Time to complete	Cost to complete
1	Obtain director identification number (DIN) online from the Ministry of Corporate Affairs portal (National)	1 day	INR 100
2	Obtain digital signature certificate online from private agency authorized by the Ministry of Corporate Affairs (National)	3 days	INR 1,500
3	Reserve the company name online with the Registrar of Companies (ROC) (National)	2 days	INR 500
4	Stamp the company documents at the State Treasury (State) or authorized bank (Private)	1 day	INR 1,300 (INR 200 for MOA + INR 1,000 for AOA for every INR 500,000 of share capital or part thereof + INR 100 for stamp paper for declaration Form 1)
5	Get the Certificate of Incorporation from the Registrar of Companies, Ministry of Corporate Affairs (National)	5 days	INR 14,133 (see comments)

⁴⁴ <https://www.tmf-group.com/en/news-insights/business-culture/top-challenges-india/>

⁴⁵ <http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2018-Full-Report.pdf>

6	Make a seal (Private)	1 day	INR 350 (cost depends on the number of seals required and the time period for delivery)
7	Obtain a Permanent Account Number (PAN) from an authorized franchise or agent appointed by the National Securities Depository Ltd. (NSDL) or the Unit Trust of India (UTI) Investors Services Ltd., as outsourced by the Income Tax Department (National)	7 days	INR 67 (INR 60 application fee + 12.36% service tax + INR 5 for application form, if not downloaded)
8	Obtain a Tax Account Number (TAN) for income taxes deducted at source from the Assessing Office in the Mumbai Income Tax Department	7 days	INR 57 (INR 50 application fee + 12.36% service tax)
9	Register with the Office of Inspector, Shops, and Establishment Act (State/Municipal)	2 days	INR 6,500 (INR 2000 + 3 times registration fee for trade refuse charges)
10	Register for Value-Added Tax (VAT) at the Commercial Tax Office (State)	12 days	INR 5,100 (registration fee INR 5000 + stamp duty INR 100)
11	Register for Profession Tax at the Profession Tax Office (State)	2 days	No cost
12	Register with Employees' Provident Fund Organization (National)	12 days	No cost
13	Register for medical insurance at the regional office of the Employees' State Insurance Corporation (National)	9 days	No cost

Focus on two prime cities of India

Delhi and Mumbai are the two cities that the report of Doing Business has primary focused on and thus time to start a business involved certain steps required by both states is given as follows:

TABLE 1.23: STEPS INVOLVED IN STARTING BUSINESS IN MUMBAI

S.No.	Procedure	Time to complete	Associated Cost
1	Obtain digital signature certificate online from private agency authorized by the Ministry of Corporate Affairs (National) Agency: Certified private agencies	1 day	INR 700 to INR 2,500 per Digital Signature Certificate

2	Obtain director identification number (DIN) online from the Ministry of Corporate Affairs portal Agency: Ministry of Corporate Affairs	1 days	INR 500 per DIN
3	Reserve the company name online with the Registrar of Companies (ROC) Agency: Registrar of Companies (ROC)	1-3 days	INR 1,000
4	Pay stamp duties, file the SPICE form and obtain the certificate of incorporation Agency: Registrar of Companies (ROC)	5 days	Fee schedule for a small company of paid-up share capital between INR 500,000 and INR 1,000,000: - Electronic Filing of the Memorandum of Association (eMOA): INR 4,800 (up to 1,000,000 amounts is fixed 2,000+ 200 INR for every 10,000 or part thereof) Electronic Filing fee for the Articles of association (eAOA): INR 400 (between 500,000 to 2,499,999) - Electronic Filing fee for Form INC32 (SPICe form): INR 500 - Stamp duty: INR 10 - Stamp duty for Articles of Association: INR 3,000 - Stamp duty for Memorandum of Association: INR 200
5	Make a company stamp Agency: Authorized vendor (Private)	1 day, simultaneous	INR 350-500
6 (i)	Submit and obtain a Permanent Account Number (PAN) and card and a Tax deduction and Collection Account Number (TAN) Agency: Registrar of Companies (ROC)	10 days	INR 350 (cost depends on the number of seals required and the time period for delivery)

6 (ii)	Obtain a Permanent Account Number (PAN) from an authorized franchise or agent appointed by the National Securities Depository Ltd. (NSDL) or the Unit Trust of India (UTI) Investors Services Ltd., as outsourced by the Income Tax Department (National)	7 days	INR 67 (INR 60 application fee + 12.36% service tax + INR 5 for application form, if not downloaded)
7	Open a bank account Agency: Bank account	2 days	No Charge
8	Register for VAT and profession tax Agency: Department of Sales Tax VAT online registration is conducted via the website www.mahavat.gov.in .	7-10 days	INR 500 (Registration Fee) + INR 25 (Stamp Duty) for compulsory VAT registration
9	Register with Employees' Provident Fund Organization Agency: Employees Provident Fund Organization (Federal)	1 day, simultaneous	No Charge
10	Register with the Employee State Insurance Corporation (ESIC) Agency: Employees' State Insurance Corporation (Federal)	1 day	No Charge
11	Register with Office of Inspector, Mumbai Shops and Establishment Act Agency: Municipal Corporation of Greater Mumbai	7 days, simultaneous	INR 1,200 (registration fee) + 3 times registration fee for Trade Refuse Charges (INR 3,600)

TABLE 1.24: STEPS INVOLVED IN STARTING BUSINESS IN DELHI

SNo.	Procedure	Time to complete	Associated Cost
1	Obtain digital signature certificate online from private agency authorized by the Ministry of Corporate Affairs (National) Agency: Certified private agencies	1 day	INR 700 to INR 2,500 per Digital Signature Certificate
2	Obtain director identification number (DIN) online from the Ministry of Corporate Affairs portal Agency: Ministry of Corporate Affairs	1 days	INR 500 per DIN
3	Reserve the company name online with the Registrar of Companies (ROC) Agency: Registrar of Companies (ROC)	1-3 days	INR 1,000
4	Pay stamp duties, file the SPICE form and obtain the certificate of incorporation Agency: Registrar of Companies (ROC)	5 days	Fee schedule for a small company of paid-up share capital between INR 500,000 and INR 1,000,000: - Electronic filing of the Memorandum of Association (eMOA): INR 4,800 (up to 1,000,000 amount is fixed 2,000+ 200 INR for every 10,000 or part thereof) - Electronic filing fee for filing the Articles of association (eAOA): INR 400 - Electronic filing fee for Form INC-32 SPICE: INR 500 - Stamp duty: INR 10 - Stamp duty for Articles of Association: INR 1,703 - Stamp duty for Memorandum of Association: INR 200

5	<p>Make a company stamp Agency: Authorized vendor (Private)</p>	1 day, simultaneous	INR 500-1,000
6 (i)	<p>Submit and obtain a Permanent Account Number (PAN) and card and a Tax deduction and Collection Account Number (TAN) Agency: Registrar of Companies (ROC)</p>	10 days	INR 350 (cost depends on the number of seals required and the time period for delivery)
6 (ii)	<p>Obtain a Permanent Account Number (PAN) from an authorized franchise or agent appointed by the National Securities Depository Ltd. (NSDL) or the Unit Trust of India (UTI) Investors Services Ltd., as outsourced by the Income Tax Department (National)</p>	7 days	INR 67 (INR 60 application fee + 12.36% service tax + INR 5 for application form, if not downloaded)
7	<p>Open a bank account Agency: Bank account</p>	2 days	No Charge
8	<p>Register for Value-Added Tax (VAT) at the Department of Trade and Taxes, Government of NCT of Delhi (State) Agency: Department of Trade and Taxes, Government of NCT of Delhi</p>	9 days	INR 500 registration fee + INR 25 stamp duty for compulsory VAT registration
9	<p>Register with Employees' Provident Fund Organization Agency: Employees Provident Fund Organization (Federal)</p>	1 day, simultaneous	No Charge

10	Register with the Employee State Insurance Corporation (ESIC) Agency: Employees' State Insurance Corporation, Ministry of Labor and Employment	1 day	No Charge
11	Register online under the Delhi Shops and Establishments Act Agency: Department of Labor - Government of NCT of Delhi	Less than one day (online procedure), simultaneous	No charge

- **Major focus can be put on various countries for reducing the time to start a business:**
Singapore and United Kingdoms are leading examples of how efficiently a procedure to start a business can be reduced

TABLE 1.25: STEPS INVOLVED IN STARTING BUSINESS IN UNITED KINGDOM

S.No.	Procedures	Time to complete	Associated costs
1	<p>Check availability of unique company name, complete application form IN01, and file for registration with Companies House <i>Agency : Companies House</i></p> <p>Company founders have the option to check for unique company name and file for registration themselves, or to retain incorporation professionals to do so. The option to complete registration is through paper application or electronically.</p> <p>In case the company chooses to file for incorporation itself online, model articles of incorporation and company memorandum are generated automatically by the registration website www.gov.uk/register-a-company-online. In addition the above forms, all companies must provide the following information to the relevant Registrar of Companies (i.e., for England and Wales, Scotland, or Northern Ireland):</p> <ul style="list-style-type: none"> • Statement of compliance with all requirements 	Less than one day (online procedure)	GBP 12 for online registration

	<p>of the 2006 Companies Act;</p> <ul style="list-style-type: none"> • Application form IN01, which includes: <ul style="list-style-type: none"> o proposed company name; o country of registration office (e.g. England and Wales (or Wales), Scotland or Northern Ireland); o Whether the liability of the members is to be limited and if so whether by shares or guarantee; and; o Whether the company is public or private; • In the case of a company with a share capital, the application must also include a statement of the capital and initial shareholdings, including the name and address of the subscriber. • A statement of the proposed officers, being the first director and company secretary (unless in the case of a private company, where the appointment of a company secretary is optional); • A statement of the intended registered office address. <p>On completing the online form if the company name provided cannot be used the website will alert you to this and you have the option of selecting another name. Fees for filing incorporation documents are as follows: GBP 12 for a Web filed incorporation and GBP 40 for paper filers (or GBP 100 for a same day service). The standard digital registration fee through a third party agent is GBP 13 (or GBP 30 for a same day service). There is no requirement for a company to use a third party agent. Third party agents may charge additional fees as well as the standard registration fee.</p> <p>In case the company chooses to retain incorporation agents to file for registration, in addition to the above documents, the application file must include the agents' name and address. Note that in case the company wants to amend model articles of association or company memorandum it cannot file for registration online via www.gov.uk/register-a-company-online. Instead, the company must use professionals to compose incorporation documents and submit them via specialized software to Companies House.</p> <p>Registration is typically completed within a few hours.</p>		
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2	<p align="center">Contact HMRC and register for VAT</p> <p align="center"><i>Agency : HMRC</i></p> <p>A business will need to register for VAT if its taxable goods and services supplied within the UK for the previous 12 months is more than the current registration threshold of £83,000 (as of April 2016) or the business expects it to go over that figure in the next 30 days alone, it must register for VAT. However, the business may also voluntarily choose to register for VAT if its VAT taxable goods fall under the £83,000 threshold.</p> <p>Most businesses, including Limited Companies, can register for VAT account online at: https://online.hmrc.gov.uk/registration or send paper forms through the post. Most applications for VAT registration can be completed online but there are some circumstances where a business has to apply by post. To register online for VAT or use other VAT online services, a business will first need to sign up for HMRC Online Services or the Government Gateway.</p>	Less than one day (online procedure)	No charge
3	<p align="center">Contact HMRC and register for PAYE</p> <p align="center"><i>Agency : HMRC</i></p> <p>The company must contact the HMRC to set up a contribution scheme for national insurance and pay-as-you-earn (PAYE) tax, which deducts tax from employee wages or salary. The company will be issued with an activation PIN within 5 business days – typically less - and will have to activate this PIN within 28 days (or else request a new PIN). The company will use the PIN to register and enroll online. For security reasons, a check is run on the data provided. A small percentage of registrations who fail the security check can take longer. Otherwise, activation is instant.</p> <p>Since 6 April 2013, companies will need to report their PAYE in real time. This means that companies must either report online or require their accountants to submit reports every time they pay their employees.</p>	3 days, simultaneous with previous procedure	No charge
4	<p align="center">Sign up for employer's liability insurance</p> <p align="center"><i>Agency: Insurance company</i></p> <p>The Employers' Liability (Compulsory Insurance) Act of 1969 requires all employers in the United Kingdom to maintain employers' liability</p>	1 day	No charge

	<p>insurance from an approved insurance company. The minimum legal requirement for employers' liability insurance is a limit of indemnity of GBP 5,000,000. In addition, a fine of GBP 2,500 per day can be imposed if employer's liability insurance is not taken out.</p> <p>The Employers' Liability (Compulsory Insurance) Act of 1969 requires that proof of insurance be posted at the workplace. Since October 1, 2008, it is possible to display this information electronically, although a company that wishes to do this will need to ensure that its employees know how and where to find the certificate and have reasonable access to it.</p>		
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- Singapore** - The number of procedures required, be it a private company limited by shares, a partnership or a joint venture, is only three, which can be completed within a day, assuming that all prior approvals are obtained from the relevant government authorities. Instances whereby investors may not get immediate approval are also usually easily resolved. For certain sectors such as architecture and medicine, professionals are first required to obtain a professional or business license from the respective statutory boards or ministries in charge, before incorporating the company. As most of the procedures and applications are done electronically, the incorporation process for a company is relatively hassle-free. Post-incorporation, a company can commence its business operations immediately.

TABLE 1.26: STEPS INVOLVED IN STARTING BUSINESS IN SINGAPORE

S.No	Procedures	Time to complete	Associated Costs
1	<p>Registration on-line with ACRA including company name search and filing the company incorporation and tax number (GST) Agency: ACRA</p> <p>The Accounting and Corporate Regulatory Authority (ACRA) is the national regulator of businesses and public accountants in Singapore. Incorporation is done through Bizfile, an electronic filing system. An application for the approval and reservation of a company name is to be submitted online via Bizfile. Since 2007, Bizfile has been providing one-stop business facilitation services to customers at the point of</p>	Less than one day (online procedure)	SGD 315

	<p>registration. These services include reserving domain names, goods and services tax (GST) registration, subscribing for the relevant e-newsletter and registering for e-service alerts on latest government procurement opportunities, activating Customs Account and application for a corporate bank account. An application fee of SGD 15 is payable for each approved company name. It can generally be completed within an hour after payment online. Once a name has been approved, it will be reserved for 60 days. A one-time application for the extension of the reservation period by a further 60 days can be made before the expiry date.</p> <p>Entrepreneurs registering a new business can purchase the Business Profile on line at the same time of registration, when filling up the incorporation forms. The processing time is about 15 minutes from the time of successful submission of all documents and all information, and the registration fee payable is SGD 300. The ACRA will issue a notice of incorporation via electronic mail to the law firm or professional firm engaged for the purposes of incorporation upon the successful incorporation of the company together with the registration number of the company.</p> <p>The registration with the Inland Revenue Authority of Singapore (IRAS) for the goods and services tax (GST) when (a) its annual taxable turnover exceeds SGD 1 million can be done using the same online forms.</p>		
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2	<p>Make a company seal Agency: Seal maker</p> <p>The company seal is not mandatory but it is still a common practice for entrepreneurs. It is generally obtained from the company seal manufacturers. Generally a market rate of SGD 40 will be charged if the seal is to be collected within 3 days or approximately SGD 70 if the seal is to be collected within 1 day</p>	1 day	SGD 70
3	<p>Sign up for Employee Compensation Insurance at an insurance agency Agency: Insurance Agency</p> <p>Under Section 23(1) of the Work Injury Compensation Act (WICA), Chapter 354, of Singapore, every employer shall insure and maintain insurance under one or more approved policies with an insurer against all liabilities which the company may incur under the provisions of this Act in respect of any employee employed by the company unless the Minister, by notification in the Gazette, waives the requirement of such insurance in relation to any employer.</p> <p>Time and cost may depend on the arrangement between the company and the insurance agency.</p>	1 day	No charge

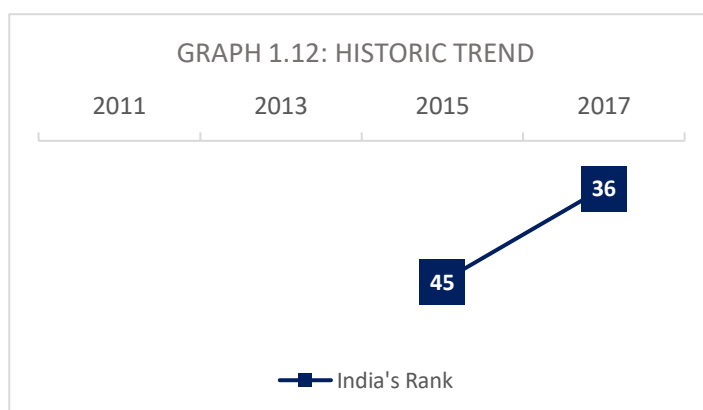
Note – Indicator 1.10 & 1.11 are merged as both are interdependent and both rely on the extent and effect of Taxation.

Indicator 1.10: Extent and Effect of Taxation on Incentives to Work

Definition: “In your country, to what extent do taxes reduce the incentive to work?”

Source: World Economic Forum, Executive opinion Survey

Value: On 1 to 7 scale (1 = significantly reduce the incentive to work, 7 = does not reduce incentive to work at all)



Graph 1.12 indicates the historic trend of India’s rank in indicator 1.10. This indicator was introduced in 2015. In 2017, India’s rank increased by 9 positions as compared to 2015. This indicator contributes 0.125% to the country score.

TABLE1.27: PERFORMANCE OF COUNTRIES

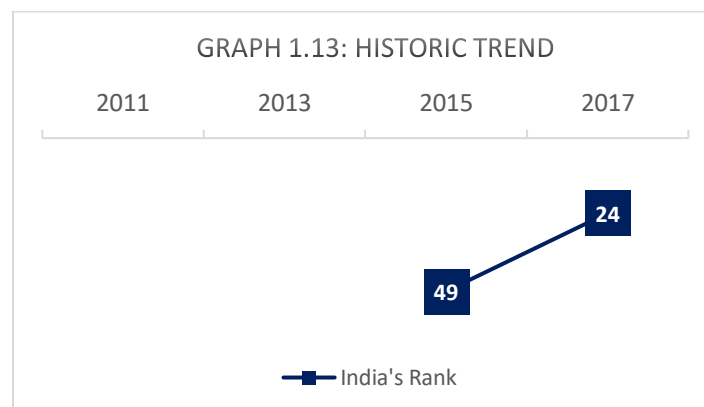
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Qatar	2	6.26	1	6.33	Top Performer
United Arab Emirates	3	6.22	2	6.21	Top Performer
Singapore	4	5.99	3	6.14	Asian Peer
India	45	3.91	36	4.36	

Indicator 1.11: Extent and effect of taxation on incentives to invest

Definition: “In your country, to what extent do taxes reduce the incentive to invest?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1 = significantly reduce the incentive to invest, 7 = do not reduce the incentive to invest at all)



Graph 1.13 indicates the historic trend of India’s rank in indicator 1.11. This indicator was introduced in 2015. In 2017, India’s rank increased by 25 positions as compared to 2015. This indicator contributes 0.125% to the country score.

TABLE 1.28: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United Arab Emirates	2	6.33	1	6.22	Top Performer
Bahrain	1	6.49	2	6.07	Top Performer
Hong Kong SAR	6	5.68	3	6.03	Asian Peer
India	49	3.92	24	4.5	

History of Indicator: In the year 2011 and 2013, this indicator was named “Extent and effect of taxation” (for both on work and investment combined). India’s rank was decreasing until 2015, but jumped to a good figure of 24 due to change in government’s policies for Ease of Doing Business.

Government Initiatives

- **Skill Development as a Responsibility** - Skill development sector is crucial for putting India back on the world map. Government is hoping for tax benefits in a bid to attract more investment for the sector. Government has decided that all companies involved in developing skill would be exempted from income tax or service tax. 200% tax benefits should be given to companies’ spending money on CSR to incentivize them for spending on the segment. The skills segment can

further evolve and cater to the country's growing skill needs if all large industries are motivated to spend transparently on skills training.⁴⁶

- **Impact of GST on perception of Investing in India. (Goods and Service Tax)**

- With an aim of simplifying tax structure in India, GST proposes to remove the geographical obstacles for trading, and transform the entire nation to 'One Common Market Place.' Previously, there were separate laws for separate levy. For instance, Central Excise Act, 1944, respective State VAT laws etc. With GST regime, there will only be one such law, as GST will subsume various indirect taxes⁴⁷.
- The previous tax regime had separate rates, such as, Excise @ 12.36 % and Service Tax @ 14%. With GST, there is only one CGST rate and a uniform rate of SGST across all states.
- Pre-GST, there was no such power to both Centre and State on same subject tax matter. With GST on board, both Centre and State are vested with the concurrent power to make laws with respect to goods and services tax, as proposed in Article 246A of the Constitution. The intra-state trade now comes under the jurisdiction of both Centre and State.
- Previously, tax compliance was complicated owing to the multiplicity of laws and their provisions to be followed. With GST, tax compliance would be much easier, as only one law subsuming other taxes would need to be followed.
- Previously, tax was levied at two stages in broad manner production and consumption, i.e., when product moves out of factory and also at retail outlet. GST is to be levied only at final destination of consumption and not at various points. This brings more transparency and corruption free tax administration.
- It has led to the removal of multiple taxation regimes and cascading tax effects. Due to the lower burden of taxes, overall costs have decreased with subsequent increase in production. This is also gradually reducing the burden on the end consumer. Black money, fraudulent practices and tax evasion have reduced, especially as reforms like the E-way bill bring in more control and transparency. Consequently, government revenues have increased as a result of the extended tax base; this has led to a healthy economic outlook.
- The GST will have a long-term impact on the country's GDP growth, ease of doing business, expansion of trade and industry, and the 'Make in India' initiative. Most importantly, it will be significant in establishing and promoting honest business practices, which will propel India towards becoming a significant economic power⁴⁸.

The impact of introduction of GST is visible from the positively altered perception of investors and a surge in the number of individuals willing to invest in the Indian market. This is due to considerable ease from the previously tedious and time consuming processes involved in taxation.

⁴⁶ <https://www.businessinsider.in/Budget2016-Give-tax-incentives-to-India-Inc-for-skill-development-as-CSR/articleshow/51057269.cms>

⁴⁷ <https://www.greengst.com/difference-between-current-tax-structure-and-gst/>

⁴⁸ <https://qrius.com/the-future-of-gst-what-will-be-the-long-term-impact-on-the-indian-economy/>

Proposed Action Plan

Ministry: Ministry of Finance

Short Term Plan

- **Sector wise impact assessment of GST**

A sector wise impact assessment study involving taxpayers as well as experts of the sector will help in implementing changes and policy interventions so as to improve the current structure and rectify loopholes, if any.

Long Term Plan

- **Enhancing Research & Development (R&D) structure**

- There are 250% deductions offered in the expenditure incurred for R&D carried out in Singapore.⁴⁹
- These deductions are offered in various stages, 200% deduction is given for first SGD (Singapore Dollar) 1,00,000 of qualifying expenditure incurred to register qualifying intellectual property (IP), and 200% deduction for the first SGD 1,00,000 for expenditure incurred to license qualifying IP.
- 100% deduction is available to Indian companies/entities for any capital expenditure (except land and building) on R&D related to the business. Indian companies incurring expenditure on scientific research on an approved in-house R&D facility are entitled to a weighted deduction of 150% of the capital and revenue expenditure (excluding the cost of land and buildings).
- **Ministry of Finance further needs to raise such exemptions to provide an enabling environment for growing research and development in India.**

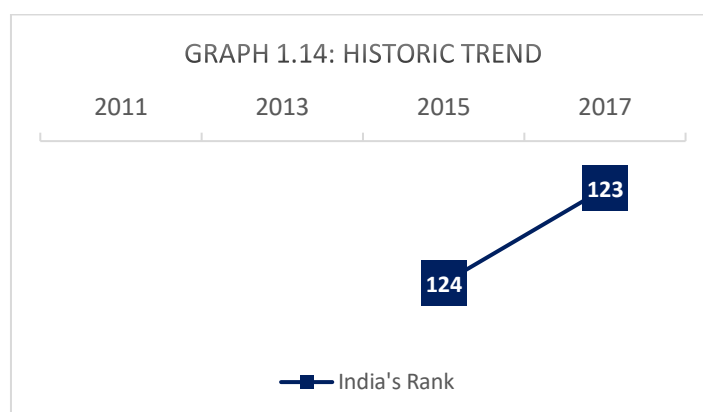
⁴⁹ <http://taxsummaries.pwc.com/ID/Singapore-Corporate-Tax-credits-and-incentives>

Indicator 1.12: Total Tax Rate

Definition: This indicator refers to a combination of profit tax (% of profits), labour tax and contribution (% of profits) and other taxes (% of profits). The total tax rate measures the amount of taxes and mandatory contributions payable by a medium-size company, expressed as a share of commercial profits. The total amount of taxes is the sum of five different types of taxes and contributions payable after accounting for deductions and exemptions: profit or corporate income tax, social contributions and labour taxes paid by the employer, property taxes, turnover taxes, and other small taxes.

Source: World Bank/International Finance Corporation, Doing Business 2017 Equal Opportunity for all

Value of the country: Profit tax (% of profits) + Labour tax and contribution (% of profits) + other taxes (% of profits)



Graph 1.14 indicates the historic trend of India's rank in indicator 1.12. This indicator was introduced in year 2015. In 2017, India's rank increased by 1 position as compared to year 2015. This indicator contributes 0.99% to country score.

TABLE 1.29: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Qatar	2	11.3	1	11.3	Top Performer
Kuwait	3	12.8	2	13	Top Performer
Bahrain	4	13.5	4	13.5	Top Performer
India	124	61.7	123	60.6	

- **Government Initiative**

- Under union budget 2018, Government has declared to decrease corporate tax rate from 30% to 25% over the period of 2 years, which will be applicable to companies having turnover of less than Rs.250 crores during 2016-2017 so as to help micro, small and medium enterprise to

boost economy. It is also anticipated that the revenue which has been sacrificed due to this move, will bring great economic reform that will enhance the overall tax system.

- The new Goods and Services Tax (GST) is a uniform tax regime that will replace the current convoluted system of separate taxes at the national and state levels, and is likely to boost foreign investment in various sectors, including real estate⁵⁰. According to ease of doing business, Implementation of Goods & Service Tax (GST) will lead to increment in tax compliance and will attract more foreign direct investments across sectors due to tax transparency. Some of the other major benefits of GST implementation include, reduced logistics cost, supply chain efficiency, better penetration of markets and export effectiveness⁵¹.

Proposed Action Plan

Ministry: Ministry of Finance

Long Term Plan

- **Reducing the Taxes:**

TABLE 1.30: TAXES BY TYPES

Taxes by Types	INDIA		CHINA	
	Delhi	Mumbai	Shanghai	Beijing
Profit Tax	21.70%	21.70%	10.60%	12.70%
Labour Tax	20.30%	20.30%	49.10%	40.80%
Other Taxes	10.10%	10.10%	8%	7.90%

Source: Doing Business report, 2018

- As shown in Table 1.30, India has high rate for Profit tax amounting for approximately 22% on the profits of businesses. **China's** revised individual income tax law that came into force in October (2018) added additional deductions for children's education, continuing education, treatment for serious diseases, caring for the elderly, as well as housing loan interests and rents⁵² from the taxable incomes.
- The temporary deduction rules were made under the principles of being fair & reasonable and at the same time keeping it simple so that it will be easy to implement to effectively reduce burdens on people so as to improve their lives¹.

⁵⁰ <https://www.abode2.com/indias-biggest-tax-reform-will-boost-the-real-estate-industry/>

⁵¹ <https://economictimes.indiatimes.com/news/economy/finance/implementation-of-gst>

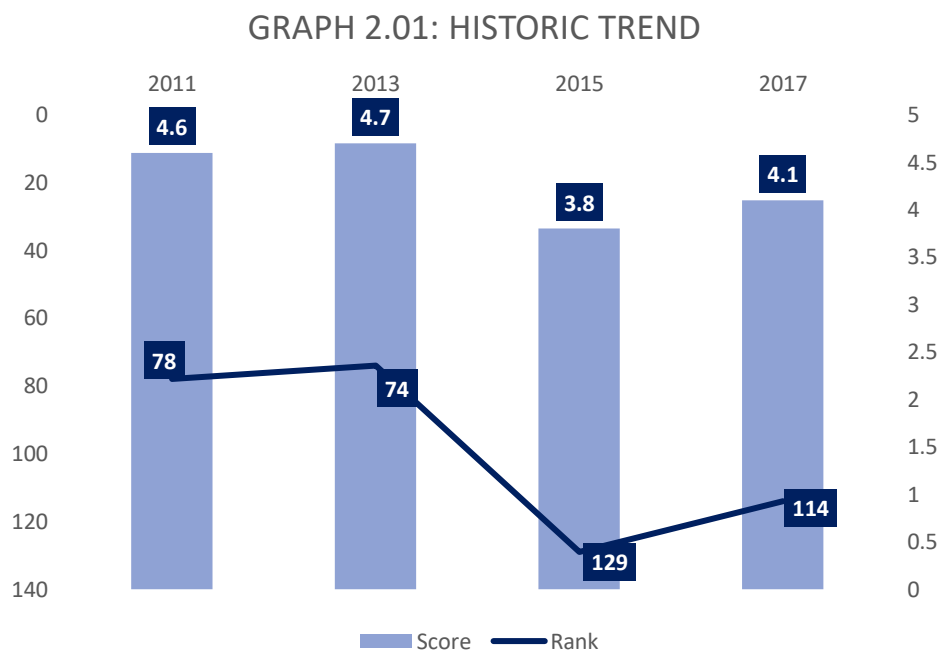
⁵² http://www.xinhuanet.com/english/2018-10/20/c_137547189.htm

- China started implementing a new standard for individual income tax from October (2018). The threshold for personal income tax exemption was raised from 3,500 yuan to 5,000 yuan per month¹. The latest plan also includes new measures to combat tax avoidance, which is rampant in China for individuals.
- These measures are aimed to strengthen real estate tax collection, preventing the use of offshore tax havens, and crack down on “unreasonable commercial arrangements” designed to avoid taxes³.
- Value-added taxes are the largest component of Chinese tax revenue, comprising 39 per cent of tax collections last year. Corporate income taxes contributed 22 per cent³.
- China is also moving forward with plans to impose a property holding tax, but that process which is more controversial, is expected to take several more years.

Pillar 2: Safety and Security

Definition: This pillar measures the extent to which a country exposes tourists and businesses to security risks mainly related to serious harm to people (violence and terrorism), petty crime is not taken into account. **Pillar 2** has a total of **5 Indicators** stated below –

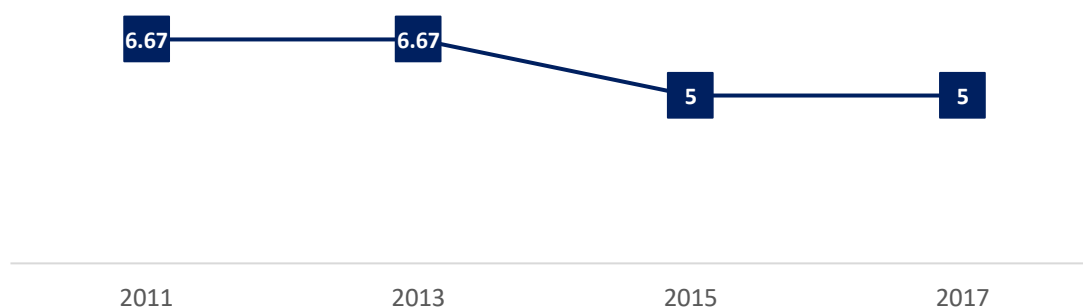
1. Business cost of crime and violence
2. Reliability of police services
3. Business cost of terrorism
4. Index of terrorism incidence
5. Homicide rate



Graph 2.01 indicates the historic trend of India's rank and value in Pillar 2. India's rank has decreased from 78th position in 2011 to 114th position in 2017

Weightage Shift:

GRAPH 2.02: WEIGHTAGE SHIFT



Graph 2.02 indicates the overall contribution of Pillar 2 i.e. Safety and Security in India's score. At present, 5% weightage is given to this pillar. The weightage of this pillar has decreased by 25% in the year 2015.

TABLE 2.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in weightage (%)
Business cost of crime and violence	1.67	1	-40.12
Reliability of police services	1.67	1	-40.12
Business cost of terrorism	1.67	1	-40.12
Index of terrorism incidence	NA	1	NA
Homicide rate	NA	1	NA

NA = Not Applicable, the indicator was not introduced in that year

Table 2.01 shows the percentage of contribution that each indicator has on the overall score of India.

Disclaimer- This pillar deals with parameters of national security and the actions taken by the government to curb those issues. These actions and classified information do not lie in the purview of the common people. Hence, it will be inappropriate to comment on the current measures or situations related to the pillar.

Based on our research and global best practices, suggestions have been provided for respective indicators in positive light for overall improvement of the pillar.

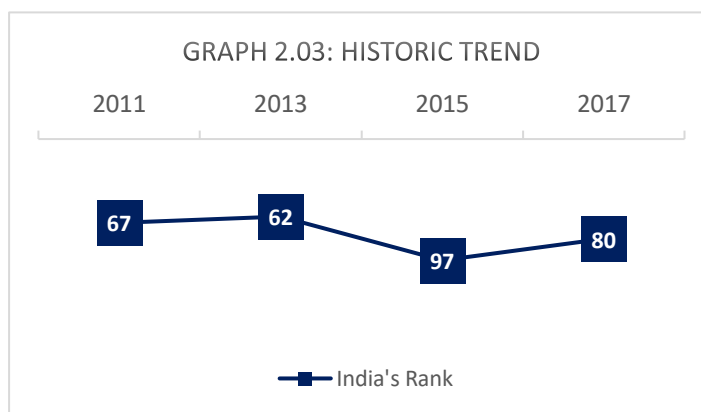
Note: Indicator 2.01, 2.02, 2.03, 2.04 & 2.05 are being shown as a single indicator as they are inter-related and can have a common action plan since a common strategy aimed at improving safety and security can have desired effects on all these indicators.

Indicator 2.01: Business costs of crime and violence

Definition: “In your country, to what extent does the incidence of crime and violence impose costs on businesses?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1= to a great extent; 7= not at all)



Graph 2.03 indicates the historic trend of India’s rank in indicator 2.01. In 2017, India’s rank increased by 17 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 2.02: PERFORMANCE OF COUNTRIES

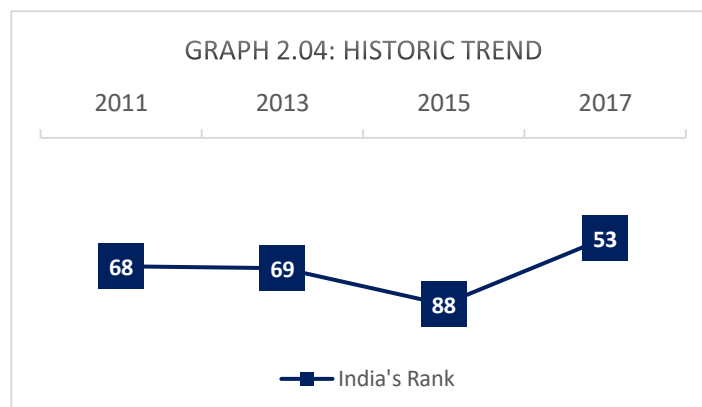
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United Arab Emirates	2	6.51	1	6.43	Best Practice
Singapore	4	6.17	7	6.15	Asian Peer
Norway	20	5.60	11	5.82	Best Practice
India	97	3.84	80	4.36	

Indicator 2.02: Reliability of Police Services

Definition: “In a country, to what extent can police services be relied upon to enforce law and order?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1 = cannot be relied upon at all, 7 = can be completely relied upon)



Graph 2.04 indicates the historic trend of India's rank in indicator 2.02. In 2017, India's rank increased by 35 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 2.03: PERFORMANCE OF COUNTRIES

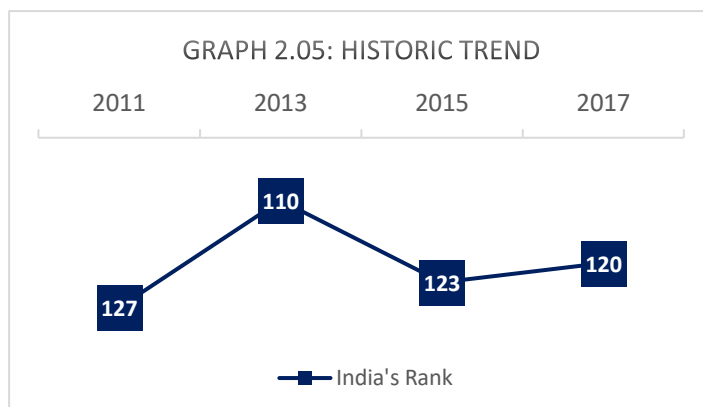
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Finland	1	6.73	1	6.78	Top Performer
New Zealand	2	6.48	2	6.61	Top Performer
Switzerland	5	6.22	3	6.56	Top Performer
United States	22	5.73	23	5.97	Best Practice
India	88	3.82	53	4.73	

Indicator 2.03: Business Cost of Terrorism

Definition: “In your country, to what extent does the threat of terrorism impose costs on businesses?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1 = to a great extent, 7 = not at all)



Graph 2.05 indicates the historic trend of India's rank in indicator 2.03. In 2017, India's rank increased by 3 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 2.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Lesotho	76	5.19	1	6.71	Top Performer
Uruguay	4	6.52	2	6.52	Top Performer
Finland	1	6.68	3	6.43	Top Performer
Indonesia	104	4.61	113	4.21	Asian Peer
India	123	3.96	120	4.00	

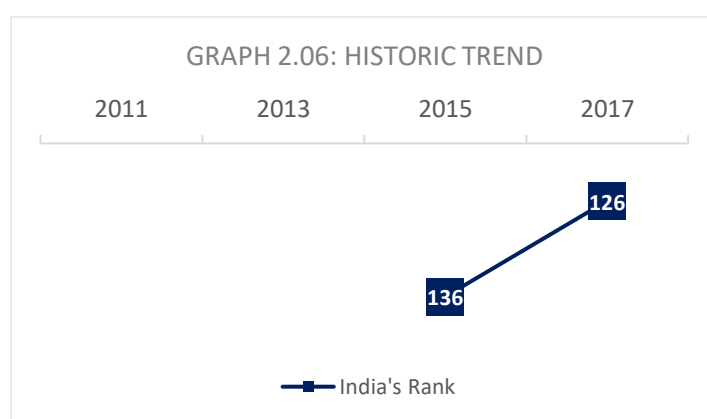
Indicator 2.04: Index of terrorism incidences

Definition: This indicator refers to a simple average of the number of terrorism related casualties and the number of terrorist attacks, each normalized on a scale of 1 to 7 using a minimum maximum formula where 1 is most attacks/casualties and 7 is no attack/casualties.

Source: World Economic Forum, National Consortium for the Study of Terrorism and Response to Terrorism, Global Terrorism Database

$$\text{Value of country} = \frac{\text{Total number of terrorist attacks} + \text{Total number of terrorism casualties}}{2}$$

Where both, Total number of terrorist attacks and Total number of terrorism casualties have been normalized on a scale of 1 to 7.



Graph 2.06 indicates the historic trend of India's rank in indicator 2.04. This indicator was introduced in year 2015. In 2017, India's rank increased by 10 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 2.05: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Vietnam	1	7	1	7	Asian Peer
Singapore	1	7	1	7	Asian Peer
Hong Kong	1	7	1	7	Asian Peer
Norway	107	6.74	1	7	Best Practise
France	120	6.15	110	5.48	Best Practise
India	136	1	126	1	

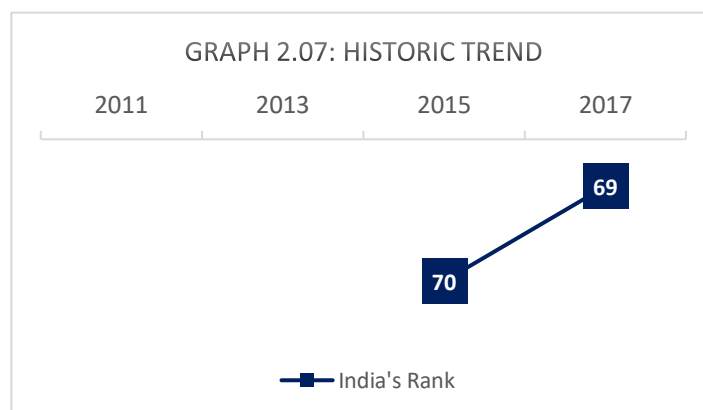
6 countries have 1st rank in this indicator as all of them have same value.

Indicator 2.05: Homicide rate

Definition: This indicator refers to the number of Homicide cases per 100000 population

Source: United Nations Office on Drugs and Crime, National Criminal Records Bureau of India

$$\text{Value of country} = \frac{\text{Total Number of Homicide cases} \times 100000}{\text{Population of the country}}$$



Graph 2.07 indicates the historic trend of India's rank in indicator 2.05. This indicator was introduced in year 2015. In 2017, India's rank increased by 1 position as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 2.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Cyprus	50	2	1	0.1	Top Performer
Greece	42	2	1	0.1	Top Performer
Iceland	2	0	3	0.3	Top Performer
India	70	4	69	3.2	

Proposed Action Plan

Ministry: Ministry of Home Affairs, Ministry of Law and Justice

Short Term Plan

- **Community Awareness & Educational Activities Program**

Mass awareness regarding introduction of new provisions in police services, false information circulation and dangers of violent extremism is quite low in India. According to a study, it is stated that more than one-fifth of total population of India (around 21%) know that “all women police station” are present across India and about 16% are aware of the introduction of the child helpline number.⁵³ A report of Indian Council for Research on International Economic Relations states the adverse effects of false information and mentions that around 16,315 hours of internet shutdowns was done in anticipation of, and to prevent further escalation of, law and order situations. In several cases, rumour-mongering or provocative messaging on social media and instant messaging platforms had driven decisions to order Internet shutdowns between 2012 and 2017, costing the country an estimated \$3.04 billion⁵⁴. Thus, to curb the above-mentioned issues, following examples of various countries can be followed by Government of India:

- **“SGSecure” public awareness campaign in Singapore**⁵⁵ was done to improve emergency preparedness, promote security awareness, and build national resiliency by launch of SG secure mobile application where citizens can receive alerts during major emergencies, can seek assistance and provide information to the authorities. They also launched an SGSecure website which provides facts about growing threats, E-learning module and is focussed on three areas as follows:
 - **Stay Alert (Community Vigilance):** Look out for and report any security threat and remain vigilant after an attack.
 - **Stay United (Community Cohesion):** Build stronger community ties and safeguard Singapore's racial and religious harmony and stand together in peacetime and after an attack.
 - **Stay Strong (Community Resilience):** Learn how to protect ourselves and those around us if caught in an attack and help each other to bounce back quickly after any incident.
- **Austin City (USA)** is the only city to have Instagram account of its police department. They upload videos about safety tips and General Awareness to reach out to masses. This has helped them in improving their image amidst the public.⁵⁶ Promotion and informational activities like social media visibility, newspaper advertisements, radio shows etc have helped in spreading awareness as well as building strong relation with citizens.

⁵³ <http://commoncause.in/pdf/SPIR-2018-c-v.pdf>

⁵⁴ http://icrier.org/pdf/Anatomy_of_an_Internet_Blackout.pdf

⁵⁵ <http://economicsandpeace.org/wp-content/uploads/2016/11/Global-Terrorism-Index-2016.2.pdf>

⁵⁶ https://www.instagram.com/austin_police/?hl=en

Ministry of Home Affairs with the help of Police Departments in various states can implement community awareness and educational activities program across India (more importance should be given to rural backward areas in states such as Bihar, Punjab, and Mizoram) which apprise about all the provisions of security along with dangers of violent extremism and aims at building national resiliency by improving emergency preparedness. Newspaper and advertisements can be used to educate people about impact of false information and this should be the first step towards spreading awareness about the same. **Independent fact-checkers can also be employed by various state departments to prevent such false news on Social Media.**

Medium Term Plan

- **Capacity Building Training (CBT) Programs for Officials and Civilians**

Quality education in self-defence, military drills, and awareness regarding emergency situations is not covered properly in majority government schools, public and private firms. Also, lack of gender friendly atmosphere in police stations, misbehaviour by and the extortionist nature of police personnel in India inhibits women from visiting police stations⁵⁷. This in turn reduces people's interaction with the police and subsequently results in decreased trust levels. The above challenges can be addressed by the following methods:

- **CBT for Officials:** Above challenges can be overcome by providing soft skill training programs where Policemen should be trained in "soft skills" along with management and communication skills such as responding to telephone calls, talking to visitors etc. Training can be outsourced to third party where experts give training to police personnel once or twice in a month. Also, training can be provided in interviewing of victims and witnesses and scientific interrogation of suspects and accused.⁵⁸ For example: In 2013, a 2-day workshop on "Responsibility of police department in changing environment and expectations and stressing on the importance of police dealing with the public" was held with the help of Police and NGOs⁵⁹. **Hence, Ministry of Home Affairs in collaboration with Police Department, NGOs and private entities should conduct soft skills training programs for police personnel and also, sensitization workshops towards issues of gender, SC/ST, minority, children, physically challenged and other weaker sections once a month. This will not only improve the quality of Police services but will also enhance interaction level of people with Police.**
- **CBT for Civilians:** Quality education can be provided to all by improving the government's service provision capacity, targeting educational access for girls and self-defence training in schools. Trainings must be made compulsory and a part of the curriculum in schools. Help to establish vocational education opportunities for marginalized youth and support to community-based schools should be provided by the government. For example, In

⁵⁷ <http://commoncause.in/pdf/SPIR-2018-c-v.pdf>

⁵⁸ <http://www.bprd.nic.in/WriteReadData/userfiles/file/201808160350402786762PeopleFriendlyReportstento states.pdf>

⁵⁹ <http://www.amity.edu/events/eventdetails.asp?id=2777>

Afghanistan, USAID (United States Agency for International Development) programs helped train 154,000 teachers, including more than 54,000 female teachers in military training. This improved the availability of trained female teachers and also the enrolment rate of female students because the cultural norms in Afghanistan sharply limit the degree to which male teachers can teach female students.⁶⁰ Hence, **Ministry of Home Affairs can collaborate with USAID or similar type of NGOs with help of military officials hired specifically for training purpose to provide compulsory training to all men, women and children through a planned method.**

- **Anti-money laundering Laws**

- Money laundering can be regarded as a multiplier of criminal activities as it gives economic power to criminals. Laundering makes crime worthwhile by permitting offenders to make use of the proceeds of crime, which in turn encourages criminal behaviour.
- Various anti-money laundering and counter-terrorist financing measures were taken in most of the European countries including Norway and France following the guidelines laid down by The Financial Action Task Force. The countries are required to criminalize financing the travel of individuals who travel to a state other than their state of residence or nationality for the purpose of the perpetration, planning, or preparation of, or participation in, terrorist acts or the providing or receiving of terrorist training.⁶¹
- Government of India has made amendments in the Prevention of Money Laundering Act in 2009 that has increased vigil on the flow of money and funding received by terrorist organizations.
- The Prevention of Money Laundering (Amendment) Bill 2011 was necessitated in view of India being an important member of the Financial Action Task Force and to bring prevention of money laundering legislation on par with global norms. The said Bill is still pending for approval in the Parliament. **Hence, a short-term plan for Ministry of Home Affairs and Ministry of Law and Justice is to take action to get the bill passed in the parliament.**

Long Term Plan

- **Legislation & Law Enforcement**

- Country Report on Terrorism 2016 by US department states that major changes are required to India's counterterrorism laws. India has continued to address terrorism-related activities through its existing but not so effective statutes, including the Unlawful Activities Prevention Act (UAPA) (1967), the South Asian Association for Regional Cooperation Convention on Suppression of Terrorism Act (1993), and various state-level laws⁶². Hence, proper measures

⁶⁰ <http://economicsandpeace.org/wp-content/uploads/2016/11/Global-Terrorism-Index-2016.2.pdf>

⁶¹ <http://www.fatf-gafi.org/home/>

⁶² <https://www.state.gov/j/ct/rls/crt/2016/>

towards utilization of the power of government in right direction are required so that decentralization of power can shape the existing laws in better ways and can help in providing more stability.

- Decentralisation is defined as enabling any one part to substitute for the other. When one part of the system is negatively affected, one or several other parts may take over. A country that is the prospective target of terrorist attacks can reduce its vulnerability by implementing various forms of decentralisation.⁶³
 - **Indonesia**, in 2000, at a stroke replaced the previous system of centralized government and development planning with a wide range of decentralization programs. The reforms gave greater authority, political power, and financial resources directly to regencies and municipalities, by-passing the provinces. The powers transferred include those of executing a wide range of responsibilities in the areas of health, primary and middle-level education, public works, environment, communication, transport, agriculture, manufacturing, and other economic sectors. At the same time, the government replaced the antiquated cash-based, single-entry system of public finance with a modern double-entry accounting system that uses a single treasury account; is performance based; and has transparent management of the public treasury, tight expenditure and financial controls with performance indicators, computerized reporting, and a tightly scheduled auditing system.⁶⁴ **Thus, Ministry of Law and Justice, on similar lines, can think of a mechanism to implement decentralizing power system in India.**
- **Enhancing Countering Violent Extremism (CVE)**
 - CVE refers to proactive actions to counter efforts made by violent extremists to radicalize, recruit, and mobilize followers for violence. CVE actions intend to address specific factors that facilitate violent extremist recruitment and radicalization to violence. Countering Violent Extremism in India has been a least active initiative and a serious effort should be taken to implement CVE in the country. This can be done by following below mentioned guidelines which have also been implemented by U.S. Agency for International Development (USAID):
 - Expand international political will, partnerships, and expertise to better understand the drivers of terrorist radicalization and recruitment and to mobilize effective interventions.
 - Encourage and assist partner governments to adopt more effective policies and approaches to prevent and counter the spread of violent extremism, including changing unhelpful practices where necessary.
 - Employ foreign assistance tools and approaches, including development, to reduce specific factors that contribute to community support for violent extremism in identifiable areas or put particular segments of a population at high risk.

⁶³ <https://d-nb.info/1026857384/34>

⁶⁴ <https://www.adb.org/sites/default/files/publication/201116/adb-wp601.pdf>

- Empower and amplify locally credible voices that can change the perception of violent extremist groups and their ideology among key demographic segments.
 - Strengthen the capabilities of government and non-governmental actors to isolate, intervene with, and promote the rehabilitation and reintegration of individuals caught in the cycle of radicalization to violence.⁶⁵
 - **Pakistan Transition Initiative (2007–Present):** USAID’s Office of Transition Initiatives with its programs in Karachi and Southern Punjab seeks to counter violent extremism in order to build a foundation for political and social development in conflict-prone communities in Pakistan. Working with concerned ministries, local governments, community groups, and the private sector, USAID provides positive opportunities for residents to develop skills, reinforce values of tolerance and mutual respect, and develop counter-narratives. Separately, in Pakistan’s FATA/KP region, USAID supports the Pakistani government’s efforts to make communities resilient to extremists by strengthening community-government ties through locally-driven projects.⁶⁶
 - **Hence, Ministry of Home Affairs can adopt similar policies of USAID to implement CVE program in India in the areas which have been majorly affected by the terrorism activities in recent years (Mumbai, Delhi, West Bengal etc.)**
- **Skill and Infrastructure Development**
 - Lack of proper infrastructure and facilities such as vehicles, phones or wireless communication devices contributes in increase in the response time for any action thus deteriorating public image of police services in India. Manpower deficiency is another factor that further deteriorates this situation. As per the report published, there was shortfall of 5.6 lakh police personnel against the sanctioned strength of 22.8 lakh and women constitute just 7.28 % of the police force in India.⁶⁷ Also, data from the United Nations Office on Drugs and Crime (UNODC) shows that in 2013, India's ratio of 138 police personnel per lakh of population was the fifth lowest among the 71 countries which were studied⁶⁸.
 - Various studies on the lives of police force have revealed that while work pressure and complexities in handling law and order have grown at an enormous pace, manpower growth has not been commensurate. There is a link between vacancies and lack of adequate training facilities.⁶⁹ The latter may be one reason preventing state police forces from quickly filling up the posts. To address this, various experts have suggested that some trained Central Armed Police Forces personnel can be deputed in the states and simultaneously, training should be made an attractive option for these prospective trainers.

⁶⁵ <https://www.state.gov/j/ct/rls/crt/2016/>

⁶⁶ <https://www.usaid.gov/countering-violent-extremism>

⁶⁷ <https://economictimes.indiatimes.com/news/politics-and-nation/just-7-28-per-cent-women-in-police-forces-government-data/articleshow/63068249.cms>

⁶⁸ <https://economictimes.indiatimes.com/news/defence/indias-ratio-of-138-police-personnel-per-lakh-of-population-fifth-lowest-among-71-countries/articleshow/48264737.cms>

⁶⁹ http://niti.gov.in/writereaddata/files/document_publication/Strengthening-Police-Force.pdf

- Another reform is using technology to supplement manpower.
 - UAE is reducing their crimes by using⁷⁰ **AI (Artificial Intelligence) Crime Detection**: Cities with sources of real time information, ranging from traditional security cameras to smart lamps, which it can use to detect crimes as they happen. **UK** has also taken help of Artificial Intelligence (AI), the data collected has been used to detect gunfire and pinpoint where the gunshots came from⁷¹.
 - In **USA, Cameras and Surveillance** systems have been using AI to perform tasks like facial recognition, license plate reading and unattended bag detection for years. By performing the processing within the cameras, the process becomes faster and cheaper. It can also reduce the need for using significant bandwidth since only relevant information needs to be transmitted⁷².
- **Singapore's island-wide network** of police cameras has been helpful in fighting their domestic crime. They have installed over 62,000 cameras in 10,000 Housing and Development Board (HDB) blocks and multi-story car parks (MSCPs) as part of a program known as PolCam 1.0. PolCam is a multi-year public initiative to enhance the safety and security of neighbourhoods and public spaces through the use of a large network of police cameras. After successful implementation of their Polcam 1.0 program, they were planning to install 11,000 more cameras over the few years at 2,500 locations island wide under their PolCam 2.0 program⁷³.
- **Thus, on similar lines, Ministry of Home Affairs can collaborate with all state police departments to implement above mentioned advanced technologies to boost the infrastructure and capability of the police forces.**
- **Signing Country Program with UNODC (United Nations Office on Drugs and Crimes)**
 - A survey named "National Survey on Extent, Pattern and Trends of Drug Abuse in India" was conducted in year 2001 by UNODC that estimated a monthly prevalence rate of 3.2% in drug use in population aged between 12-60⁷⁴. India is the world's largest producer of licit opium and ketamine for pharmaceutical trade, but an undetermined quantity of opium is diverted to illicit international drug markets. India is also vulnerable to narcotics money laundering through the hawala system.⁷⁵
 - **Vietnam signed a Country Program with the United Nations Office on Drugs and Crime (UNODC)** which sets cooperation priorities between UNODC and the Vietnamese Government. The programme advocates and supports the ratification of those international

⁷⁰ <https://www.thenational.ae/uae/robocops-and-predicting-crime-dubai-police-plan-an-artificial-intelligence-future-1.698034>

⁷¹ <https://www.forbes.com/sites/andrewarnold/2018/04/21/can-ai-help-us-predict-and-prevent-crimes-in-the-future/#620245055d9a>

⁷² <https://www.wscpa.net/uploads/1/1/9/8/119821114/smr18nl.pdf>

⁷³ <https://www.straitstimes.com/singapore/installation-of-62000-police-cameras-in-10000-hdb-blocks-multi-storey-carparks-complete>

⁷⁴ https://www.unodc.org/documents/wdr/WDR_2010/2.0_Drug_statistics_and_Trends.pdf

⁷⁵ <https://www.nationmaster.com/country-info/stats/Crime/Illicit-drugs>

conventions & protocols for which UNODC acts as the worldwide custodian. It also helped with the adoption of related legislation within the Vietnamese legal system. Dedicated programme components are helping in the introduction of practices & materials which are required for successful implementation of up-to-date international standards in drug control and criminal justice.⁷⁶ The country programme responds to various challenges through five inter-related sub programmes mentioned below:

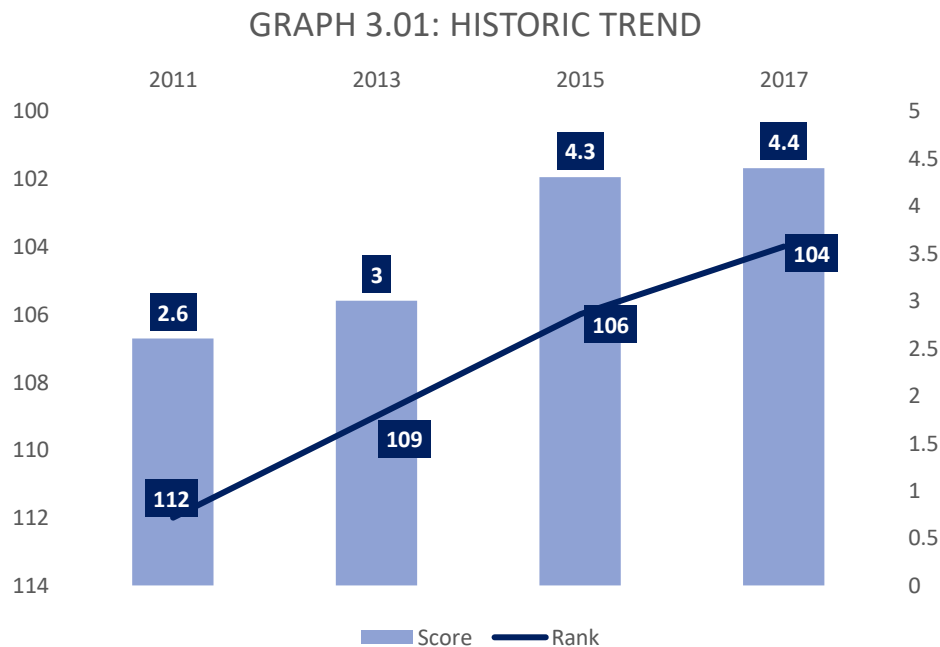
- Transnational organized crime and illicit trafficking;
 - Anti-corruption and money laundering;
 - Terrorism prevention;
 - Criminal justice; and
 - Drug demand reduction and HIV/AIDS
- **Hence, Ministry of Law and Justice, on similar lines as Vietnam, can sign a Country Program with The United Nations Office on Drugs and Crime (UNODC). It can also collaborate with Ministry of Home Affairs for its successful implementation.**

⁷⁶ <https://www.unodc.org/southeastasiaandpacific/en/vietnam/country-programme.html>

Pillar 3: Health and Hygiene

Definition: This pillar measures the availability of health resources such as physician density, access to basic sanitation, access to improved drinking water that is important for the comfort and health of travellers. In the event that tourists do become ill, the country health sector must be able to ensure they are properly cared. **Pillar 3** has a total of **6 indicators** stated below –

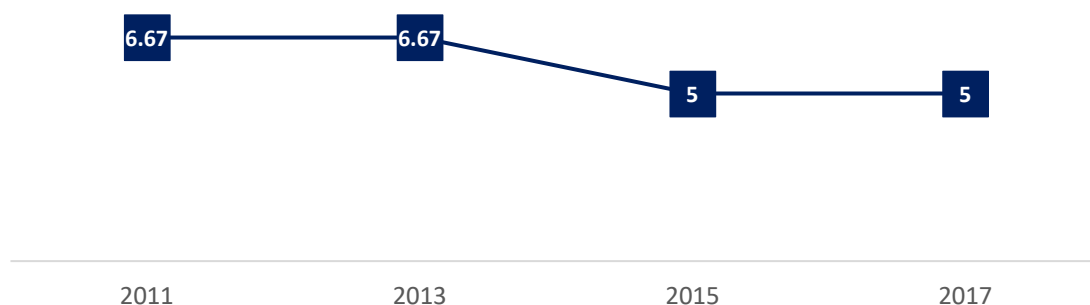
1. Physician Density
2. Access to improved sanitation
3. Access to improved drinking water
4. Hospital beds
5. HIV prevalence
6. Malaria incidence



Graph 3.01 indicates the historic trend of India's rank and value in Pillar 3. India's rank has increased from 112th position in 2011 to 104th position in 2017.

Weightage Shift:

GRAPH 3.02: WEIGHTAGE SHIFT



Graph 3.02 indicates the overall contribution of Pillar 3 i.e. Health and Hygiene in India's score. At present, 5% weightage is given to this pillar. The weightage of this pillar has decreased by 25% in the year 2015.

TABLE 3.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in Weightage (%)
Physician Density	1.67	1	-40.12
Access to improved sanitation	1.67	0.5	-70.06
Access to improved drinking water	1.67	0.5	-70.06
Hospital Beds	1.67	1	-40.12
HIV Prevalence	0.83	1	20.48
Malaria Incidence	NA	1	NA

NA = Not Applicable, the indicator was not introduced in that year

Until 2013, HIV prevalence was under the pillar of Human Resources. In TTCI report 2015 edition, HIV Prevalence became a part of the 3rd pillar and a new indicator (Malaria Incidences) was also introduced.

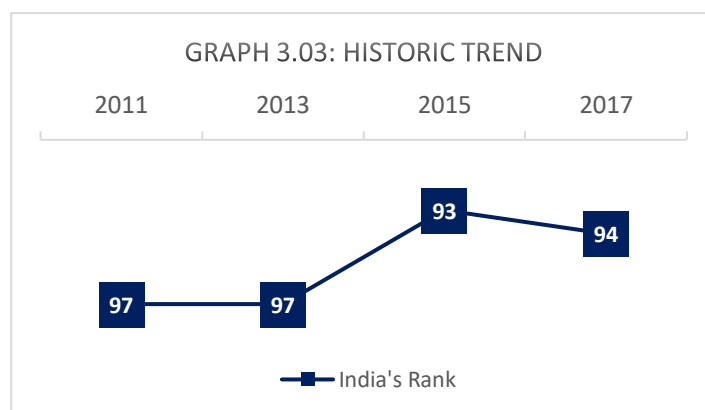
Table 3.01 shows the percentage of contribution that each indicator has on the overall score of India.

Indicator 3.01: Physician Density

Definition: This indicator refers to the number of physicians in the country per 1,000 population.

Source: The World Health Organization, Global Health Observatory Repository

$$\text{Value of country} = \frac{\text{Number of Physicians} \times 1000}{\text{Total Population}}$$



Graph 3.03 indicates the historic trend of India's rank in indicator 3.01. In 2017, India's rank decreased by 1 position as compared to year 2015. This indicator contributes 1% to the country score.

Data Source in India: WHO compiles data for the Global Health Observatory Repository (GHOR) from each country's respective medical council database. Hence, in case of India, Indian Medical Council provides this database to WHO.

TABLE 3.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Qatar	1	7.74	1	7.74	Top Performer
Spain	13	3.7	2	4.95	Top Performer
Greece	3	4.38	3	4.38	Top Performer
United Kingdom	38	2.79	40	2.8	Best Practise
India	93	0.7	94	0.7	

Government Initiative

- **National Progressive Strategies**

- As per WHO standards (1:1000), India requires 10 times more allopathic doctors which accounts to at least 6 lakhs additional government doctors than the number mentioned in the

data provided by Central Ministry. Thus, to overcome this shortage, following are some of the strategic⁷⁷ measures taken by Ministry of Health and Family welfare:

- Enhancement of maximum intake capacity at MBBS level from 150 to 250.
- Relaxation in the norms of setting up of Medical Colleges in terms of requirement for land, faculty, staff, bed/bed strength and other infrastructure.
- Strengthening/upgradation of State Government Medical Colleges for starting new post graduate courses/increase of PG seats.
- Establishment of new medical colleges attached with existing district/referral hospitals.
- The ratio of teachers to students has been revised from 1:1 to 1:2 or a maximum of 1:3 and there is an enhancement in the age limit for appointment of faculty from 65-70 years.
- **Ministry of Health and Family Welfare can closely review the progress of the above-mentioned strategies and if any further reforms are required based on variations in the scenario, appropriate changes should be initiated which would help in improving the Physician Density of the country in the long run.**

Proposed Action Plan

Ministry: Ministry of Health and Family Welfare, National Medical Commission (Earlier known as Medical Council of India).

Note: Medical Council of India (MCI), after 2018 ordinance is proposed to be replaced by National Medical Commission (NMC)

Short Term Plan

- **Recognition of AYUSH Doctors by MCI/NMC**
 - **AYUSH:** Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (**AYUSH**) was formed with focused attention for development of Education and Research in Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy.
 - **Osteopathy:** Practitioners of osteopathy are referred to as osteopaths. Osteopathy is a type of alternative medicine that emphasizes manual readjustments, myofascial release and other physical manipulation of muscle tissue and bones.
 - United Kingdom passed an act called “Osteopathy Act 1993” in which the General Medical Council (GMC) of UK recognized osteopathic practitioners as medical practitioners. Similarly, in **India**, there are 7.63 lakhs AYUSH⁷⁸ doctors but they are not recognised by MCI/NMC as general practitioners. Thus, **Ministry of Health and Family welfare can appeal to National Medical Commission to recognise these AYUSH doctors as medical practitioners. This would increase the physician density from 0.7 to 1.27.**

⁷⁷ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=177559>

⁷⁸ Ministry of AYUSH

- Assuming there is no change in the physician density of other countries, by recognising AYUSH doctors, India’s rank would jump by 18 places pushing its rank to 76 in this indicator.

TABLE 3.03: PHYSICIAN DENSITY INCLUDING AYUSH DOCTORS PER 1000 PEOPLE

Type of Doctors	Doctors registered under MCI	Physician Density per thousand people
Allopathy Doctors	1022859	0.702/1000
AYUSH Doctors	763000	0.57/1000
Total (AYUSH + Allopathy)	1785859	1.272/1000

Long Term Plan

- **Imposing fine on doctors migrating abroad**

- India is one of the largest “exporters” of medical doctors in the world. Till 2004, 71,290⁷⁹ Indian medical physicians have emigrated (latest data is not available). This 14-year-old data accounts for 7% of doctors currently present in India.
- According to The British Association of Physicians of Indian Origin (BAPIO), there are 40,000 Indian doctors in UK, while the American Association of Physicians of Indian Origin (AAPI) stats show 50,000 Indian doctors in US. About 20% of doctors working in Australia have received their basic education in India.⁸⁰
- To tackle a similar problem, United Kingdom is looking forward to imposing a fine of £220m on doctors moving abroad within 4 years of their graduation. This will ensure greater loyalty to the country’s health service sector. Because India is the single largest source of emigrating physicians in the world, **Ministry of Health and Family Welfare on similar lines as UK can start imposing fines on its doctors who are planning to move abroad which will also help in solving the problem of brain drain in the country.**

⁷⁹ The World Bank: Physician Brain Drain

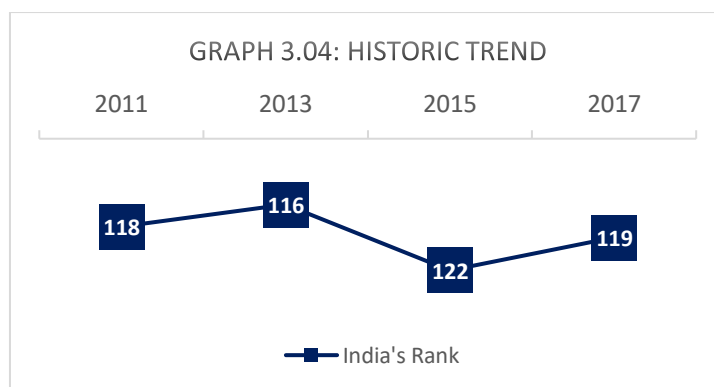
⁸⁰ Economic Times: Indian Healthcare: Stop the brain drain of doctors

Indicator 3.02: Access to improved sanitation

Definition: This indicator refers to the percentage of the population with at least adequate access to excreta disposal facilities that can effectively prevent human, animal and insect contact with excreta.

Source: The World Health Organization, Global Health Observatory Data Repository

$$\text{Value of Country} = \frac{\text{Number of people using adequate sanitation} \times 100}{\text{Total Population}}$$



Graph 3.04 indicates the historic trend of India's rank in indicator 3.02. In 2017, India's rank increased by 3 positions as compared to year 2015. This indicator contributes 0.5% to the country score.

TABLE 3.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Japan	1	100	1	100	Asian Peer
United States	1	100	1	100	Best Practise
India	122	36	119	39.6	

13 countries have 1st rank in this indicator as all of them have same value.

Swachh Bharat Mission (SBM)/Clean India Mission: SBM is a nationwide campaign, which was launched on 2nd October 2014 with an aim to make India Open Defecation Free by October 2019. As of 2nd October 2014, only 38.70% of the rural areas were open defecation free. 4 years after the launch of SBM, 99% of the whole country are open defecation free as per the officials from Ministry of Drinking Water and Sanitation. Up till now SBM is meeting its target and at this rate India would be declared ODF by 2019. This would drastically improve India's rank to 1st position by 2021.

Proposed Action Plan

Ministry: Ministry of Drinking Water and Sanitation (MDWS), Ministry of Housing and Urban Affairs

Short Term Plan

- **Safety, Security and Hygiene:**

- As of September 2017, data⁸¹ from the ministry of drinking water and sanitation claims that 12,526 community toilets (CT) have been built. However, in a survey conducted by SQUAT⁸² (Sanitation quality, usage, access and trends) in a rural village in Northern India, a major issue came into light that women do not feel safe going to community toilets (CTs) at night. Moreover, inadequate design, partially constructed toilets, poor maintenance, improper lighting, poor accessibility and irregular availability of water are some other problems of public toilets/ community toilets that discourage women to use them.
- **Therefore, collaboration between Ministry of Drinking Water and Sanitation, Ministry of Housing and Urban Affairs, Ministry of Women & Child Development and Ministry of Human Resource Development needs to focus on constructing gender friendly community toilets that can also have the provision of sanitary pad vending machines, dustbins in the cubicles for safe disposal of used sanitary napkins and availability of water supply and soap for good hygiene practices. Their prime focus should be on safety and security of women by appointing caretakers/security guards for the CT. The security guard for CT can be recruited from within the community itself so that being a known face, it would encourage women to use the community toilet even at night.**

Medium Term Plan

- **Focus on states lagging behind**

TABLE 3.05: STATES WITH LOWEST RURAL OPEN DEFECATION FREE (ODF) COVERAGE

State	ODF Coverage
Goa	5.87%
Odisha	36.56%
Bihar	42.35%
Tripura	56.54%
Telangana	62.51%

- There are states within India like Goa⁸³ that tops the list with as low as 5.87% rural Open Defecation Free (ODF) coverage, while the figure is 36.56% for Odisha. India needs to focus

⁸¹ <http://swachhbharatmission.gov.in/sbmcms/index.htm>

⁸² http://riceinstitute.org/news_post/why-community-toilets-wont-reduce-open-defecation-in-rural-india

⁸³ <https://sbm.gov.in/sbmdashboard/ODF.aspx>

on these states and make them rural ODF (Open Defecation Free) through **Compulsory use of Toilets**⁸⁴ as done in states like Haryana (a model state in terms of toilet usage), Uttar Pradesh, Madhya Pradesh, Chhattisgarh, and a few other states that have passed bills making it compulsory for anyone contesting panchayat elections to have a functional toilet at home. Many districts are adopting innovative approaches to solve the issue. For example, blowing whistles at people defecating in the open, publishing their photographs on village billboards, cancelling their ration cards, or taking away other government benefits. **In addition to these practices, it is important for Ministry of Drinking Water and Sanitation to sensitize and educate people to make them aware of the benefits of using toilets and that can be done through IEC (Information, Education and Communication) programmes such as street plays (nukkad natak) and awareness campaigns to promote compulsory use of Toilets.**

Long Term Plan

- **Adopting Community-Led Total Sanitation (CLTS) model**
 - **Community-Led Total Sanitation (CLTS)** has been found to be effective in Himachal Pradesh in promoting change at the community level as it addresses sociocultural attitudes toward sanitation and involve women as agents of change. In CLTS, they educate the head of the household and convey the benefits of using toilets through SHGs (Self Help Groups) involvement, creating social groups in schools and educational institutions for IEC programmes.
 - **Ministry of Drinking Water and Sanitation can study CLTS model in depth with prime focus on capturing the best practices and the reasons behind them. After the study, MDWS could roll out the model at national level especially in states where ODF practices are very low.**

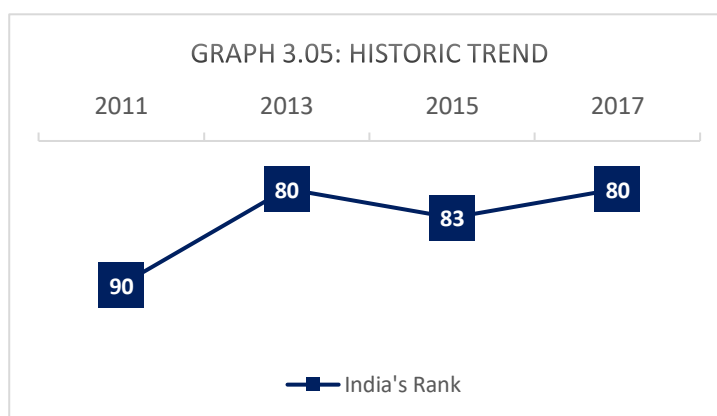
⁸⁴ <http://www.rediff.com/news/report/how-to-make-the-eople-use-toilets/20170818.html>

Indicator 3.03: Access to improved drinking water

Definition: This indicator refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring and rainwater collection.

Source: The World Health Organization, Global Health Observatory Data Repository

$$\text{Value of country} = \frac{\text{Total Population with adequate amount of water from improved source} \times 100}{\text{Total Population}}$$



Graph 3.05 indicates the historic trend of India’s rank in indicator 3.03. In 2017, India’s rank increased by 3 positions as compared to year 2015. This indicator contributes 0.5% to the country score.

TABLE 3.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reasons
Bhutan	55	98	1	100	Asian Peer
Georgia	43	99	1	100	Top Performer
Hong Kong	1	100	1	100	Asian Peer
Singapore	1	100	1	100	Asian Peer
India	83	93	80	94.1	

35 countries have 1st rank in this indicator as all of them have same value.

Proposed Action Plan

Ministry: Ministry of Drinking Water and Sanitation

Short Term Plan

- **Rain water harvesting Practice**

- In 2001, Tamil Nadu government made it compulsory for each household to have rainwater-harvesting infrastructure, which reflected in the improvement of overall water quality within 5 years. A similar experiment was carried out in the cities of Bangalore and Pune, where housing societies were required to harvest rainwater. Apart from these few examples, there is no pan India infrastructure or scheme for rainwater harvesting. This major area has been left unexplored for past many years which can also be seen through the fact that Ministry of Drinking Water and Sanitation (MDWS) last updated its manual on rainwater harvesting in 2004. Since then no revised material on rainwater harvesting have been published by the ministry.
- There is an immediate need to launch a rainwater harvesting campaign nationwide in order to make large scale impact/difference. **Thus, Ministry of Drinking Water and Sanitation should partner with NGOs like Varsha-Jal, KFP etc. or with various corporates under CSR initiative to formulate a policy of adopting a village/farm and make it permanently water secured. Moreover, learning from the success of Swachh Bharat Mission, MDWS can take advantage of the vast network and outreach of self-help groups to spread awareness regarding rain water harvesting on the ground level.**

Medium Term Plan

- **Recycling and Reuse of Wastewater**

- According to Asian Development Bank's prediction, India will have a water deficit of 50% by year 2030. Water scarcity involves water stress, water shortage and water crisis. Main factors that contribute to this are inefficient use of water for agriculture, reduction in the number of traditional water recharging areas, sewage and wastewater drainage into traditional water bodies and lack of efficient water management and distribution.
- Table 3.07 consists of the list of states⁸⁵ with more than 50% urban population with no access to adequate drinking water supply.

⁸⁵ Niti Aayog WTR Ranking

TABLE 3.07: PERCENTAGE OF URBAN POP. WITHOUT ADEQUATE DRINKING WATER SUPPLY

State	% urban pop. without drinking water supply
Jharkhand	55.12
Rajasthan	62.24
Bihar	80.09
Nagaland	76.8
Assam	80.39

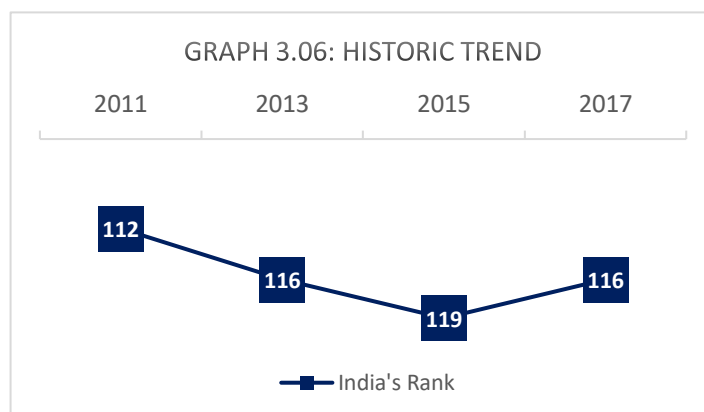
- Singapore also faced a similar situation of water shortage where it had to rely on imported water from Malaysia. Singapore government worked hard to handle this challenge of providing sustainable water supply to the country for which it developed “**NEWater Treatment Plant**” which was introduced in 2003. As a part of this treatment, advanced technologies treat used water and make it suitable for drinking. The quality of the resultant treated water is so high that it is used in place of potable water (drinking water). There are currently five NE water treatment plants, which cater to 30% of country’s water demand.
- **In a similar manner, at least for the states mentioned in table 3.07, Ministry of Drinking Water and Sanitation should adopt Singapore’s waste water treatment strategy. This can be implemented by collaborating with Ministry of Water Resources and the concerned State Authorities for setting up of wastewater treatment plants in such states, so that sustainable water supply could be maintained by converting wastewater into potable form.**

Indicator 3.04: Hospital Beds

Definition: This indicator refers to the number of hospital beds per 10,000 people. Hospital beds include inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centres. In most cases, beds for both acute and chronic care are included.

Source: The World Bank, World Development Indicator

$$\text{Value of country} = \frac{\text{Number of Hospital Beds} \times 10000}{\text{Total Population}}$$



Graph 3.06 indicates historic trend of India's rank in indicator 3.04. In 2017, India's rank increased by 3 positions as compared to year 2015. This indicator contributes 1% to the country score.

TABLE 3.09: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Japan	1	137	1	137	Asian Peer
Korea, Rep.	2	103	2	103	Asian Peer
Russian Federation	3	97	3	97	Top Performer
Hong Kong	38	45	30	52.4	Asian Peer
Australia	41	39	42	39	Best Practise
India	119	7	116	7	

Proposed Action Plan

Ministry: Ministry of Health and Family Welfare

Short Term Plan

- **Inclusion of Private and AYUSH Hospital beds**
 - Countries Like Canada, Lithuania, Chile, Australia⁸⁶ etc. include their inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centres to take an estimate for the number of hospital beds available in the country which is also as per the definition of this indicator.
 - On the other hand, India only includes the number of hospital beds available in its government hospitals, which is one of the reasons for its poor ranking in this indicator. **If India also starts including its inpatient beds available in private hospitals, as well as its 3601 AYUSH Hospitals (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy), it may improve India's ranking from 116th position in coming years. Therefore, maintaining a centralised database for the Hospital Beds of both public and private sector can improve India's rank.**

Medium Term Plan

- **Maintaining Centralised Database for Hospital Beds**
 - The central government enacted a law -The Clinical Establishments Act, (CEA) 2010 to provide registration and regulation of all medical establishments to ensure that they conform to basic minimum standards for facilities and services. Presently, it is applicable in several Indian states, but in states like Assam, Goa, Gujarat, Kerala, and Tamil Nadu, there is an absence of adequate legislations to regulate private hospitals i.e. hospitals can be set up without obtaining major licenses from the government⁸⁷.
 - Australia had made it mandatory to register a private hospital with their respective state or territory health departments, only then it can start functioning and treat/admit its patients. This registration process has helped Australia to maintain a centralised database for healthcare infrastructure⁸⁸. Similarly, **Ministry of Health and Family Welfare should work together with state and territory health departments to make Clinical Establishments Act mandatory for all the Private hospitals. This would provide a centralized database, which would improve policy decisions related to healthcare infrastructure across the country.**

⁸⁶ HEALTH_REAC_15_1_Total%20hospital%20beds%20(5).pdf

⁸⁷ PWC, 2017-Healthcare Infrastructure

⁸⁸ Australian government: Department of Health

Long Term Plan

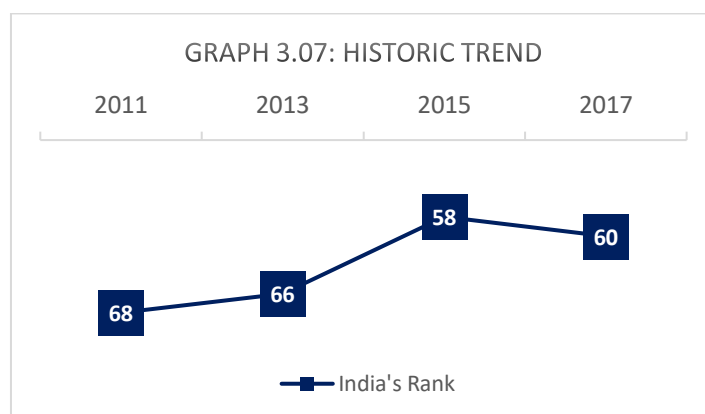
- **Increase spends on Healthcare Infrastructure**
 - India is one of the preferred destinations for medical tourism, which implies that some of our hospitals can provide world-class treatment at relatively lower costs, but we also have hospitals which are understaffed, have insufficient facilities, no bed or an ambulance for a patient. For example, rural India contains 75% of the total population but has only 30% of the country's hospitals, hospital beds and doctors. People living in rural areas as well as in hilly regions have to travel more than 100 km to avail basic health care facilities.
 - To offer secondary and tertiary healthcare benefits to poor, Government of India launched the National Health Protection Scheme, also known as Ayushman Bharat which plans to cover over 10 crore poor and vulnerable families providing coverage up to 5 lakh rupees and will empower the economically weaker population of the country. But in order to implement this programme successfully, there is a need to build an enormous infrastructure and system for provision of healthcare benefits for which it needs more and better doctors, clinics and hospitals, distributed evenly throughout the country that are within the reach of low-income families in rural areas.
 - The Government of Hong Kong Special Administrative Region has set aside a dedicated fund of HK\$ 200 billion for implementation of a 10-year Hospital Development Plan (HDP) in the coming 10 years to cater the growing healthcare service demand and to improve existing services. The 10-year HDP includes:
 - Construction of new Acute Hospital at Development Area, new Community Health Centres, new supporting Services centre and Redevelopment/ Expansion of existing hospitals aiming to improve current healthcare services in the country.
 - Hence, to improve the status of current healthcare infrastructure in rural areas, **Ministry of Health and Family Welfare, on similar lines as Hong Kong, can also take up a 10-year hospital development plan, which would enable them to increase the number of hospitals, community health centres and primary health centres in remote areas across the country.**

Indicator 3.05: HIV prevalence

Definition: HIV prevalence refers to the percentage of people aged 15-49 who are infected with HIV at a particular point in time, no matter when infection occurred.

Source: The World Bank, World Development Indicators Database, UNAIDS

$$\text{Value of country} = \frac{\text{Number of people infected with HIV in the age group (15-49)} \times 100}{\text{Total population (15-49) of the country}}$$



Graph 3.07 indicates the historic trend of India's rank in indicator 3.05. In 2017, India's rank decreased by 2 positions as compared to 2015. This indicator contributes 1% to the country score.

TABLE 3.10: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Albania	1	<0.2	1	<0.1	Top Performer
China	1	<0.1	1	<0.1	Asian Peer
Nepal	58	0.3	1	0.2	Asian Peer
India	58	0.3	60	0.3	
Madagascar	87	0.5	60	0.3	Best Practise

58 countries have 1st rank in this indicator as all of them have less than or equal to 0.2 value

- **Reduction in HIV Prevalence Rate of India**

According to the 2017 UNAIDS Report, India has reduced its HIV prevalence rate from 0.3% to 0.2%, in late 2017, which would increase India's rank by 1 position i.e. 59th rank if we assume that there will be no change in the HIV Prevalence rate of the other countries.

TABLE 3.11: HIV PREVALENCE RATE AND NEW INFECTION INCIDENCE OF INDIA

Year	2016	2017
HIV Prevalence Rate	0.3	0.2
New Infection Incidence	80000	88000

Government Initiative

- **National Strategic Plan:** National AIDS Control Organization (NACO)⁸⁹ has proposed a seven-year National Strategic Plan on HIV/AIDS and Sexually Transmitted Infections, (2017-2024) which is sub-divided into two different phases, which are explained below-:
 - **PHASE 1-** Reduce 75% of new HIV cases by 2020 and implementation of **90-90-90 plan** i.e. 90% of people with HIV should know that they have HIV, 90% people who know that they have HIV should be treated and 90% of those on treatment should experience effective viral load suppression.
 - **PHASE 2-** By 2024, further achievements planned are to reduce 80% of new HIV infections and to increase the 90-90-90 plan to 95-95-95. If implemented successfully, India's HIV prevalence rate would go down to 0.1% from 0.2% by 2024 this would jump India's rank 1st position.

Apart from the national strategic plan of India to combat HIV/AIDS, below are the few suggestions that might be adopted along with the national plan:

Proposed Action Plan

Ministry: Ministry of Health and Family Welfare (MHFW), National Aids Control Organization (NACO)

Short Term Plan

- **Tracking Migrants**
 - Nepal has jumped from 58th position in 2015 to 1st position in 2017. One of the key strategies of **Nepal**⁹⁰ to eradicate HIV/AIDS Prevalence in the country was the implementation of **NATIONAL HIV/AIDS STRATEGY 2011 - 2016** which focused and kept a track of mobile and migrant people going for work elsewhere and especially to India. Nepal has also made policies to increase coverage of gay men and men who have sex with men (MSM) through educational outreach program.
 - This strategy worked for Nepal which saw improvement in its HIV prevalence rate in the country from 0.4% in 2011 to 0.2% in 2017. Following Nepal's footsteps, India can also keep a close monitoring of mobile and migratory population especially those coming from

⁸⁹ <http://naco.gov.in/national-strategic-plan-hiv-aids-and-sti-2017-24>

⁹⁰ (Source: Nepal HIV/AIDS policy)

neighbouring countries where HIV prevalence is high. In order to implement such a strategy, **MHFW with the help of state departments would need to set up camps at high migration points such as on the border areas of Bangladesh and India. This would also require the MHFW to jointly work with Ministry of External Affairs so that the implementation can go smoothly.**

Medium Term Plan

- **Awareness and counselling through Mobile clinics**
 - **Madagascar**⁹¹ launched an **economic and social development strategy in 2008** that works with both community and health workers to provide low cost & high-quality family planning options (condoms, pills, IUD) to women and men across country. They have trained community health workers by providing them with proper counselling on HIV issues.
 - They introduced a revolutionary method of **“mobile clinics”** that roamed around the countryside, expounding knowledge of reproductive health and family planning in previously unreachable areas. This strategy has improved Madagascar’s rank from 87th position in 2015 to 60th in 2017. Therefore, on similar lines, **Ministry of Health and Family Welfare with the help of State health departments** can set up Mobile Clinics. A state with high HIV prevalence rate such as Manipur can be selected as a pilot state to find out strategies for effective implementation.

Long Term Plan

- **IEC (Information, Education, Communication) strategies**
 - As seen in table 3.12, HIV prevalence rates are more prevalent in states where literacy levels are not up to the mark like **Manipur, Nagaland** etc. whereas states where literacy level is high like **Kerala, Lakshadweep** etc., the rate of HIV prevalence is low.

TABLE 3.12⁹²: STATE WISE HIV PREVALENCE RATE AND LITERACY RATE

States	HIV Prevalence Rate (%)	Literacy Rate (%)
Manipur	1.15%	79.85%
Nagaland	0.80%	80.11%
Arunachal Pradesh	0.66%	66.95%
Telangana	0.66%	66.50%
Karnataka	0.45%	75.60%
Kerala	0.13%	93.91%
Lakshadweep	<0.04%	92.28%
Tripura	0.06%	87.75%

⁹¹ (Source: USAIDS Madagascar)

⁹² <https://www.avert.org/professionals/hiv-around-world/asia-pacific/india>

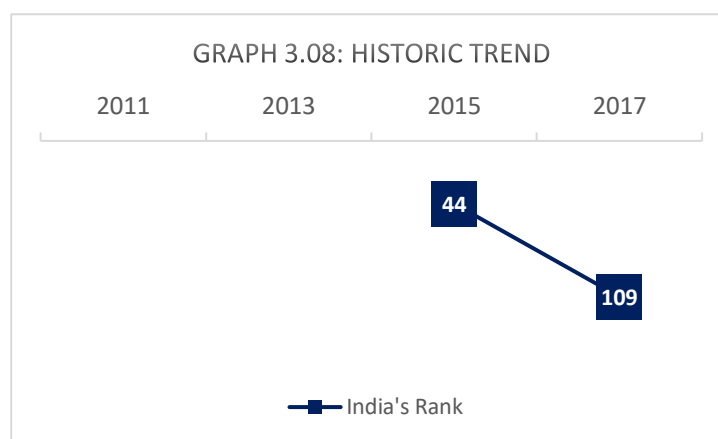
- From the correlation between HIV Prevalence Rate and Literacy Rate, we can conclude that special focus is required in the states where literacy rate is lower than national average. **Hence, MHFW can formulate strategies with Ministry of Information & Broadcasting to develop state specific IEC (Information, Education and Communication) strategies such as street plays (nukkad natak) on AIDS awareness. Local brand ambassadors who are popular in their states can also be roped in for the campaign and region specific advertisement campaigns can also be planned.**

Indicator 3.06: Malaria Incidences

Definition: This indicator refers to the estimated number of new cases of malaria in the economy per 100,000 population

Source: The World Health Organization, World Malaria Report

$$\text{Value of country} = \frac{\text{Number of Malaria Cases} \times 100000}{\text{Total Population}}$$



Graph 3.08 indicates the historic trend of India's rank in indicator 3.06. This indicator was introduced in 2015. In 2017, India's rank decreased by 65 positions in comparison to year 2015. This indicator contributes 1% to the country score.

TABLE 3.13: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Azerbaijan	8	0.04	1	0	Best Practise
Sri Lanka	14	0.38	1	0	Asian Peer
Bangladesh	41	394	106	810	Asian Peer
Pakistan	47	1953	108	440	Asian Peer
India	44	1536	109	1312	

74 countries have 1st rank in this indicator as all of them have been declared malaria free

Despite an increase in India's performance according to the values of 2015 and 2017 in this indicator, the decrease in rank by 65 positions is due to increase in the number of countries ranked in this indicator from 75 (in 2015) to 136 (in 2017).

Government initiative

The National Strategic Plan: National Framework for Malaria Elimination (NFME) has been launched in 2016 by Ministry for Health & Family Welfare and a National Strategic Plan (NSP) for Malaria Elimination (2017-2022) has been developed under that with a vision to provide universal intervention package, paving the way for malaria elimination by 2030.

Apart from the national strategic plan of India to eradicate malaria, below are few suggestions that can be adopted along with the national plan:

Proposed Action Plan

Ministry: National Vector Borne Disease Control Program (NVBDCP), Ministry of Health and Family Welfare

Short Term Plan

- **Use of Mosquito Fish (Azerbaijan)⁹³**
 - One of the safest and interesting methods in mosquito control is the use of biological agents that eat or destroy the larvae. Eco-friendly larvicolous fish such as the top water minnow or mosquito fish (*Gambusia affinis*) or the common guppy (*Poecilia reticulata*) can be effectively used to control the mosquito population. These fish can be introduced into collections of water such as wells, tanks, ponds and lakes, particularly in rural and peri-urban areas and in freshwater bodies in rural areas. **NVBDCP needs to work with Department of Animal Husbandry, Dairying & Fisheries to distribute mosquito fish to various stakeholders (ULBs, gram panchayat, etc.) involved in sanitation & hygiene activities which would help to reduce the number of Malaria incidences in the country.**

Medium Term Plan

- **Screening family members of infected person (Sri Lanka)⁹⁴**
 - In 2011, Sri Lanka launched the malaria elimination programme in which each case of malaria was reported to the **anti-malaria control headquarters**. The council then tests and screens the family members and those who were in contact of the infected person. By screening anyone who could potentially catch the virus, officials stopped outbreaks before they started. In 2015, Sri Lanka's rank was 14th, which has improved to 1st in 2017. In NVBDCP's National Strategic Plan, surveillance process is present but any procedure to screen family members of the infected person is absent which is essential as it is a method to eliminate all potential

⁹³ <http://www.euro.who.int/en/health-topics/communicable-diseases/vector-borne-and-parasitic-diseases/malaria/country-work/azerbaijan>

⁹⁴ World Health Organization: Malaria Free Sri Lanka

threat. Therefore, NVBDCP could incorporate screening of family members in their current surveillance process similar to Sri Lanka for its effective use.

Long Term Plan

- **Inclusion of Ministry of Tribal Affairs in IEC activities**
 - The tribal population of the country as per 2011 census is 10.43 crores, constituting 8.6% of the total population. Madhya Pradesh and Odisha hosts the largest tribal population⁹⁵ i.e. 14.7% and 9.2% respectively. Madhya Pradesh accounts for 30% of the total malaria cases⁹⁶ in the country followed by Odisha at 25%, Chhattisgarh at 13% and West Bengal at 11% as shown in table 3.14.

TABLE 3.14: MALARIA CASES (IN %) STATE-WISE

State	Tribal Population (%)	Malaria Cases (%)
Madhya Pradesh	14.7%	30%
Odisha	9.2%	25%
Chhattisgarh	7.5%	13%
West Bengal	5.1%	11%

- We can infer from the above table that tribal population in various states is the worst affected section by the malaria incidence. Therefore, there is a need for major attention to tribal population. **Hence, Ministry of Health and Family Welfare should collaborate with Ministry of Tribal Affairs, region specific NGOs or Community-Based organisations to reach remote and conflicted areas with the aim to make people living in these areas more aware about the disease by conducting various appropriate educational programmes through IEC (Information, Education and Communication) campaigns and supply them with the proper required medication to curb these diseases.**

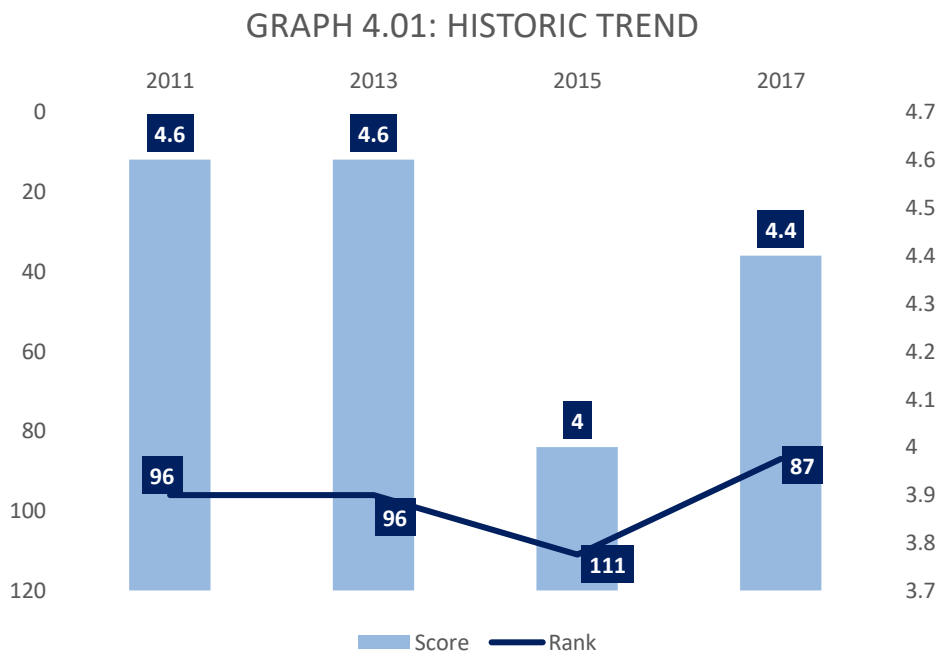
⁹⁵ Ministry of Tribal Affairs Statistical Division

⁹⁶ National Vector Borne Disease Control Programme Statistical Division

Pillar 4: Human Resource and Labour Market

Definition: This pillar measures the availability of quality human and how efficiently human resources are allocated in their most efficient use. **Pillar 4** has a total of **9 indicators** stated below –

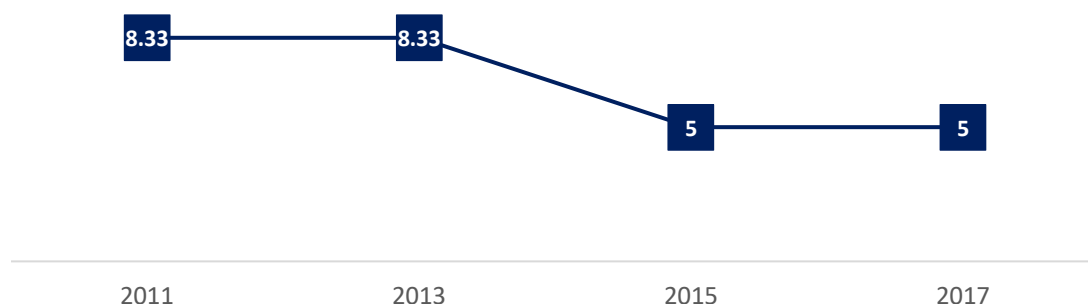
1. Primary Education Enrolment Rate
2. Secondary Education Enrolment Rate
3. Extent of Staff Training
4. Treatment of Customers
5. Hiring and Firing Practices
6. Ease of Finding Skilled Employees
7. Ease of Hiring Foreign Labour
8. Pay and Productivity
9. Female Participation in Labour Force



Graph 4.01 indicates the historic trend of India's rank and value in Pillar 4. India's rank has increased from 111th position in 2015 to 87th position in 2017

Weightage Shift:

GRAPH 4.02: WEIGHTAGE SHIFT



Graph 4.02 indicates the overall contribution of Pillar 4 i.e. Human resource and labor Market in India's score. At present, 5% weightage is given to this pillar. The weightage of this pillar has decreased by 40% in the year 2015.

Table 4.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011 (%)	2013 (%)	2015 (%)	2017 (%)	Change in weightage (%)
Primary education enrolment rate	0.83	0.83	0.625	0.625	-24.70
Secondary education enrolment rate	0.83	0.83	0.625	0.625	-24.70
Extent of staff training	0.83	0.83	0.625	0.625	-24.70
Treatment of customers	NA	2.08	0.625	0.625	-69.95
Hiring and firing practices	0.83	0.83	0.5	0.5	-39.76
Ease of finding skilled employee	NA	NA	0.5	0.5	NA
Ease of hiring foreign labour	0.83	0.83	0.5	0.5	-39.76
Pay and productivity	NA	NA	0.5	0.5	NA
Female labour force participation	NA	NA	0.5	0.5	NA

NA = Not Applicable, the indicator was not introduced in that year

In TTCI Report 2013, 1 new indicator namely treatment of customers was introduced. In TTCI Report 2015, 3 new indicators namely Ease of finding skilled employee, Pay & Productivity and Female labour force participation were introduced.

Table 4.01 shows the percentage of contribution that each indicator has on the overall score of India.

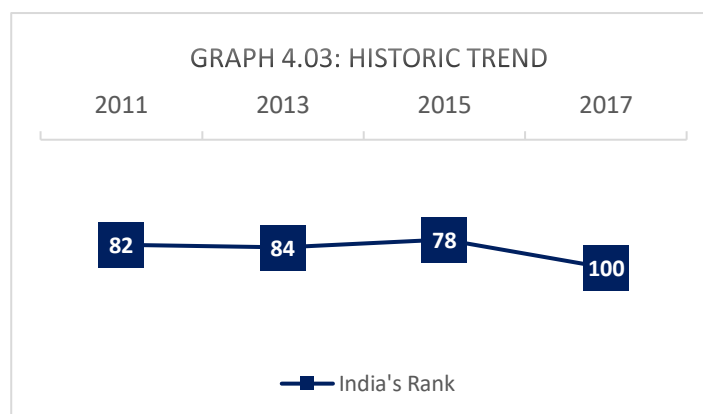
Note – Indicator 4.01 & 4.02 are being shown as single indicator as both are interdependent and follow the same criteria.

Indicator 4.01: Primary education enrolment rate

Definition: This indicator refers net primary education enrolment rate. The reported value corresponds to the ratio of children of official school age (as defined by the national education system) who are enrolled in school to the population of the corresponding official school age.

Source: UNESCO Institute for statistics, Data centre, Organisation for economic cooperation and development, Education at a glance 2015, UNICEF.

$$\text{Value of country} = \frac{\text{Total population enrolled in primary education (age 6–11)} \times 100}{\text{Total population in the same age group (age 6–11)}}$$



Graph 4.03 indicates the historic trend of India’s rank in indicator 4.01. In 2017, India’s rank decreased by 22 positions as compared to year 2015. This indicator contributes 0.62% to the country score.

TABLE 4.02: PERFORMANCE OF COUNTRIES

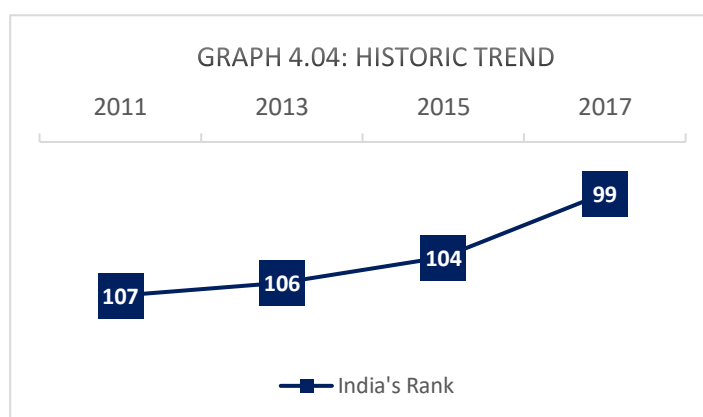
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
China	4	99.9	1	100	Asian Peer
Singapore	1	100	1	100	Asian Peer
Japan	3	99.91	3	99.95	Asian Peer
India	78	93.34	100	90.04	

Indicator 4.02: Secondary education enrolment rate.

Definition: This indicator refers to gross secondary education enrolment rate. The reported value corresponds to the ratio of total secondary enrolment from the age (age 11-17), to the population of the age group that officially corresponds to the secondary education level.

Source: UNESCO Institute for statistics, Data centre, Organisation for economic cooperation and development, Education at a glance 2015, UNICEF, NCERT.

$$\text{Value of country} = \frac{\text{Total population enrolled in secondary education (age 11-17)} \times 100}{\text{Total population in the same age group (age 11-17)}}$$



Graph 4.04 indicates the historic trend of India's rank in indicator 4.02. In 2017, India's rank increased by 5 positions as compared to year 2015. This indicator contributes 0.62% to the country score.

TABLE 4.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)*	Rank (2017)	Value (2017)	Reason
Belgium	15	107.26	1	164.81	Top Performer
Finland	14	107.67	2	149.46	Top Performer
Australia	1	135.53	3	137.56	Top Performer
India	104	68.5	99	74.28	

*In table 4.03 value can be over 100 due to inclusion of over-aged and under-aged pupils/students because of early or late entrants, and grade repetition.

Government Initiatives for Primary and Secondary Education Enrolment

- **Primary Education Enrolment**

- Government of India has initiated a new system of tracking drop-out rates by using students' Aadhar IDs, so that early intervention can be made to bring them back to school. The idea behind the ID-based tracking system is to log the individual data of every student enrolled in Classes I-XII in 15 lakh schools of the country so that policy makers would be able to pinpoint

a specific student dropping out of a particular school. The unique ID number (Aadhaar) will be tracked every year. If any student has shifted to some other school, his ID number would reflect the same. If he/she has dropped out, the ID number should be shown in the dropout box of that school. The data will be maintained by National University for Education Planning and Administration (NUEPA) under the scheme called Unified District Information System of Education (U-DISE).⁹⁷

- **Secondary Education Enrolment**

- The Gross Enrolment Ratio (GER) in higher education has registered an increase from **24.5%** in 2015-16 to 25.2% in 2016-17. Government has targeted Gross Enrolment Ratio (GER) to reach 30% in higher education by 2020 to drive investments.
- Adoption of “The Model School Scheme” which aims to provide quality education to talented rural children through setting up of 6,000 model schools at the rate of one school per block as benchmark of excellence.
- In February 2017, HRD Ministry formed a panel of Central Advisory Board of Education to boost girls' education in Telangana with help of the state government.⁹⁸

Proposed Action Plan

Ministry: Ministry of Human Resource Development (MHRD)

Short Term Plan

- **Emulating Delhi Government’s Education Model⁹⁹**

Facility in Schools	Delhi (%)	All India (%)
Computers in Working Condition	67.53	14.11
Playground Facility	87.42	61.98
Library Facility	97.92	82.96
Electricity Connections	99.91	60.81

- Almost half of the schools in India do not have proper WASH facilities (Functional toilets, Drinking Water and Hand Wash facility) as per U-DISE (Unified-District Information System for Education) flash statistic report 2016-17. Poor infrastructure such as leaking toilets, smelly cafeterias, broken furniture, extreme temperatures in classrooms, mouldy walls and plaster falling off ceilings demotivate and dishearten students which lead to increase in drop out numbers.

⁹⁷<https://www.telegraphindia.com/india/dropout-pill-aadhaar-tabs-on-all-students/cid/1513969>

⁹⁸<https://www.bloomberg.com/news/articles/2018-02-02/need-faster-growth-spend-more-on-educating-india-s-children>

⁹⁹<https://medium.com/@SaaksharOrganisation/primary-education-in-india-progress-and-challenges-c318b5c41d9e>

- This negative perception of the school’s atmosphere contributes to high absenteeism, low test scores and poor academic achievement.
- To overcome the infrastructure problem in 2016-17, as per a RBI study of state budgets, Delhi government allocated 22.8% of its total budget to education, the highest for any state in India and far above the all India average of 15.6%¹⁰⁰. Government of Delhi utilised the budget in improving school infrastructure, revamping course curriculum and providing training to teachers. This has resulted in unprecedented performance of Class XII students of Delhi government schools by registering 90.68 passing percentage, and for the first time in 20 years the passing percentage of government school has crossed the benchmark of 90%.
- Ministry of Human Resource Development should conduct a comprehensive study of the Delhi Government’s education model with the prime objective of finding methods to improve the quality of education. Further this model should be recommended to other states by MHRD as improving quality of education of government schools would also attract students who were earlier reluctant to attend school leading to increase in enrolment rate.

Medium Term Plan

- **Focus on states with high dropout rates**

TABLE 4.04- STATES WITH HIGHEST DROPOUT RATES (PRIMARY LEVEL)

State	Dropout Rate
Nagaland	31.51%
Manipur	31.30%
Arunachal Pradesh	27.91%
Mizoram	21.43%
Meghalaya	18.71%
Goa	15.66%

- Ministry of Human Resource Development needs to focus on the states where drop outs are very high, as listed in Table¹⁰¹ 4.04. As per the survey report of ASER (Annual States of Education Report) 2016, it was found that 1.1% of children between the age of 11 and 14 years had never enrolled in schools and 3.5% were dropouts .¹⁰² This is due to:
 - Poverty, migration, child marriage, lack of school infrastructure such as drinking water and sanitation, child labour and lack of awareness on part of parents on the benefits of sending children to school.

¹⁰⁰ <https://aamaadmiparty.org/aap-brings-systematic-changes-to-government-education-2/>

¹⁰¹ U-DISE: Flash Statistics on School Education 2016-17

¹⁰²<https://www.firstpost.com/india/indias-great-education-challenge-low-attendance-high-rate-of-dropouts-plague-rural-schools-3378802.html>

- **Ministry of Human Resource Development** and **State Governments** should conduct awareness programs on importance of education on regular intervals with the help of school teachers in rural areas to tackle with high dropout rate of students.

Long Term Plan

- **Lack of teachers in Primary and Secondary education schools**
 - It is unfortunate however that as many as 18% positions of teachers in government run primary schools and 15% in secondary schools are vacant in India, according to data tabled in the Lok Sabha by MHRD. About 9,00,000 teaching positions in elementary schools and 100,000 in secondary schools – put together a million are vacant. The number of single teacher schools in the country also reveals a severe shortage which is 11 percent out of total primary schools¹⁰³. The Pupil Teacher ratio (PTR) should be 30:1 in primary schools, however in Bihar and Uttar Pradesh, PTR ratio is above 60, which is far off from the required standards¹⁰⁴.
 - **Ministry of Human Resource Development** needs to focus on regular recruitment of teachers. Teachers allotted to rural schools are always on the lookout for urban posting and have no motivation to stay there. The **State Government** and **MHRD** should develop an incentive-based plan to retain teachers in rural areas.

¹⁰³ <http://www.idreameducation.org/blog/lack-teachers-govt-schools-impacting-students-learning-outcomes/>

¹⁰⁴ <https://www.tribuneindia.com/news/nation/india-improves-student-classroom-pupil-teacher-ratios-survey/535524.html>

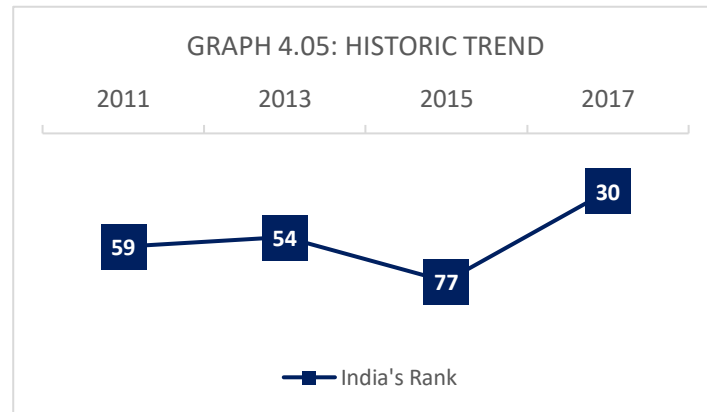
Note – Indicator 4.03 & 4.06 are being shown as single indicator as both are interdependent and follow the same criteria.

Indicator 4.03: Extent of staff training

Definition: “In your country, to what extent do companies invest in training and employee development?”

Source: World Economic Forum, Executive Opinion Survey

Value of country: On 1 to 7 scale (1 = not at all, 7 = to great extent)



Graph 4.05 shows the historic trend of India’s rank in indicator 4.03. In 2017, India’s rank increased by 47 positions as compared to year 2015. This indicator contributes 0.62% to the country score.

TABLE 4.05: PERFORMANCE OF COUNTRIES

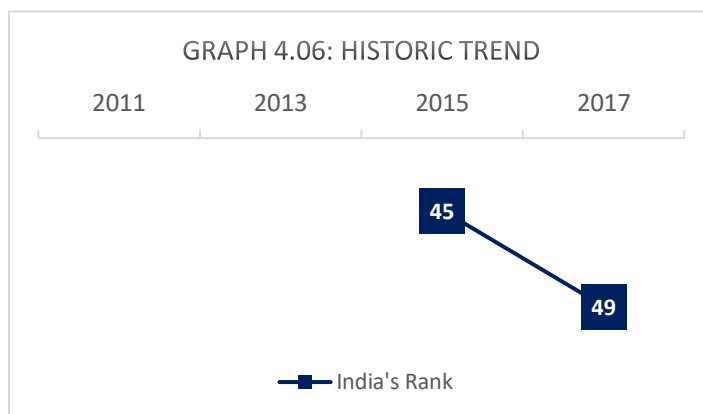
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	1	5.68	1	5.71	Top Performer
Norway	8	5.16	2	5.54	Top Performer
Singapore	7	5.25	3	5.51	Asian Peer
India	77	3.94	30	4.59	

Indicator 4.06: Ease of Finding Skilled Employees

Definition: “In your country, to what extent can companies find people with the skills required to fill their vacancies?”

Source: World Economic Forum, Executive Opinion Survey

Value: On scale of 1 to 7 (1= not at all, 7= to a great extent)



Graph 4.06 indicates the historic trend of India's rank in indicator 4.06. India's rank decreased by 4 positions as compared to year 2015. This indicator contributes 0.5% to the country score.

TABLE 4.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Norway	21	4.77	1	5.76	Top Performer
Finland	1	5.61	2	5.72	Top Performer
Iceland	13	4.93	3	5.53	Top Performer
Singapore	22	4.76	19	5.09	Asian Peer
India	45	4.26	49	4.52	

Government Initiatives¹⁰⁵

- Ministry of Skill Development and Entrepreneurship (MSDE) has trained more than 1.17 crore aspirants in various skills through many short and long-term skilling programs since the inception of Skill India (2015). More than 20 lakh citizens have been trained under Pradhan Mantri Kaushal Vikas Yojana (PMKVY). Around 356 Pradhan Mantri Kaushal Kendra (PMKK) have been established in 24 States and two Union Territories and work is going on at 124 additional sites for setting up of such centres.

¹⁰⁵<http://pib.nic.in/newsite/PrintRelease.aspx?relid=164440>

- **Skill India Mission Operation (SIMO) Project¹⁰⁶**

- To support the country's vision, the World Bank has approved a US\$250 million aid to Skill India Mission Operation (SIMO) to help India's growing young workforce acquire market-relevant skills needed in today's highly competitive job market. The operation will support the Government of India's Skill India Initiative and attempt to address the dual challenge of ensuring greater access to training as well as providing quality training leading to employment.
- It is estimated that by 2023, when the project ends, about 8.8 million youth will have received some market-relevant training that will in turn open up better job opportunities for them in an ever changing job market.
- The government of India has ambitious plans to transform India into a competitive, high-growth and high productivity country. **National Skill Development Mission** launched on 15th July 2015, aims to train approximately 300 million people across country by 2022¹⁰⁷. This programme will especially encourage creation of skill development programmes for women, marginalized communities, tribals and people with disabilities to enable them to acquire skills that will be needed in future labour market..¹⁰⁸

Proposed Action Plan

Ministry: Ministry of Skill Development & Entrepreneurship

Medium Term Plan

As per the 2018 talent shortage survey by Manpower Group, 56% of employers are having difficulty in finding workers with required skills. It was found that 26% of applicants lack in hard skills, 25% in experience and 15% expect higher pay than offered. The main roles in which skill lack is observed are:

Hardest skills to find by employers

Sales Representatives (B2B, B2C, contact centre)

Cybersecurity experts, network administrators

Chemical, Mechanical, electrical and Civil engineers

Project Managers, Lawyers, Researchers

Certified accountants, auditors, financial analysts

Management/ executive

Skilled electricians, welders, mechanics

¹⁰⁶<http://www.worldbank.org/en/news/feature/2017/06/23/skilling-india>

¹⁰⁷ <https://www.msde.gov.in/assets/images/Mission%20booklet.pdf>

¹⁰⁸ <http://www.worldbank.org/en/news/feature/2017/06/23/skilling-india>

- **Introducing the concept of Public Private partnership to curb indicator 4.03 along with 4.06**
 - The concept plans to combine the skill sector to the demands of the market. Entire skill training program can be aligned with demand of the industries by converting companies into training stakeholders under Skill India based on the professional requirement of company and finally providing them with employment.
 - This will facilitate market based skill training with appropriate expertise of the sector or the industries, alongside increasing the investment of the companies in training of the employees. Government can act as a facilitator for the same and companies will become parent skill providers and replace beleaguered institutes.
 - Note - A similar exercise is being conducted by Government of Chhattisgarh under Employment through Skill Training and Placement program as a part of National Urban Livelihoods Mission.

Long Term Plan

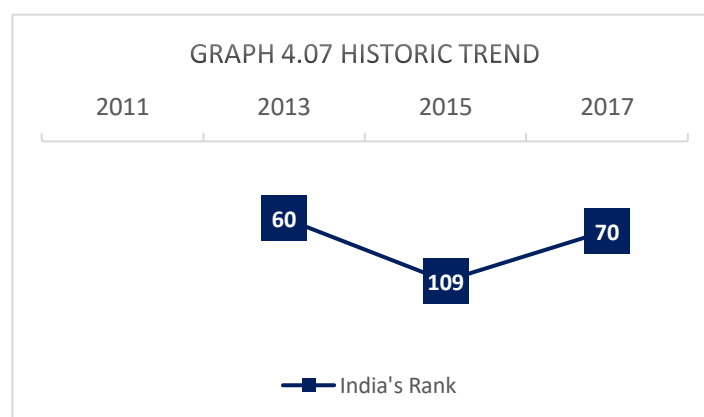
- **Revised Skill Gap Analysis alongside Demand-Supply Gap Analysis:**
 - The previous Skill Gap Analysis was conducted in 2011 and have not been revised since. In an economy moving towards digitalisation and concepts such as Internet of Things and Artificial Intelligence coming into picture, there is a high need of analysing the skill market based on the changing demands of the economy.
 - The revised skill gap analysis should be done along with a demand and supply gap analysis so as to incorporate the market needs in a sustainable manner.
 - **Note** - It was observed through a study that currently there is shortage of experts who can provide GIS mapping in India. Under RAPDRP scheme, the Ministry of Power aimed at mapping the entire electrical network of the country through GIS, but the same has not been achieved yet due to shortage of technical experts in this area. Such example reiterates the above mentioned point.

Indicator 4.04: Treatment of customers

Definition: “In your country, how well do companies treat customers?”

Source: World Economic Forum, Executive Opinion Survey.

Value: On scale of 1 to 7 scale (1= indifferent to customer satisfaction, 7= highly responsive to customers and seek customer retention)



Graph 4.07 indicates the historic trend of India’s rank in indicator 4.04. This indicator was introduced in year 2013. In 2017, India’s rank increased by 39 positions as compared to year 2015. This indicator contributes 0.62% to the country score.

TABLE 4.07 - PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Japan	1	6.26	1	6.23	Asian Peer
Sweden	18	5.37	2	6	Top Performer
Switzerland	2	6.02	3	5.95	Top Performer
India	109	4.04	70	4.6	

Proposed Action Plan

Ministry: Ministry of Consumer Affairs, Food and Public Distribution, Department of Consumer Affairs

Short Term Plan

- **Development of feedback mechanism¹⁰⁹**
 - Development of an exhaustive feedback mechanism would help **Ministry of Consumer Affairs, Food and Public Distribution** in identifying bottlenecks in the system and key areas of focus present in our current redressal process. This would help department of consumer affairs to improve the current grievance redressal system and would further enhance the rate

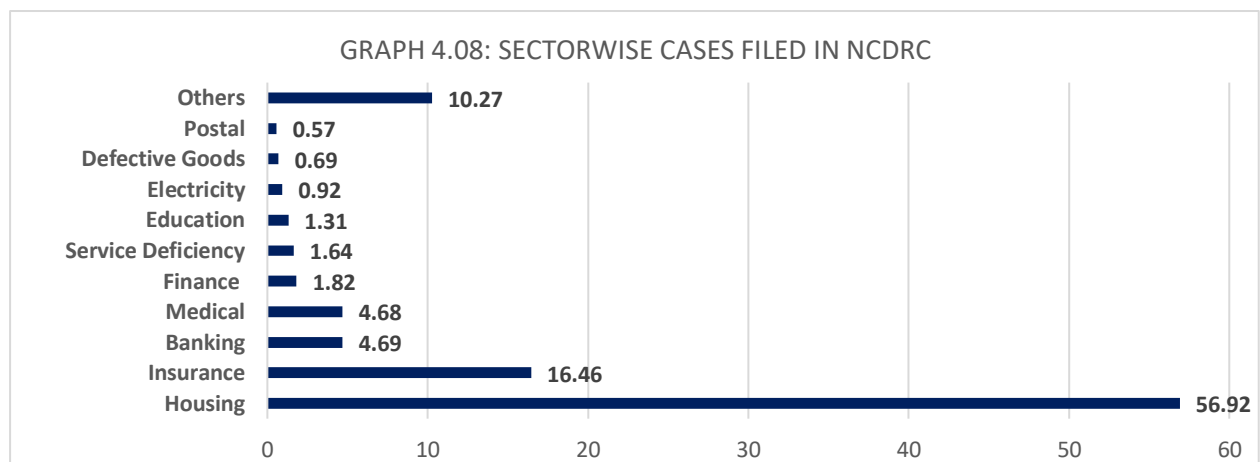
¹⁰⁹ ISOR JBM: Performance Evaluation of Consumer Disputes Redressal Agencies in India

of redressal and functionality of the current system.

- During sensitization workshop a detailed discussion on the above indicator was commenced, **Ministry of Consumer Affairs, Food and Public Distribution** suggested that companies should be penalized based upon the volume of complaints registered against them. They suggested that if more complaints are registered under companies/industries, they should be subjected to greater slab of GST and companies getting less consumer complaints should be exempted from GST to some extent.

Long Term Plan

- **Creating awareness about government initiatives to curb frauds in Real Estate Sectors:**¹¹⁰



- As per Confonet dashboard, highest number of cases were filed under the Housing Sector i.e. 56.92% in National Consumer Disputes Redressal Commission (NCDRC). Majority of the issues were related to delay in possession of homes whereas in some cases the delay has extended to almost six years or more now, with no possession in sight.
- In 2016, Government of India passed RERA or Real Estate (Regulation and Development) Act to regulate the largely unregulated real estate sector. The aim is to provide a redressal mechanism apart from regular legal framework.
- Notwithstanding, the act has been enforced for 2 years, it is still in its infancy stage. The enforcement status is still lagging behind in 8 states as mentioned in the table¹¹¹4.08. **Ministry of Housing and Urban Affairs (MoHUA)** should ask for progress report from the concerned states, and need to ensure that the RERA is enforced throughout the country as soon as possible.
- **State Governments** and to an extent **MoHUA** can ensure that citizens are made aware of their rights and responsibilities under the Act to ensure its implementation in both letter and spirit. Therefore, a reinvigorated awareness campaign needs to be created so that benefits of RERA

¹¹⁰<http://cms.nic.in/ncdrcusersWeb/dashboard.do?method=loadDashBoardPub>

¹¹¹<https://getmeroof.com/blog/2018/02/a-guide-to-understanding-rera-and-its-impact-on-indian-real-estate/>

reach the targeted audience for which **MoHUA** could collaborate with **Ministry of Information and Broadcasting**.

TABLE 4.08 STATUS OF RERA IN THE VARIOUS STATES OF INDIA

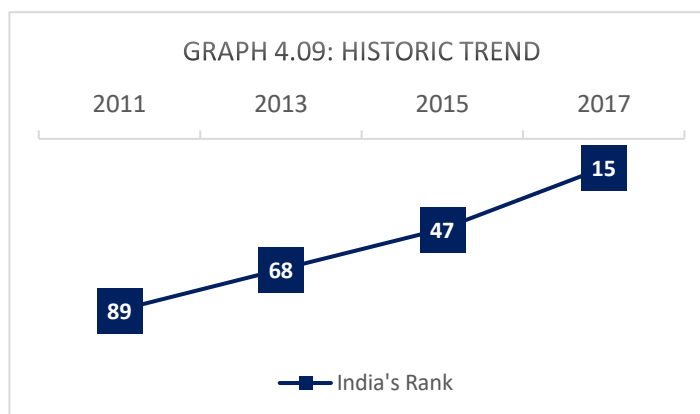
States	Status
West Bengal	In Draft
Sikkim	In Progress
Manipur	In Progress
Meghalaya	In Progress
Mizoram	In Progress
Nagaland	In Progress
Goa	In Draft
Arunachal Pradesh	In Progress

Indicator 4.05: Hiring and firing practices

Definition: “In your country, how would you characterize the hiring and firing of workers?”

Source: World Economic Forum, Executive Opinion Survey

Value: On scale of 1 to 7 (1= heavily impeded by regulations, 7= extremely flexible)



Graph 4.09 indicates the historic trend of India’s rank in indicator 4.05. In 2017, India’s rank increased by 32 positions as compared to year 2015. This indicator contributes 0.5% to the country score.

TABLE 4.09 PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	2	5.69	1	5.79	Best Practice
Hong Kong SAR	1	5.72	2	5.73	Asian Peer
Singapore	3	5.4	3	5.56	Asian Peer
India	47	4.13	15	4.75	

Government Initiative

- The current Government has modified labour rules (extending the labour contract rules first introduced in 2016 for the textiles and apparel industry) to encourage fixed tenure or contract jobs across all industries, signalling a shift in its employment generation strategy from job security to job creation.
- The new rules allow companies to hire contractual workers for a fixed term. According to the rules, no termination will be needed, irrespective of whether workers are contracted for a month, week or the duration of a specific project. The move is aimed at liberalizing labour policies to facilitate

hire-and-fire policy as per the need of a company by reducing strict retrenchment conditions and help overhaul country 's archaic labour laws.¹¹²

Proposed Action Plan

Ministry: Ministry of Labour and Employment

Short Term Plan

- **Advertising India's Achievements**

- As per Glassdoor economic research study of 25 countries around the world, India has the shortest reported interview time of 16.1 days, which has been achieved due to flexibility in hiring and firing practices and relaxed labour market regulations.
- There is a need to sensitise responders of the Executive Opinion Survey conducted by World Economic Forum. Majority of the responders engaged in the survey are top business executives from different sectors. **Ministry of Labour and Employment (MoLE)** should advertise its achievement in order to sensitise the responders. In the process of sensitization, **MoLE** can collaborate with **Confederation of Indian Industry (CII)** as they were the partner for WEF's survey in India until 2016. This exercise would change the perception of the responders and they would rate India higher in upcoming surveys.

TABLE 4.10: AVERAGE HIRING DURATION BY COUNTRY

Country	Average Length of Interview Process (Days)
India	16.1
Israel	16.9
Romania	19.2
Singapore	25.4
Spain	31.7
Switzerland	37.6

Long Term Plan

- **Feedback Mechanism**

- **Ministry of Labour and Employment** should start a **feedback loop system** to engage with **key stakeholders** on **biannual basis** where the stakeholders can get a chance to raise their concerns and opinions in front of the committee. This would create a direct link between the policy makers and their beneficiaries, hence the stakeholders would feel more involved in the system.

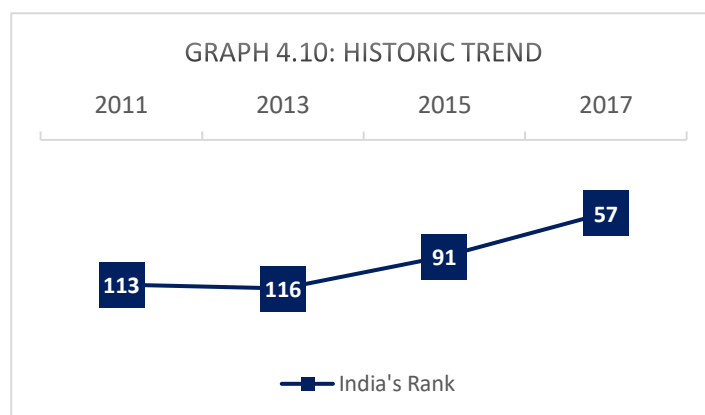
¹¹² <https://timesofindia.indiatimes.com/business/india-business/ease-of-doing-biz-cos-may-get-flexibility-to-hire-and-fire/articleshow/62657759.cms>

Indicator 4.07: Ease of hiring foreign labour

Definition: “In your country, how restrictive are regulations related to the hiring of foreign labour?”

Source: World Economic Forum, Executive Opinion Survey

Value: On scale of 1 to 7 (1=highly restrictive, 7= not restrictive at all)



Graph 4.10 indicates the historic trend of India's rank in indicator 4.07. In 2017, India's rank increased by 34 positions as compared to year 2015. This indicator contributes 0.5% to the country score.

TABLE 4.11: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Albania	6	5.26	1	5.64	Top Performer
Luxembourg	5	5.28	2	5.51	Top Performer
United Arab Emirates	1	5.57	3	5.41	Top Performer
China	20	4.58	39	4.35	Asian Peer
India	91	3.82	57	4.15	

Government Initiatives

- **Regulations and Requirements for foreign labour in India**

- **Employment Visa:**

- A foreign national generally applies for an Indian employment visa at the Indian Embassy/High Commission in his country of residence.
- The employment visa must be issued from the foreign national's country of origin, or from remove foreign national's country of domicile provided the applicant's period of permanent residence in that particular country is more than two years.
- If the stay in India will be for more than 180 days, the employment visa holder must register with Foreigners Regional Registration Offices (FRRO) or Foreigners Registration Offices (FRO) within 14 days of arrival. The foreign national must have a valid travel

document and a re-entry permit (if required under the law of the concerned country. An employment visa may be extended on a yearly basis for a maximum period of five years.

- An application for extension must be made within 30 to 90 days in advance. The foreign national being sponsored for an employment visa must draw a salary in excess of **US\$25,000** per annum (except for employment in certain sectors).
- The minimum salary threshold would stand lowered to US\$14,000, approximately (INR 0.91 million p.a.) for foreign nationals engaged as teaching faculty at specified premier Indian educational institutions like Indian Institutes of Technology (IITs), Central Universities (CUs), National Institutes of Technology (NITs), Indian Institutes of Management (IIMs) and Indian Institutes of Science Education and Research (IISERs).
- Employment visa or E-visa is granted for one year, or for the term of contract in India (up to 5 years).
- US citizen can get 5 years or 10 years' multiple entry visa.
- **Cost:** The fee for an employment visa is between US\$15 and US\$1,000 and is subject to periodic amendments by the government.
- **Time frame:** It is difficult to give a precise time frame as the process is at discretion of Indian Embassy/High Commission in respective countries.
- **Sanctions:** If the visa is not granted, the expatriate cannot travel to India. If the visa is granted for a particular purpose and the expatriate does not adhere to that purpose, the expatriate's visa must be cancelled, and he will be deported. He will also attract the sanctions of imprisonment and/or fines.
- **Work Permits:** Except for the employment visa, no other permits are required from an immigration perspective.
- **Nationality restrictions:** There are specific restrictions that apply to the telecom and broadcasting industry. Companies operating in these industries must ensure that majority of their board of directors comprises of Indian nationals. Industries operating in the defence sector are required to ensure that majority of their board of directors are Indian residents.

Proposed Action Plan

Ministry: Ministry of Labour & Employment and Ministry of External Affairs (MEA).

Medium Term Plan

- **Ease in Employment Visa Regulations**

- The Indian government has set the minimum salary threshold limit of \$25,000 a year for foreign nationals. However, this condition does not apply to ethnic cooks, teaching faculty at Indian educational institutions like IITs, Staff working for the concerned embassy/ High commission of India.
- As the minimum income threshold limit is high it makes difficult for many Foreign nationals to get an employment visa. During the past few years, Indian Government has relaxed its many regulations and has allowed 100% Foreign Direct Investment (FDI) in various sectors under Make in India initiative.
- Allowing foreign companies to invest and work in India through FDI will not only play an important role in attracting funds but will also open Indian markets for skilled foreign labour. Therefore, the **Ministry of External Affairs** in consultation with **Ministry of Commerce** can work in this direction to ease out the regulation laid for entry of foreign labour.

Long Term Plan

- **Re-evaluating Permanent Residency Policy for International Workers**

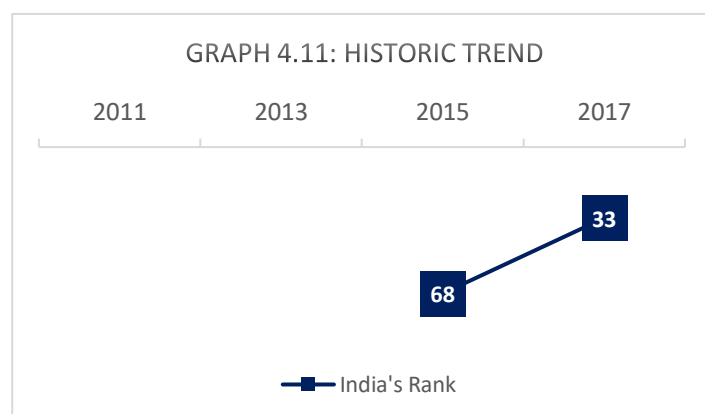
- India is deficient in skilled workers, relative to its needs, then almost any other major country. The most recent Manpower Talent Shortage Survey reported that more than half of Indian employers surveyed, experienced difficulties in finding workers with required skills.
- China recognised the importance of mobile talent and announced 1000 talent programme in 2008 in which highly talented research scientists and entrepreneurs were lured from around the world. They have also launched a China Green Card, a permit for permanent residency for certain groups of skilled foreigners.
- India also needs to create policies and build institutions that attract foreign talent to supplement its skill requirements, hence India should join the race and offer easy residency to skilled foreign workers. Ministry of Labour and Employment can conduct an extensive skill gap and market demand analysis through which they can identify group of skills that are deficient in the market. The identified gap can be covered by hiring skilled foreign workers for which MEA should provide a permanent residency provision in its immigration policy.

Indicator 4.08: Pay & Productivity

Definition: “In your country to what extent is pay related to worker productivity?”

Source: World Economic Forum, Executive opinion Survey

Value: On scale of 1 to 7 (1= not related to worker productivity, 7=not restrictive at all)



Graph 4.11 indicates the historic trend of India’s rank in indicator 4.08. This indicator was introduced in the year 2015. In 2017, India’s rank increased 35 positions as compared to year 2015. This indicator contributes 0.5% to the country score.

TABLE 4.12: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	5	5.25	1	5.62	Top Performer
Singapore	4	5.33	2	5.5	Asian Peer
Hong Kong SAR	1	5.52	3	5.49	Asian Peer
India	68	3.95	33	4.54	

Proposed Action Plan

Ministry: Ministry of Labour and Employment

Short Term Plan

- **Collection of data on a regular basis and analysis**
 - In India good and reliable national data on employment, wages, productivity and hours worked are not collected on regular basis. As these data points are required by policy makers to make informed decisions on minimum wage fixing, collective bargaining and development of adequate labour market, collection of the same must be taken into consideration.
 - **Ministry of Labour and Employment** should entrust the task of data collection to the **Labour Bureau of India**, which already conducts both the Rural Labour Enquiry (collecting rural and agricultural wages) and the Occupational Wage Survey (capturing wage data for occupations in the non-agricultural sector), thereby covering all sectors. In addition, there is a need to

revise the list of occupations in the Occupational Wage Survey, which was formulated almost four decades ago.

Medium Term Plan

- **Formalizing the Informal Sector**

- As per the recommendations suggested in Indian Wage Report by International Labour Organization, India should progressively extend minimum wage protections, in law and in practice, to workers in the informal economy through the process of formalization. The recommendations provide guidance to facilitate the transition of workers and economic units into formal sector, while ensuring the preservation and improvement of existing livelihoods during the transition. It calls for a combination of incentives, compliance and enforcement measures, including, for example, improving access to business services or finance because of transition, reducing compliance costs for micro and small economic units through simplified tax and contribution regimes, as well as more extensive coverage of labour inspection in the informal economy.

Long Term Plan

- **Promoting equal pay for work of equal value**

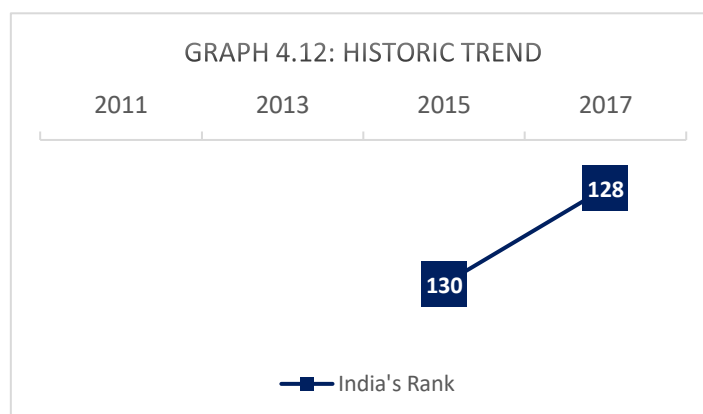
- The pay gap between workers in the informal and formal economies can be reduced through effective laws, policies and practices that will facilitate the transition from informal to formal economy. In this regard, a comprehensive anti-discrimination law, such as the Anti-Discrimination and Equality Bill (2016), if enacted into a statute could help in addressing some of the discriminatory practices.

Indicator 4.09: Female labour force participation

Definition: This indicator is the percentage of women aged 15-64 participating in the labour force divided by the percentage of men aged 15-64 participating in the labour force.

Source: International Labour Organization

$$\text{Value of the country} = \frac{\% \text{ of female in labour force (age 15-64)}}{\% \text{ of male in labour force (age 15-64)}}$$



Graph 4.12 indicates the historic trend of India's rank in indicator 4.09. In 2017, India's rank increased by 2 positions as compared to year 2015. This indicator contributes 0.5% to the country score.

TABLE 4.13 PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Mozambique	2	1.04	1	1.1	Top Performer
Rwanda	3	1.02	2	1.05	Top Performer
Lao PDR	5	0.98	3	1.02	Asian Peer
India	130	0.36	128	0.34	

Proposed Action Plan

Ministry: Ministry of Labour and Employment (MLE)

Short Term Plan

- **Skill Development**

- At present, women contribute a mere 17% to the country's GDP, well below the global average of 37%. Increasing women's labour force participation by 10 percent could add \$700 billion to India's GDP by 2025 (or a 1.4% increase)¹¹³. Most females, who are willing to work, don't get the job because of lack of skills especially in rural areas.
- National Rural Livelihood Mission (NRLM) is a poverty alleviation project implemented by Ministry of Rural Development. This scheme is focused on promoting self-employment and organization of rural poor. The basic idea behind this programme is to organize the poor into SHGs (Self Help Groups) and make them capable for self-employment. Ministry of Labour and Employment should make a marketing team which can promote measures like NRLM, Pradhan Mantri Kaushal Vikas Yojna, door to door in rural areas which will make people aware about the benefits of these schemes.

Medium Term Plan

- **Reservation in Parliament¹¹⁴**

- Rwanda was the first country in the world to have more than 50% female members in Parliament. At 86%, Rwanda¹¹⁵ has one of the highest rates of female labour force participation in the world. A research by Oxfam India has informed that greater number of females in parliament, leads to more questions being raised about women empowerment and domestic violence. Currently, India has only 11.6% females in Lok Sabha and 11% females in Rajya Sabha.
- The **Women's Reservation Bill**, has lapsed in the Parliament of India which proposed to amend the constitution of India to reserve 33% of seats for women in the lower house of Parliament of India, and in state legislative assemblies. The Rajya Sabha passed the bill on 9 March 2010. However, the Lok Sabha never voted on the bill. The bill lapsed after the dissolution of the 15th Lok Sabha session in 2014. Hence, Ministry of Labour & Employment should plan to bring back the women's reservation bill in Lok Sabha and get it passed by building consensus among all political parties. This will empower women and provide greater say at the highest level of policy making in India.

¹¹³https://www.huffingtonpost.in/2018/06/21/a-10-increase-in-womens-workforce-participation-could-add-770-billion-to-indias-gdp-by-2025-report_a_23464316/

¹¹⁴ <https://www.oxfamindia.org/blog/women-representation-political-decision-making-catalyst-achieving-gender-equality>

¹¹⁵http://www.lmis.gov.rw/scripts/publication/reports/Fourth%20Rwanda%20Population%20and%20Housing%20Census_labour_Force.pdf

Long Term Plan

• Reduce Gender Pay Gap

- As per the report of Monster Salary Index on gender, 2017, the median gross hourly salary for men was Rs. 345.8 and Rs. 259.8 for women. The gender pay gap on average was 25% in 2016. This figure varies across industries as shown in table 4.14.¹¹⁶ Women in India earn less than men even if they have the same educational qualifications.
- For this, companies need to actively invest in training of staff that can sensitize people on the issue of the gender pay gap. Active consideration should be given to appoint women at leadership positions. This can be buttressed by introducing mentoring schemes and leadership workshops for women. The gender pay gap should be decreased so that women's labour force participation can be increased.

TABLE 4.14: SECTOR-WISE AVERAGE GENDER PAY GAP

Sector	Average Gender Pay Gap (%)
Manufacturing	29.90%
IT	38.20%
Construction and Technical Consultancy	18.10%
Financial Services, Banking and Insurance	21.50%
Education and Research	14.70%
Healthcare, Caring Services and Social Work	22.60%
Transport, Logistics, and Communications	7.70%
Legal and Market Consultancy and Business Activities	27.50%

• Awareness of SHe-box

- Sexual harassment at the workplace has been one of the core concerns of women's movement in India since the '80s. The maximum number of cases were reported in information technology (IT), banking and finance and pharmaceuticals companies. The number of sexual harassment cases at work increased by 5.81% in FY18 from the previous financial year to 601 cases, according to the annual reports of India's 50 largest companies by market valuation.¹¹⁷
- In 2013, Ministry of Women & Child Development established a Sexual Harassment Electronic Box (SHe-Box) to provide a single window access to working women to facilitate the registration of complaint related to sexual harassment. Any woman facing sexual harassment at workplace can register her complaint through this portal. SHe-Box also works as repository providing information related to sexual harassment of women at workplace¹¹⁸.

¹¹⁶ <https://feminisinindia.com/2017/11/20/gender-pay-gap/>

¹¹⁷ https://www.livemint.com/Companies/sZR4sQ2INON3lcecgE6UUP/Government-workplaces-lag-in-setting-up-sexual-harassment-me.html?utm_source=scroll&utm_medium=referral&utm_campaign=scroll

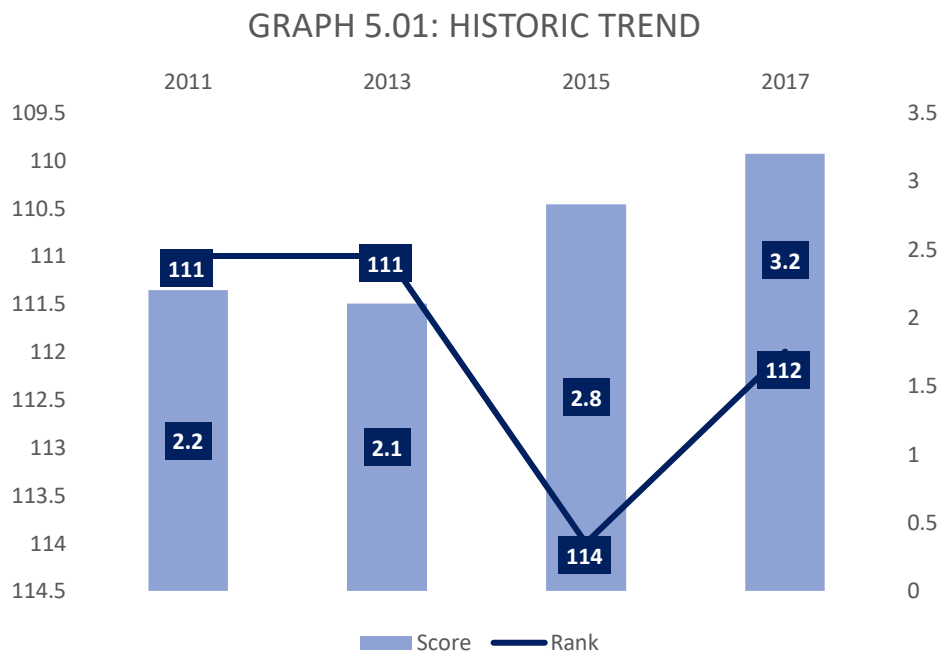
¹¹⁸ <http://www.shebox.nic.in/user/termsConditions>

- As many people are still unaware about this step, **Ministry of Women & Child Development** needs to **promote this initiative** in collaboration with **Ministry of Information and Broadcasting** so that every woman can raise her voice for justice.

Pillar 5: ICT Readiness

Definition: This pillar measures how developed is the ICT infrastructure in a country as well as how extensively it is used by individuals and businesses in the country. **Pillar 5** has a total of **8 indicators** stated below -

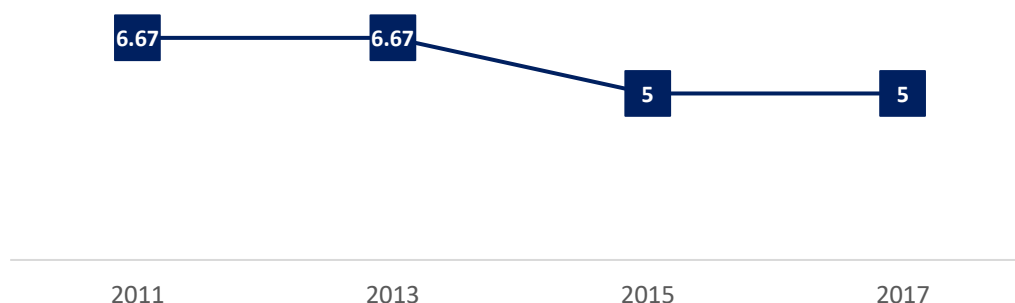
1. ICT use for business-to-business transactions
2. Internet use for business-to-consumer transactions
3. Individuals using the internet
4. Broadband internet subscribers
5. Mobile telephone subscriptions
6. Mobile broadband subscriptions
7. Mobile network coverage
8. Quality of electricity supply



Graph 5.01 indicates the historic trend of India's rank and value in Pillar 5. India's rank has decreased from 111th position in 2011 to 112th position in 2017.

Weightage Shift:

GRAPH 5.02: WEIGHTAGE SHIFT



Graph 5.02 indicates the overall contribution of Pillar 5 i.e. ICT Readiness in India's score. At present, 5% weightage is given to this pillar. The weightage of this pillar has decreased by 25% in year 2015.

TABLE 5.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011 (%)	2013 (%)	2015 (%)	2017 (%)	Change in Weightage (%)***
ICT use for business-to-business transactions*	NA	0.55	0.35	0.35	-36.36
Internet use for business-to-consumer transactions*	NA	0.55	0.35	0.35	-36.36
Individuals using the internet	1.33	1.11	0.71	0.71	-36.04
Broadband internet subscribers	1.33	1.11	0.71	0.71	-36.04
Mobile telephone subscriptions	1.33	1.11	0.71	0.71	-36.04
Mobile broadband subscriptions*	NA	1.11	0.71	0.71	-36.04
Mobile network coverage**	NA	NA	0.71	0.71	NA
Quality of electricity supply**	NA	NA	0.71	0.71	NA

NA = Not Applicable, the indicator was not introduced in that year

*3 new indicators namely ICT use for business-to-business transactions, Internet use for business-to-consumer transactions and Mobile broadband subscription were introduced in 2013.

**2 new indicators namely mobile network coverage and quality of electricity supply were introduced in 2015

***Change in weightage is shown as compared to year 2013

Table 5.01 shows the percentage of contribution that each indicator has on the overall score of India.

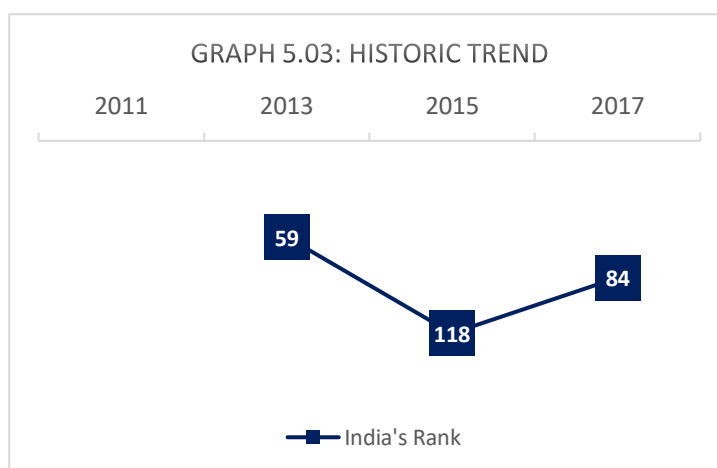
Note: Indicator 5.01 & 5.02 are being shown as a single indicator as both of the indicators come under the umbrella of e-commerce. Hence, a common strategy aimed at e-commerce can have desired effects on both the indicators.

Indicator 5.01: ICT use of Business-to-Business Transactions

Definition: “In your country, to what extent do businesses use ICTs for transactions with other businesses?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1 = not at all, 7 = to a great extent)



Graph 5.03 indicates the historic trend of India’s rank in indicator 5.01. This indicator was introduced in year 2013. In 2017, India’s rank increased by 34 positions as compared to year 2015. This indicator contributes 0.35% to the country score.

TABLE 5.02: PERFORMANCE OF COUNTRIES

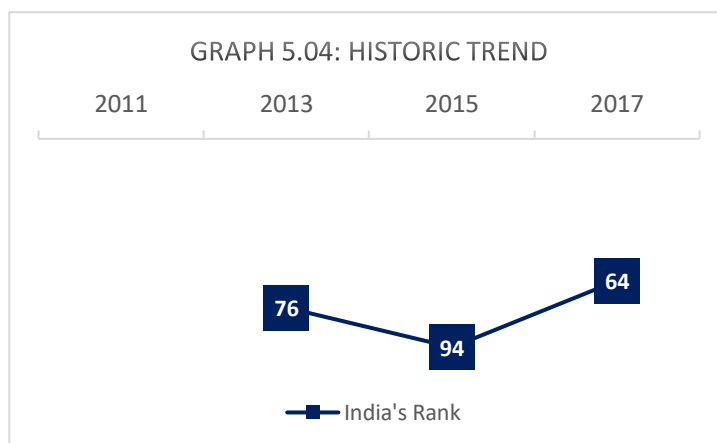
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Norway	8	5.95	1	6.11	Top Performer
Switzerland	6	6.02	2	6.09	Top Performer
United Kingdom	3	6.08	3	6.04	Top Performer
India	118	4.01	84	4.47	

Indicator 5.02: Internet use for business-to-consumer transactions

Definition: “In your country, to what extent do businesses use the internet for selling their goods and services to consumers?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1 = not at all, 7 = to a great extent)



Graph 5.04 indicates the historic trend of India’s rank in indicator 5.02. This indicator was introduced in year 2013. In 2017, India’s rank increased by 30 positions as compared to year 2015. This indicator contributes 0.35% to the country score.

TABLE 5.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United Kingdom	1	6.3	1	6.4	Top Performer
United States	2	6.26	2	6.38	Top Performer
Sweden	5	6.03	3	6.17	Top Performer
India	94	4.08	64	4.57	

Proposed Action Plan

Ministry: Ministry of Skill Development and Entrepreneurship

Short Term Plan

- **Skill Development and Training**

- E-commerce has generated both, blue-collar and white-collar employment opportunities in India. Further, activities such as logistics, analytics, pricing, inventory management, transportation, last-mile delivery etc. are unique and demands high specialization. Lack of skilled manpower in these areas is one of the challenges faced by the e-Commerce industry.
- E-commerce is more than just buying and selling products online. It includes the entire online process of developing, marketing, selling, delivering, serving and paying for products and services. Online sellers are likely to make costly mistakes when they launch their business unprepared as they are not equipped with adequate digital knowledge to be successful.
- To address this problem, joint programmes by the private and government sector would be helpful to train individual who have the ability to quickly adapt to the dynamic growth phases experienced by this industry. Strategic alignment between the Central and State government is imperative to strengthen this talent development initiative.
- For example, **e-Commerce private players could team up with the Skill India initiative of the Ministry of Skill Development and Entrepreneurship (MSDE)¹¹⁹ to make it more industry relevant while at the same time with help of state governments, MSDE should identify potential talent pockets present in their area which can be involved into this programme.**
(Source: Deloitte's "E-Commerce in India A game changer in economy" in collaboration with Confederation of Indian Industry)

Ministry: Ministry of Commerce & Industry, Reserve Bank of India and Ministry of Communication

Medium Term Plan

- **Seamless integration between Government departments and agencies**

- As per the United Nations Industrial Development Organisation Report on E-commerce Development in India, majority of the stakeholders have raised concern regarding lack of integration and coordination between different government agencies like income tax department, excise duty department, and registrar of companies, which lead to slower turnaround time, low efficiency and lack of transparency.
- To overcome above challenges, an **Online Customs Clearance system** should be implemented where all the concerned Departments of the Government, such as **Department of Posts, Directorate General of Foreign Trade (DGFT), RBI and various other stakeholders** should be

linked through **Customs Electronic Data Interchange (EDI) platform to ensure seamless flow of data between different departments making the process easy.**

Long Term Plan

- **Scoring Database**

- There is currently absence of a trustworthy mechanism for a customer to authenticate sellers or the products sold by them on e-Commerce sites, since there is no certification rating mechanism which is authenticated by the government. Customers, therefore, are left to make a choice based on the seller ratings given by fellow customers (or in many cases fake or paid reviewers).
- Therefore, in the interest of bringing credibility to such e-commerce entities, a mechanism to provide accreditation and/or rating should be developed by the government. A consultative approach should be taken which can be developed with the participation from various stakeholders in the e-commerce industry. The aim should be to develop a database comprising of ratings of both customers as well as sellers by first determining the key parameters for scoring based on previous online shopping behaviour of buyers and sellers.
- Similarly, scoring can be assigned to merchants based on their quality of products delivered. The scoring mechanism will discourage the abuse and fraud instances from both buyers and sellers by encouraging the confidence building among users which can be done by bringing in standardization of procedures, quality in service delivery and overall homogeneity in expectations across buyers and sellers in the country.
- **In order to achieve the desired standardization for the above said objectives, a designated facilitating and hand holding agency needs to be created by Ministry of Commerce and Industry which will create online-systems with proper forward and backward linkages to enable the adherence of a standard model code for E-commerce.**

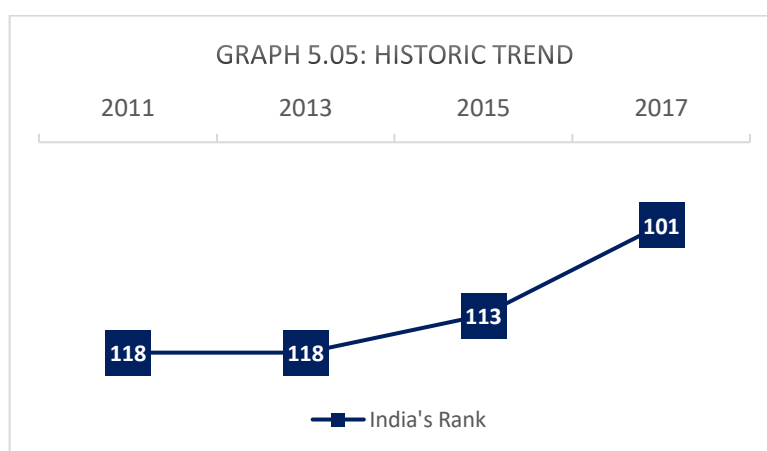
Note: Indicator 5.03, 5.05, 5.06 and 5.07 are shown as a single indicator as all are interdependent and follow the same criteria.

Indicator 5.03: Individuals using the Internet

Definition: This indicator refers to the percentage of individuals using the Internet. Here, Internet users are people using the Internet from any device (including mobile phone) in the last 12 months. Data are based on surveys generally carried out by national statistical offices or estimated based on the number of internet subscriptions.

Source: International Telecommunication Union, World Telecommunication Indicators

$$\text{Value of the Country} = \frac{\text{Individuals using the Internet} \times 100}{\text{Total Population}}$$



Graph 5.05 indicates the historic trend of India’s rank in indicator 5.03. In 2017, India’s rank increased by 12 positions as compared to year 2015. This indicator contributes 0.71% to the country score.

TABLE 5.04: PERFORMANCE OF COUNTRIES

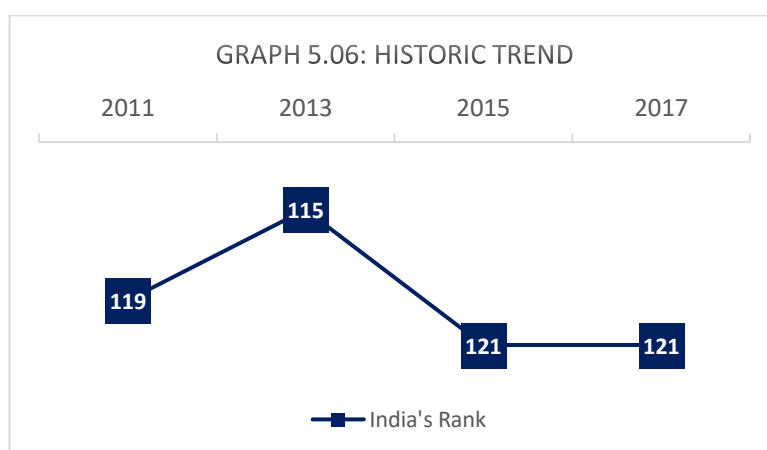
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Iceland	1	96.55	1	98.2	Top Performer
Luxembourg	6	93.78	2	97.33	Top Performer
Norway	2	95.05	3	96.81	Top Performer
India	113	15.1	101	26	

Indicator 5.05: Mobile-cellular Telephone Subscriptions

Definition: This indicator refers to the number of mobile telephone subscriptions per 100 population. A mobile telephone subscription refers to a subscription to a public mobile telephone service that provides access to the Public Switched Telephone Network (PSTN) using cellular technology, including the number of active pre-paid SIM cards active during the past 3 months. This includes both analogous and digital cellular system (IMT-2000, Third Generation, 3G) and 4G subscriptions, but excludes mobile broadband subscriptions via data cards or USB modems. Subscriptions to public mobile data services, private trunked mobile radio, tele point or radio paging and telemetry services are also excluded. It includes all mobile cellular subscriptions that offer voice communications.

Source: International Telecommunication Union, World Telecommunication Indicators

$$\text{Value of the country} = \frac{\text{Number of Mobile Telephone Subscriptions} \times 100}{\text{Total Population}}$$



Graph 5.06 indicates the historic trend of India's rank in indicator 5.05. In 2017, India's rank remained consistent at 121st position as compared to year 2015. This indicator contributes 0.71% to the country score.

TABLE-5.05: PERFORMANCE OF COUNTRIES

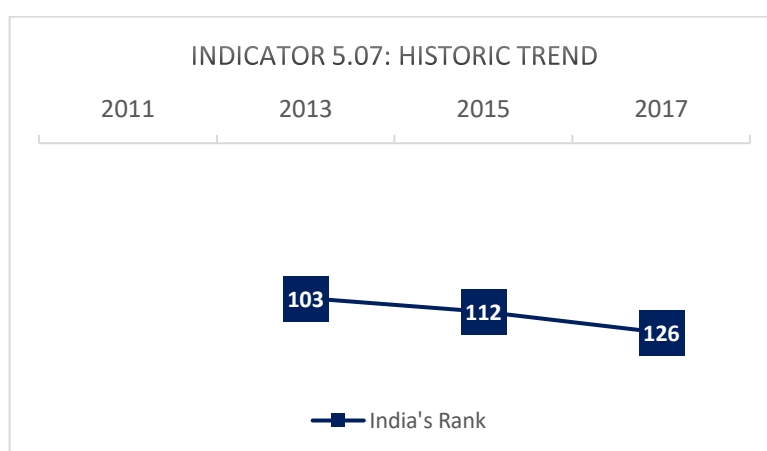
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Kuwait	4	190.29	1	231.76	Top Performer
Hong Kong SA	1	237.35	2	228.68	Asian Peer
United Arab Emirates	7	171.87	3	187.35	Top Performer
India	121	70.78	121	78.06	

Indicator 5.06: Mobile Broadband Subscription

Definition: This indicator refers to mobile broadband subscriptions per 100 population. Mobile broadband subscription refers to active SIM cards or, on CDMA networks, connections accessing the internet at consistent broadband speed of over 512 kb/s, including cellular technologies such as HSPA, EV-DO and above. This include connections being used in any type of device able to access mobile broadband networks, including smartphones, USB modems, mobile hotspot and other mobile-broadband connected devices.

Source: International Telecommunication Union, World Telecommunication Indicator

$$\text{Value of the Country} = \frac{\text{Mobile Broadband Subscription} \times 100}{\text{Total Population}}$$



Graph 5.07 indicates the historic trend of India’s rank in indicator 5.06. This indicator was introduced in year 2013. In 2017, India’s rank decreased by 14 positions as compared to year 2015. This indicator contributes 0.71% to the country score.

TABLE 5.06: PERFORMANCE OF COUNTRIES

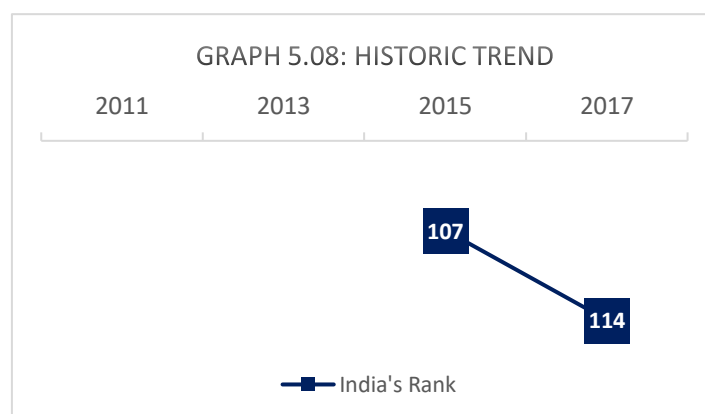
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Finland	2	123.14	1	143.99	Top Performer
Singapore	1	149.33	2	143.23	Asian Peer
Kuwait	NA	NA	3	140.2	Top Performer
India	112	3.22	126	9.36	

Indicator 5.07: Mobile network coverage

Definition: This indicator refers to the percentage of inhabitants who are within range of a mobile cellular signal, irrespective of whether or not they are subscribers.

Source: International Telecommunication Union, World Telecommunication Indicators

$$\text{Value of the country} = \frac{\text{Number of Inhabitants within a range of mobile cellular signal} \times 100}{\text{Total Population}}$$



Graph 5.08 indicates the historic trend of India's rank in indicator 5.07. This indicator was introduced in year 2015. In 2017, India's rank decreased by 7 positions as compared to year 2015. This indicator contributes 0.71% to the country score.

TABLE 5.07: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Armenia	1	100	1	100	Top Performer
Azerbaijan	1	100	1	100	Top Performer
Bulgaria	34	99.99	30	99.99	Top Performer
India	107	93.46	114	93.46	

In table 5.07 there are 29 countries with 1st rank in this indicator

Government Initiatives¹²⁰

The Union cabinet approved the new telecom policy (National Digital Communication Policy) in September 2018 that aims to attract \$100 billion in form of investments in India by 2022 and create 4 million jobs. The National Digital Communication Policy aims to accomplish the following Strategic Objectives:

- Provisioning of Broadband for All
- Creating 4 Million additional jobs in the Digital Communications sector
- Enhancing the contribution of the Digital Communications sector to 8% of India's GDP from 6% in 2017
- Propelling India to the Top 50 Nations in the ICT Development Index of ITU from 134 in 2017
- Enhancing India's contribution to Global Value Chains
- Ensuring Digital Sovereignty

This National Digital Communication Policy is further bifurcated on the basis of following three missions which are to be accomplished by 2022:

- **Connect India: Creating a Robust Digital Communication Infrastructure**
 - Provide Universal broadband connectivity at 50Mbps to every citizen
 - Provide 1 Gbps connectivity to all Gram Panchayats of India by 2020 and 10 Gbps by 2022
 - Enable 100Mbps broadband to all key development institutions; including all educational institutions
 - Achieve 'unique mobile subscriber density' of 55 by 2020 and 65 by 2022
- **Propel India: Enabling Next Generation Technologies and Services through Investments, Innovation, Indigenous Manufacturing and IPR Generation**
 - Increase India's contribution to Global Value Chains
 - Creation of innovation led Start-ups in Digital Communications sector
 - Creation of Globally recognized IPRs in India
 - Development of Standard Essential Patents (SEPs) in the field of digital communication technologies
 - Train/ Re-skill 1 Million manpower for building New Age Skills
 - Expand information and technology ecosystem to 5 Billion connected devices
 - Accelerate transition to Industry 4.0

¹²⁰ National Digital Communication Policy 2018

- **Secure India: Ensuring Digital Sovereignty, Safety and Security of Digital Communications**
 - Establish a comprehensive data protection regime for digital communications that safeguards the privacy, autonomy and choice of individuals and facilitates India's effective participation in the global digital economy
 - Ensure that net neutrality principles are upheld and aligned with service requirements, bandwidth availability and network capabilities including next generation access technologies.

Proposed Action Plan

Ministry: Ministry of Communication, Department of Telecommunication

Short Term Plan

- **Forming a Feedback Committee¹²¹**
 - The National Digital Communication Policy aims to propel India among the top 50 nations in the ICT Development Index of United Nation's International Telecommunication Union (ITU) from 134th position in 2017. **Hence, Ministry of Communication in alliance with various stakeholders should conduct in depth study of ITU's ICT Development Index report to figure out the loopholes in telecom sector that need to be addressed which then can be resolved by setting yearly targets and which would push India's ranking among top countries.**
 - **Department of Industrial Policy and Promotion** followed a model of feedback loop system for improving India's rank in Ease of Doing Business report which increased India's rank by 23 positions in the lasted report. **A similar model could be followed by Department of Telecommunication where they can create a feedback committee consisting of stakeholders that would recommend strategies to solve the on-ground issues in telecom industry.**

Medium Term Plan

Ministry: Ministry of Electronics & Information Technology and Ministry of Rural Development

- **Digital Literacy**
 - Technical illiteracy is one of the greatest barriers in usage of mobile phones among rural population of India. The Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA), one of the flagship schemes of the government which aims at making rural India digitally literate, is way behind its target¹²². This can also be verified by the data published by Ministry of Electronics and Information Technology (MeitY) that had fixed a target of making 3 crore of the rural population digitally literate by March 31, 2018, but the scheme's achievement has been only 57 lakhs i.e. 19% only.

¹²¹ <https://assets.kpmg.com/content/dam/kpmg/in/pdf/2017/08/Accelerating-growth.PDF>

¹²² <https://indianexpress.com/article/india/aiming-to-cover-3-crore-people-digital-literacy-scheme-covers-57-lakh-pm-modi-5208856/>

- Therefore, to achieve the target on time, MeitY should conduct digital literacy awareness programmes in coordination with Ministry of Rural Development, Self-Help groups and NGOs with an aim to increase the outreach among females in rural areas and make them more aware about mobile technology. This would eventually increase the number of mobile subscribers in India.

Long Term Plan

- **Site Acquisition Process**

- Site acquisition is one of the major operational challenges with respect to tower installations. To ease the site acquisition process, government has rolled out an initiative whereby tower providers are allowed to install telecom towers on government sites as these sites are well spread out in important locations of the country, they can act as a crucial enabler for improving connectivity for mobile phone users.
- However, until now only 3 states namely; Kerala, Andhra Pradesh and Assam have initiated the process of allotment of **government premises for tower installation. Hence, Ministry of Communication should intervene and push state governments to speed up the application of this initiative so that more towers can be installed on government sites all across India. If the plan is implemented successfully, this would improve the mobile network coverage.**

- **Boosting Installation of Telecom Towers**

- The country as of 2018, has about 461,000 mobile towers for a customer base of 1.18¹²³ billion. The Tower and Infrastructure Providers Association (TIPA) states that India still needs at least 100,000 more towers to take care of the growing data and voice requirements.
- Rural market is a major area where growth prospects are high. Total telecom penetration in rural areas is just 58%. Many telecom giants place mobile towers only in cities, but do not focus on rural areas due to huge costs incurred during the setting up of mobile towers. Therefore, to address this issue and in order to boost the network coverage and increase the mobile subscribers, **Department of Telecommunication should provide subsidy or any other financial incentive to Telecom Service Providers (TSPs) to encourage them to increase telecom towers in rural areas.**

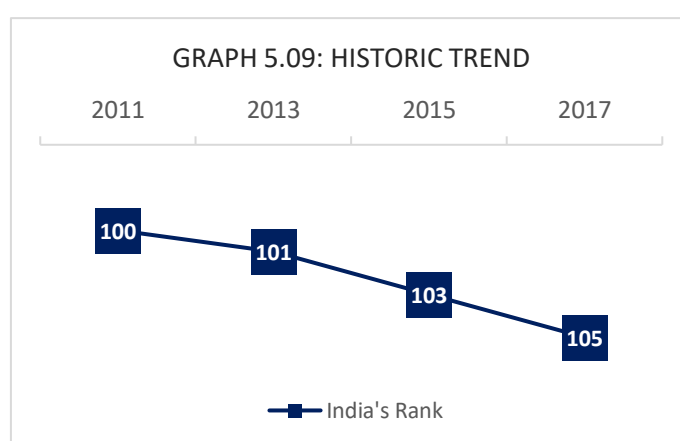
¹²³ Business Standards: India need 100,000 telecom towers to cater to the rising data demand

Indicator 5.04: Broadband Internet Subscribers

Definition: This indicator refers to the fixed broadband internet subscriptions per 100 population. This refers to total fixed (wired) broadband Internet Subscriptions (that is, subscriptions to high speed access to the public Internet – a TCP/IP connection – at downstream speeds equal to or greater than 256 kbps).

Source: International Telecommunication Union, World Telecommunication Indicators

$$\text{Value of Country} = \frac{\text{Fixed broadband internet subscription} \times 100}{\text{Total Population}}$$



Graph 5.09 indicates the historic trend of India's rank in indicator 5.04. In 2017, India's rank decreased by 2 position as compared to year 2015. This indicator contributes 0.71% to the country score.

TABLE 5.08: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	1	42.52	1	45.11	Top Performer
Denmark	2	40.16	2	42.51	Top Performer
Netherlands	3	40.08	3	41.73	Top Performer
Japan	19	28.90	20	30.66	Asian Peer
Australia	26	25.01	25	28.54	Best Practice
Italy	34	22.30	37	24.37	Best Practice
India	103	1.16	105	1.32	

Fixed broadband encompasses any high-speed data transmission to a residence or a business – i.e. a fixed location – using a variety of technologies, including cable, DSL, fibre optics, and wireless. Essentially, it refers to high-speed internet connections that are “always on” in fixed locations.

Government Initiative

National Digital Communication Policy 2018 has been formulated which aims to accomplish India's transition to a digitally empowered economy by establishing a '**National Broadband Mission – Rastriya Broadband Abhiyan**' to secure universal broadband access. The key objectives of the strategy are:

- **Bharat Net** – Providing 1 Gbps to Gram Panchayats upgradeable to 10 Gbps
- **Gram Net** – Connecting all key rural development institutions with 10 Mbps upgradeable to 100 Mbps
- **Nagar Net** – Establishing 1 Million public Wi-Fi Hotspots in urban areas
- **Jan Wi-Fi** – Establishing 2 Million Wi-Fi Hotspots in rural areas
- Implementing a 'Fibre First Initiative' to take fibre to the home, enterprises and key development institutions in Tier I, II and III towns and to rural clusters with the help of state, local bodies and private sector
- Creating a Broadband Readiness Index for States/ UTs to attract investments and address right of way challenges
- Encouraging investment in broadband infrastructure through fiscal incentives, including accelerated depreciation and tax incentives; and incentivizing fixed line broadband.

Proposed Action Plan

Ministry: Ministry of Communications, Department of Telecom (DoT), Telecom Regulations Authority of India (TRAI)

Short Term Plan

- India is ranked at 105th position globally in terms of fixed-line broadband service. Thus, there is a need for increase in the number of Wi-Fi networks that offer an affordable, versatile & flexible method for scaling up of Internet Access. Major challenge that is hindering the growth of Wi-Fi hotspots across the country is Right of Way (RoW) rules in the country.
 - **Uniform and seamless implementation of Right of Way (RoW) rules across the country**
 - The Right of Way (RoW) is a framework that provides approvals and settle disputes in a time-bound manner, as well as improve coordination between companies and government authorities.
 - Laying of fibre is required for enabling Wi-Fi connectivity across nooks & corners of the country. However, there are several RoW challenges such as acquisition of sites, exorbitant fee charges, etc. which leads to delay in rolling out of fibres and establishing Wi-Fi networks. Multiple documents and NOCs are required which differ from state to state. The challenge is not limited to obtaining permissions, but also to the payment of charges for obtaining RoW.

- Therefore, Department of Telecommunication (DoT) must bring uniformity and standardisation in the RoW rules across the states for installation of telecom infrastructure. During the policy formulation, Telecom Service Providers (TSPs) should also be involved as they are responsible for putting up the underground or over ground telecom infrastructure.

Ministry: Ministry of Tourism, Ministry of Culture and Ministry of Communication

Long Term Plan

- **Establishment of Public Wi-Fi Hotspots**

- In 2016, Japan introduced a free Wi-Fi connection app called **Travel Japan Wi-Fi** for tourists. This provides connection to at least 2,00,000 hotspots¹²⁴ spread throughout the country. The app automatically connects to hotspots present at major train stations, tourist spots, popular shops, restaurants and cafes. The travel Japan Wi-Fi app is available in multiple languages and acts as a personal assistant by guiding travellers about nearby shops and sightseeing spots. Countries like Singapore, Italy and Australia also provide this service of free Wi-Fi hotspots to its tourist which helps in ease out their travelling.
- Presently, the public Wi-Fi hotspots in India are only 31,518¹²⁵ which is far less than the what is required and there is an urgent need to increase this number. **Ministry of Tourism (MoT) should articulate a phase-wise strategy with Ministry of Tele-communication and Ministry of Culture (as major sites come under the purview of Ministry of Culture) in which Wi-Fi hotspots would be installed at tourist sites with an aim to cover all the Tier-I towns in 1st Phase, all the Tier-II towns in 2nd Phase and so on. This would not only enhance tourist's experiences but would also increase the number of fixed broadband subscriptions.**
- Meanwhile, MoT could develop an app similar to Japan, where all the public Wi-Fi hotspots will be listed so that it will allow the visitors to utilize nearby available Wi-Fi connections more easily.

¹²⁴ <https://japanfreewifi.com/>

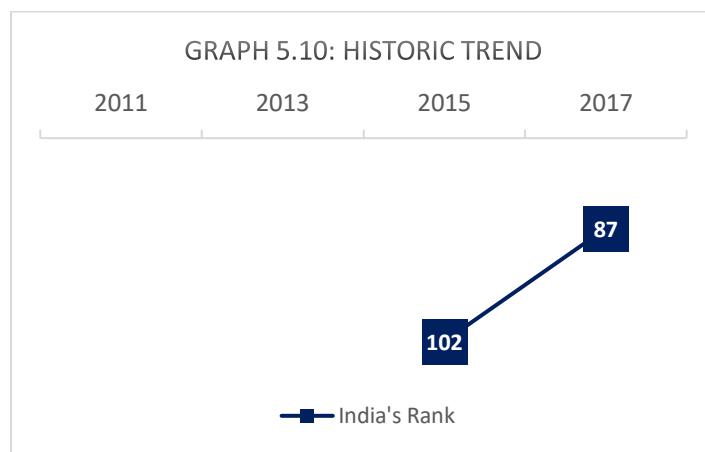
¹²⁵ <https://www.trai.gov.in/sites/default/files/201608260444111068778TAIPA.pdf>

Indicator 5.08: Quality of Electricity Supply

Definition: “In your country, how reliable is the electricity supply in your country (lack of interruptions and lack of voltage fluctuation)?”

Value: On 1 to 7 scale (1=extremely unreliable, 7= extremely reliable).

Source: World Economic Forum, Executive Opinion Survey



Graph 5.10 indicates the historic trend of India’s rank in indicator 5.08. This indicator was introduced in year 2015. In 2017, India’s rank increased by 15 positions as compared to year 2015. This indicator contributes 0.71% to the country score.

TABLE 5.09: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	1	6.78	1	6.89	Top Performer
Singapore	6	6.68	2	6.81	Asian Peer
Hong Kong SAR	2	6.76	3	6.79	Asian Peer
India	102	3.43	87	4.28	

Government Initiatives

- **Deen Dayal Upadhyaya Gram Jyoti Yojana-** This scheme focuses on feeder separation (rural households & agricultural) and strengthening of sub-transmission & distribution infrastructure including metering at all levels in rural areas. This will help in providing round the clock power to rural households and adequate power to agricultural consumers.
- **Saubhagya-** Pradhan Mantri Sahaj Bijli Har Ghar Yojana, a new scheme was launched by the hon’ble Prime Minister on 25th September 2017. Under this scheme free electricity connections will be provided to all households (both APL and poor families) in rural areas and poor families in urban areas.
- **Integrated Power Development Scheme (IPDS)** is one of the flagship programmes of the Ministry of Power. IPDS aims at strengthening of sub-transmission network, and is also involved in

metering, IT application, customer care services, provisioning of solar panels, and completion of the ongoing works of Restructured Accelerated Power Development and Reforms Programme (RAPDRP)

- **National Smart Grid Mission** has been established by Government of India vide **Ministry of Power** to reap benefits of smart grids in India and to accelerate Smart Grid deployment. NSGM has been operational since January 2016 with a dedicated team. NSGM has its own resources, authority, functional & financial autonomy with a main aim to plan and monitor implementation of policies and programs related to Smart Grids in the country.

Proposed Action Plan

Ministry: Ministry of Power

Short Term Plan

- **Choice for selection of Distribution Company**
 - In Singapore, Open Electricity Market Model (OEM) has allowed consumers across Singapore with an option to buy electricity from any retailer at a price plan & quality that satisfies their needs. While competition is bringing the price down, it is also ensuring that each distributor provides best quality supply to the consumers.
 - **Hence, Ministry of Power on similar lines can adopt such model in India as this would ensure a healthy competition among the distributors and would improve the quality of electricity supply.**

Long Term Plan

- **Standardisation of Power Quality Parameters throughout the Country**
 - In the Regulations of State Commissions, there are either none or few¹²⁶ power quality parameters specified. Further, the prescribed limits for the parameters, which are specified, are varying across different States. Moreover, the standards specified by different State Regulators exhibits different level of efficiency. Also, the incentive/disincentive mechanism with clearly defined framework are not widely covered.
 - In order to overcome above-mentioned challenges, a Model Regulation on Power Quality should be adopted where power quality indices, roles and responsibilities of various entities, standards/limits to be followed, incentive/disincentive mechanism and procedure for monitoring, management and control of all aspects of power quality should be well defined. **Ministry of Power with the help of State Electricity Regulation Commissions (SERCs) should implement this Model Regulation on Power Quality so that uniform and consistent standards on power quality across the country can be ensured.**

¹²⁶ Report on Power Quality of Electricity Supply to the Consumers: Central Electricity Regulatory Commission

SUB-INDEX B

T&T POLICY AND ENABLING CONDITIONS

The T&T Policy and Enabling Conditions sub-index, captures specific policies or strategic aspects that impact the T&T industry more directly. The pillars in this sub-index are indicators to what extent natural capital-on which a large part of the tourism industry relies-is being conserved.

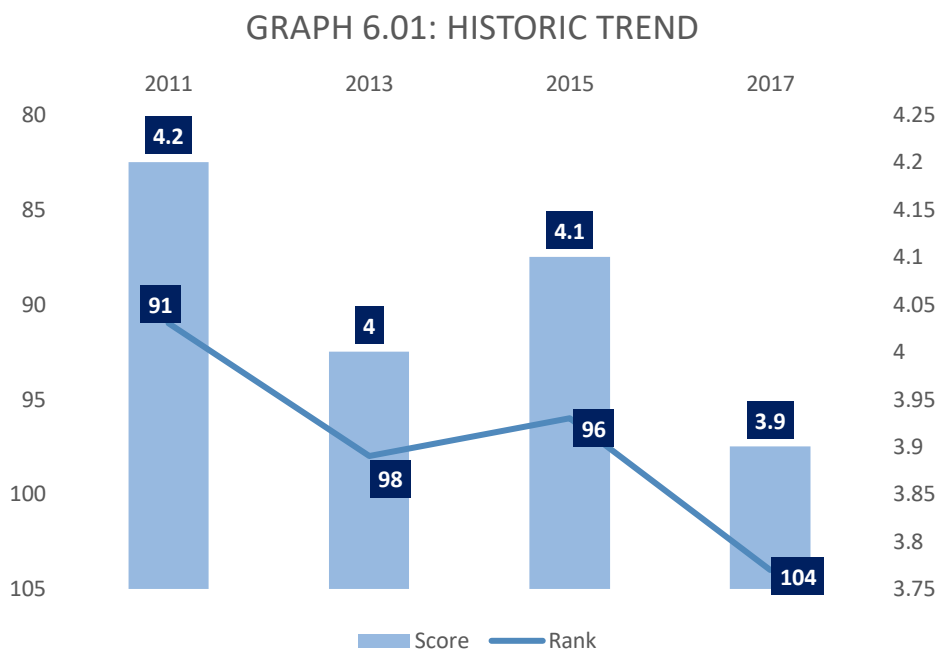
This Sub-index comprises 4 pillars:

- 1. Prioritization of Travel and Tourism (6 indicators)**
- 2. International Openness (3 indicators)**
- 3. Price Competitiveness (4 indicators)**
- 4. Environmental Sustainability (10 indicators)**

Pillar 6: Prioritization of Travel and Tourism

Definition: This pillar measures the extent to which the government actively promotes and orchestrate the development of the T&T sector. **Pillar 6** has a total of **6 indicators** stated below –

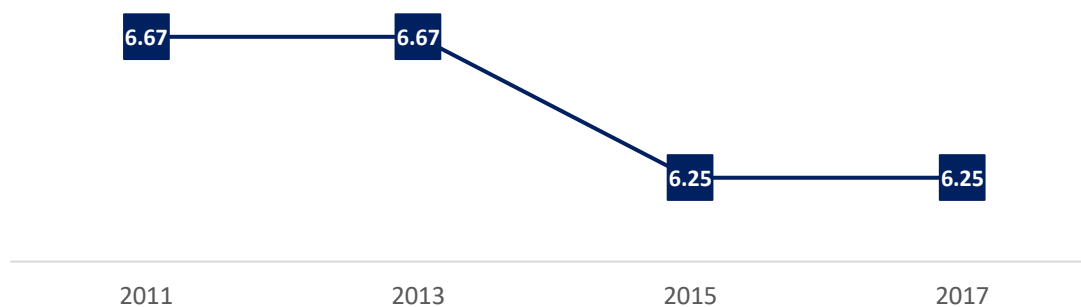
1. Government prioritization of travel and tourism industry
2. T&T government expenditure
3. Effectiveness of marketing and branding to attract tourist
4. Comprehensiveness of annual T&T data
5. Timeliness of providing monthly/quarterly T&T data
6. Country Brand Strategy Rating



Graph 6.01 indicates the historic trend of India's rank and value in Pillar 6. India's rank decreased from 91th position in 2011 to 104th position in 2017.

Weightage Shift:

GRAPH 6.02: WEIGHTAGE SHIFT



Graph 6.02 indicates the overall contribution of Pillar 6 i.e. Prioritization of Travel and Tourism in India’s score. At present 6.25% weightage is given to this pillar. The weightage of this pillar has decreased by 6.30% in the year 2015.

TABLE 6.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in Weightage (%)
Government prioritization of travel and tourism industry	1.67	1.25	-25.15
T&T government expenditure	1.67	1.25	-25.15
Effectiveness of marketing and branding to attract tourist	1.67	1.25	-25.15
Comprehensiveness of annual T&T data*	0.83	0.625	-24.70
Timeliness of providing monthly/quarterly T&T data*	0.83	0.625	-24.70
Country Brand Strategy Rating	NA	1.25	NA

NA = Not Applicable, the indicator was not introduced in that year.

*These indicators are combined applying a simple average aggregation to form one single indicator. Consequently, they are implicitly weighted by a factor of 0.5.

Table 6.01 shows the percentage of contribution that each indicator has on the overall score of India.

On-going government initiatives to boost the Travel and Tourism sector

- **Ude Desh ka Aam Naagrik (UDAN)¹²⁷**

- UDAN is an innovative scheme, launched by the Ministry of Civil Aviation, to develop the regional aviation market. It is a market-based mechanism in which airlines bid for seat subsidies. This first-of-its-kind scheme will create affordable yet economically viable and profitable flights on regional routes so that flying becomes affordable to the common man residing even in small towns.

- **Swadesh Darshan scheme**

- The scheme was introduced by the Cabinet Ministry and the Ministry of Tourism to develop the theme-based tourism in the country.
- Swadesh Darshan scheme has a vision to develop theme based tourist circuits on the principles of high tourist value, competitiveness and sustainability in an integrated manner by synergizing efforts to focus on needs and concerns of all stakeholders to enrich tourist experience and enhance employment opportunities.
- Under the scheme fifteen thematic circuits have been identified for development, namely: North-East India Circuit, Buddhist Circuit, Himalayan Circuit, Coastal Circuit, Krishna Circuit, Desert Circuit, Tribal Circuit, Eco Circuit, Wildlife Circuit, Rural Circuit, Spiritual Circuit, Ramayana Circuit, Heritage Circuit, Tirthankar Circuit & Sufi Circuit.

- **Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive (PRASHAD)**

- The 'National Mission on Pilgrimage Rejuvenation and Spiritual, Augmentation Drive' (PRASHAD) has been launched by the Ministry of Tourism with a vision to rejuvenate pilgrimage and spiritual experience of the tourists through availability of well-planned tourism infrastructure enabling tourist convenience, accessibility, security, cleanliness, experience and revitalize / preserve the soul of the pilgrimage/heritage city through integrated, inclusive and sustainable developments that would spur employment opportunities for the local communities.
- The total number of sites identified for development under the scheme at present are 41 in 25 states. They are Amaravati and Srisailem (Andhra Pradesh), Kamakhya (Assam), Parasuram Kund (Lohit District, Arunachal Pradesh), Patna and Gaya (Bihar), Balmeshwari Devi Temple (Rajnandgaon, Chhattisgarh), Dwarka and Somnath (Gujarat), Gurudwara Nada Saheb, Panchkula (Haryana), Maa Chintpurni (Una, Himachal Pradesh), Hazratbal and Katra (Jammu & Kashmir), Deogarh and Parasnath (Jharkhand), Chamundeshwari Devi, Mysuru (Karnataka), Guruvayoor, St. Thomas International Shrine, (Malayattoor), Cheraman Juma Mosque (Thrissur, Kerala), Omkareshwar and Amarkantak (Madhya Pradesh), Babedpara, West Jaintia Hills and Sohra (Meghalaya), Aizwal (Mizoram), Kohima and Mokokchung Districts (Nagaland), Trimbakeshwar (Maharashtra), Puri (Odisha), Amritsar (Punjab), Ajmer (Rajasthan), Kanchipuram and Vellankani (Tamil Nadu), Tripura Sundari (Tripura), Varanasi, and Mathura

¹²⁷<http://pib.nic.in/newsite/PrintRelease.aspx?relid=151850>

(Uttar Pradesh), Badrinath, Kedarnath, Gangotri and Yamunotri (Uttarakhand) and Belur (West Bengal).

- **Incredible India 2.0**¹²⁸

- The Ministry of Tourism has launched the Incredible India 2.0 campaign, during the financial year 2017-18 to promote various destinations and tourism products of the country including spiritual, medical and wellness tourism in important and potential source markets overseas.
- The Ministry, as part of its on-going activities, annually releases global print, electronic and online media campaigns in important and potential markets overseas, under the 'Incredible India' brand-line, to promote various tourism destinations and products of the country, including the cultural heritage. Promotions are also undertaken through the website and social media accounts of the Ministry.
- The launch of several branding & marketing initiatives by the Government of India such as Incredible India! & Athiti Devo Bhava provides a focused impetus to growth.

- **Chalo Kumbh Chalo**¹²⁹

- Ministry of Tourism has taken an initiative which is the launch of 'Chalo Kumbh Chalo' campaign to promote the 49-day Kumbh Mela globally through branding and marketing campaigns for Kumbh 2019, through advertisements at major international airports of the country to attract foreign tourists, by development of a designated area for flag hoisting for 192 countries visiting Kumbh Mela and organising the 'Pravasi Bharatiya Divas', 2019 in Varanasi to attract 'Pravasi Bharatiya Delegates' to visit Kumbh, 2019.

- **Adarsh Smarak**

- **Archaeological Survey of India (ASI)** has identified 100 monuments to be developed as Model Monuments. These monuments would be provided necessary tourist facilities including Wi-Fi, security, signage, encroachment free area, interpretation centres showing short films about the importance of monuments.

- **Adventure Tourism**

- Adventure tourism involves exploration or travel to remote, exotic areas. Any constructive activity which tests the endurance of both a person and his equipment to its extreme limit is termed as Adventure. Adventure tourism is rapidly growing in popularity as a tourist seeks different kinds of vacations.
- The Ministry of Tourism has issued guidelines for the approval of Adventure Tour Operators, which is a voluntary scheme, open to all bona-fide Adventure Tour Operators.
- The Ministry of Tourism has also formulated a set of guidelines in 2012 on Safety and Quality Norms on Adventure Tourism as Basic Minimum Standards for Adventure Tourism Activities. These guidelines have been reviewed and the revised guidelines 'Indian Adventure Tourism Guidelines' (Version 2.) have been launched on 31st May 2018 which cover 31 verticals

¹²⁸ <http://www.incredibleindia.com/>

¹²⁹ <https://www.traveltrendstoday.in/news/india-tourism/item/6236-govt-to-promote-kumbh-mela-to-attract-foreign-tourists>

involving land, air and water in respect of adventure tourism activities. These Guidelines have been uploaded on the website of the Ministry of Tourism. The same have also been forwarded to the State Governments and Union Territory Administrations for compliance. The Central Financial Assistance is being extended to various State Governments / Union Territory

- Administrations for development of Tourism Infrastructure in destinations including Adventure Tourism destinations.
 - Special efforts are made by the Ministry of Tourism to promote Inland Water Tourism by providing necessary infrastructure facilities. Financial assistance was extended for construction of Double Hull Boats, constitution of Jetties, Cruise Vessels, Boats, etc.
 - A Task Force on Adventure Tourism has been set up in October 2016 with Secretary (Tourism) as chairman to act as a forum for resolving issues related to development and promotion of Adventure Tourism in the country. The first meeting of the Task Force was held on 21st December 2016. The last meeting of the Adventure Tourism Task Force was held on 11.08.2017.
- **Sports Tourism¹³⁰**
 - To infuse sports culture and achieve sporting excellence in the country with the motive to encourage sports all over the country, Khelo India Scheme has been revamped and has been re-launched with specific verticals for development of sports at community, school and university levels with a budget outlay of US\$262 million.

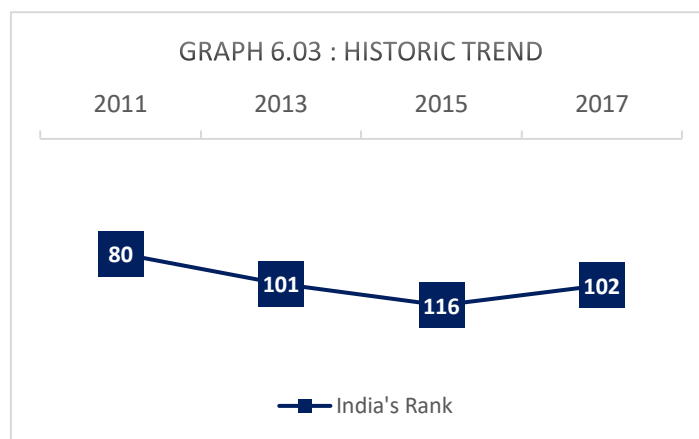
¹³⁰ <http://ficci.in/spdocument/22996/Tourism-Report-2018.pdf>

Indicator 6.01: Government Prioritization of Travel & Tourism Industry

Definition: “How high of a priority is the development of the travel & tourism industry for the government of our country?”

Source: World Economic Forum, Executive Opinion Survey

Value of the country: On a scale of 1 to 7 (1= not priority at all, 7= a top priority)



Graph 6.03 indicates the historic trend of India’s rank in indicator 6.01. In 2017, India’s rank increased by 14 positions as compared to year 2015. This indicator contributes 1.25% to the country score.

TABLE 6.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United Arab Emirates	1	6.71	1	6.62	Top Performer
New Zealand	2	6.68	2	6.49	Top Performer
Lesotho	62	5.32	3	6.47	Best Practice
France	34	5.84	36	5.45	Best Practice
India	116	4.34	102	4.07	

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- The Ministry of Tourism has launched a flagship scheme called Incredible India 2.0 campaign during the financial year 2017-18 to promote various destinations and tourism products of the country including spiritual, medical and wellness tourism in important and potential source markets overseas. This campaign aims at a shift from generic promotions undertaken across the world to market specific promotional plans and content creation with thematic creatives on different niche products.

- **Social Media Marketing Team**
 - Incredible India 2.0 still has a long way to go to showcase a changed and modern India. To achieve this aim faster, India must fix its value chain to enable not only to attract tourists but also guaranteeing the experience that they expect by making people aware through the campaign and stories on social media platform like Facebook, Instagram and Twitter. **By setting a social media marketing team, whose main focus will be on the online marketing of the events on various social media handles, Ministry of Tourism, can run campaigns to expand its following and gain immense international appeal.**
 - The Incredible India app has around 10,000+ downloads on Android. This needs to be increased by proper publicity/marketing of the application. **To encourage users to download the Incredible India app, various incentives can be offered to the users like discounts on registered hotels, tourist packages, booking tickets for events, etc. as done by other applications like makemytrip.com, goibibo, etc.**
 - To enhance the reachability of the Incredible India App, a more prominent method can be adopted by the Ministry of Tourism. They can reach out to various online platforms specifically the ones related to travel and tourism like makemytrip.com, goibibo, etc for the promotion of Incredible India scheme on their website. This will also affect the perception of the executives who are responsible for 30% of the report's survey questions.

- **Strengthening of Incredible India website and mobile application:**
 - During the study, it was observed that there is scope of improvement in the current version **website and mobile application** as mentioned below:
 - The application is available only in single language i.e. English but lacks the option of Hindi language **which might discourage domestic users to use the app.**¹³¹
 - Current version of website lacks a good search engine optimization. The official website of Incredible India shows up 4th position while searched through Google. Also on the Incredible India website, no information regarding the mobile application or its download link is provided.
 - Such weaknesses massively affect the interest of tourists to make use of the website or mobile application. Therefore, there is an urgent need to re-analyse the website and mobile application development along with its functionality. This, coupled with proper and effective publicity of the application can increase the number of app downloads thereby potentially increasing tourism in the country.

- Lack of overseas promotion, outdated brand image, lack of management in India Tourism offices overseas, poor PR efforts to counter negative publicity, high prices and poor surrounding infrastructure of National Monuments are some reasons due to which the tourism in India may

¹³¹ <https://itunes.apple.com/in/app/incredible-ndia/id1398253039?mt=8>

see a decline in the near future. **To eliminate these reasons, Ministry of Tourism can adopt the following methods:**¹³²

- Appointing and commissioning a Public Relations Consultant/Company of repute to evolve a PR(Public Relation) Strategy for Indian Tourism based on prevention, early intervention to bad publicity and effective response to crisis situations.¹³³
- A third-party survey can be conducted at tourist sites to keep a check on different indicators such as number of hotels in any area, infrastructure development, mobile network coverage, transport facility & accessibility, safety measures etc. This will help the Ministry of Tourism to keep a track of the tourist destinations which require immediate attention.

- **Medium Term Plan**

- Lesotho Tourism Development Corporation (LTDC)¹³⁴, launched on 1st September 2003, is a Lesotho Government initiative which is responsible for marketing and promotion of Lesotho country as a tourist destination. LTDC has leadership in the development of a strong and vibrant tourism industry which contributes to sustainable economic growth, job creation, poverty alleviation, and protection of the natural and cultural environment. This is done through effective partnership with the private sector and the community in strategic marketing, research, product development, quality service delivery and human resource development. **Therefore, Ministry of Tourism can also set up a corporation like LTDC which can look after tourism marketing.** The main aim of the corporation will include the following things:
 - To market and promote India as a preferred destination for tourist in such a manner that will contribute to generation of additional foreign exchange, improved balance of payments and creation of employment.
 - To promote and increase the flow of tourist by adopting proper marketing strategy to promote the unique selling points of India like Kumbh Mela, Jaipur literature festival, Hornbill Festival, Pushkar International Balloon festival with particular focus on appreciation of heritage, traditional and cultural endowments and responsible use of environment.
 - They can also come up with a show like Indaba and promote their tourism sector, as Lesotho promote their tourism in the well-known Indaba show (Africa's top show held annually in Durban).¹³⁵

- **Long Term Plan**

- France is also called centre of world gastronomy. The gala celebration of French cuisine underlined the message that France aims to cater to visitors who visit the country especially for its food. On similar lines, Ministry of Tourism can collaborate with Ministry of Food Processing Industries

¹³² http://www.iato.in/uploads/newsletter/Newsletter_Feb2015March201612.pdf

¹³³ http://www.wttcii.org/pdf/India_Tourism_Plan.pdf

¹³⁴ <https://www.lesothotradeportal.org.ls/kcfinder/upload/files/MINISTRY%20OF%20TOURISM.pdf>

¹³⁵ <https://maliba-lodge.com/blanketwrap/tag/lt/dc/>, <http://fortuneofafrica.com/lesotho/tourism-in-lesotho/>

and/or State governments to focus on gastronomy tourism by promoting it through food festival at regular intervals, as India is well known for its old and unique cultural diversity which offers a myriad of unique delicacies. This will not only bring Indian cuisines more into picture but will also boost the Indian economy by adding values to products & services that are based on the unique Indian culture.¹³⁶

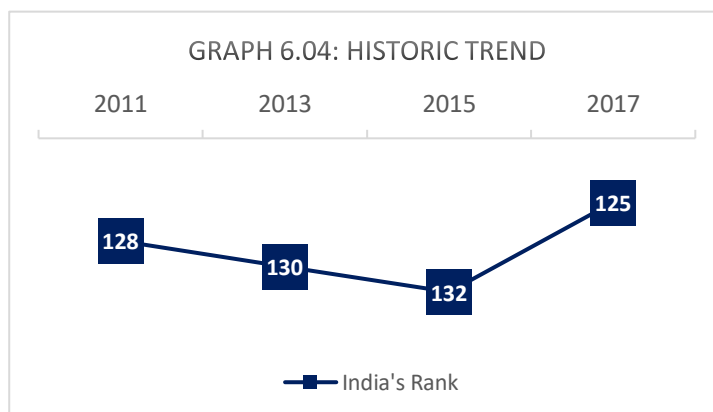
¹³⁶ <https://www.campusfrance.org/en/culinary-specialties-French-gastronomy>

Indicator 6.02: T&T government expenditure

Definition: This indicator refers to total T&T government expenditure as a percentage of total government budget. This includes expenditures (transfers or subsidies) made by government agencies to provide T&T services such as cultural (e.g. art museums), recreational (e.g. national parks), clearance (e.g. immigration/customs) and so on to visitors.

Source: World Travel & Tourism Council, Tourism Satellite Account Research

$$\text{Value of the country} = \frac{\text{Total direct investment by government on T\&T} \times 100}{\text{Total government budgets}}$$



Graph 6.04 indicates the historic trend of India's rank in indicator 6.02. In 2017, India's rank increased by 7 positions as compared to year 2015. This indicator contributes 1.25% to country score.

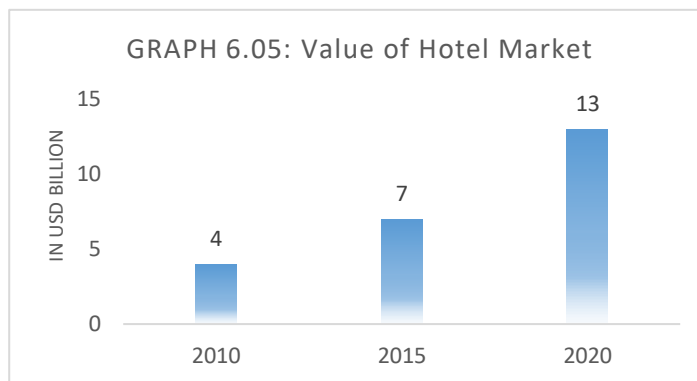
TABLE 6.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Dominic Republic	2	21.77	1	22	Top Performer
Jamaica	3	17.05	2	17.1	Top Performer
Mauritius	4	16.44	3	16.6	Top Performer
India	132	0.98	125	1	

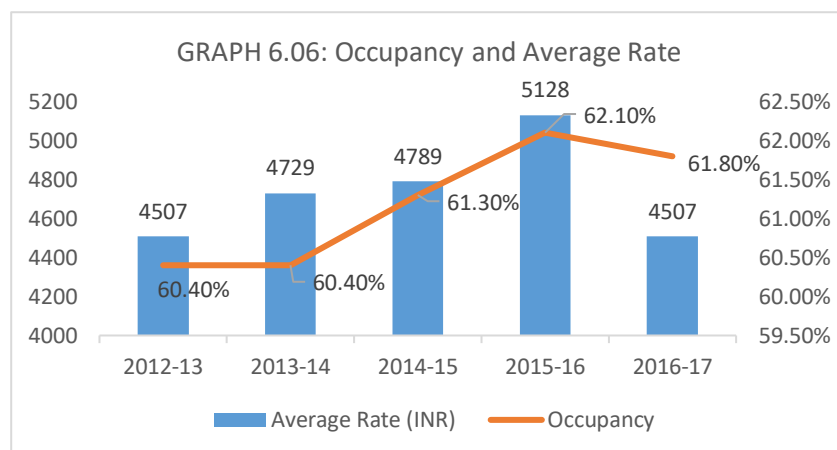
Tourism Infrastructure

- **Hospitality Analysis**

- Indian hospitality industry has emerged as one of the key industries driving the growth of the service sector and thereby, the Indian economy. The Indian hotel market is projected to grow to around 13 Bn USD by 2020.



- Despite increase in private sector investment, Indian hotel industry observed decline in average room rate and room occupancy in 2016-17 which is largely attributed to lower participation of hotels in the Five-Star Deluxe and Five-Star categories in India. According to Hotelivate¹³⁷, a hospitality consulting firm, following are the occupancy and average rates of hotels in India.



Proposed Action Plan

Ministry: Ministry of Tourism

- Indian government's expenditure on Travel & Tourism services such as cultural (e.g. art museums), recreational (e.g. national parks), clearance (e.g. immigration/customs) to visitors is 1% of its total budget. As per the projections suggested by India Brand Equity Foundation, Travel and Tourism contribution to capital investment is expected to grow to 6.3% p.a. during 2016-2026 which is higher than the global average of 4.5% p.a.¹³⁸ **Hence to achieve this target, the Ministry of Tourism needs to invest more in the travel and tourism sector to boost its demand in the world.**

Short Term Plan

- **Marketing and Advertisements**

¹³⁷ <https://hotelivate.com/hotel-finance/indian-hotel-industry-survey-2016-2017/>

¹³⁸ <https://www.ibef.org/download/Tourism-and-Hospitality-January-2018.pdf>

- Scotland spent about \$5.6 million this year on commissioned music, narration by Scottish actors through a series of advertisements on TV, or in taxi or on popular news websites and Social Media and other promotional efforts.¹³⁹ Spending millions on marketing campaigns makes sense for many countries, which rely on tourists for a significant share of their GDPs. However, a modest investment can also yield a solid return. The Visit Denmark campaign reported a return of \$16 in revenue for each dollar spent, while Tourism Ireland found a return of 10% for its television and online advertising, according to a WTTC report.¹⁴⁰
- Similarly, Assam Tourism has launched its new multimedia campaign with its brand ambassador, Priyanka Chopra. The three-and-a-half-minute-long YouTube video version has fetched a fair share of attention when it was released. Because of this video, it is expected that tourism of India will grow and it will attract a lot of tourists from UK, Europe, South-east Asian countries like Japan, Singapore, China, Thailand, etc. and the Indian diaspora from across the world to visit Assam. Therefore, **Ministry of Tourism can collaborate with Ministry of Information and Broadcasting and/or Ministry of Entertainment & Production to promote tourism through such advertisements and videos with the help of a brand ambassador.**

Long Term Plan

- **Creating adequate supply for travel and tourism**
 - While emphasis should be placed on increasing the demand for India as a tourist destination, it should also be complemented through adequate supply. Bain & Company estimated that with a growth in international arrivals to 20 million in India, the upside opportunity would be \$19.9 billion in incremental tourism receipts from international travellers and the creation of approximately 1 million additional jobs. India having one of the five fastest-growing aviation markets in the world, plans to continue this growth to become the largest market by 2030, with passenger numbers reaching 278 million by 2026 and 442 million by 2035. However, despite India's considerable current investment, an estimated \$1.5 trillion in infrastructure investment will be required over the coming decade to cater the estimated demand.¹⁴¹
 - At this stage, investing in infrastructure is the most necessary thing to do. From airports to roads and hotels to tourist service infrastructure, infrastructure development is required. Also, focus on implementing progressive legislation and ensuring digital infrastructure throughout the ecosystem is needed. **Thus, Ministry of Tourism can collaborate with State department for identifying tourist locations (through tourist surveys) which require enhancement in their various services and can then invest in the development of those tourist locations.**

¹³⁹ <https://www.cnbc.com/2016/09/29/tourism-how-much-do-countries-spend-to-attract-tourists.html>

¹⁴⁰ https://www.wttc.org/-/media/files/reports/benchmark-reports/the_comparative_economic_impact_of_travel_tourism.pdf

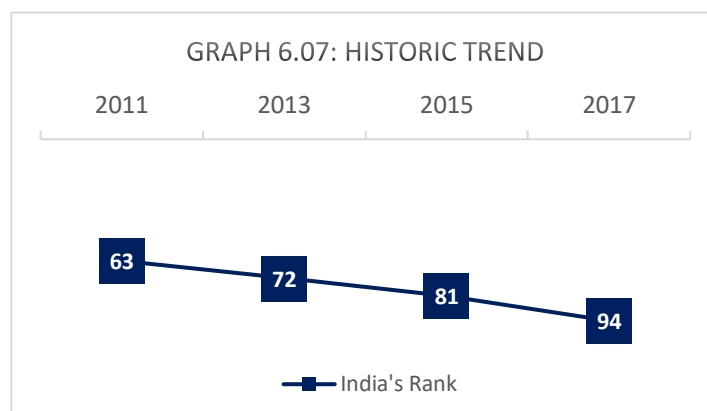
¹⁴¹ http://www3.weforum.org/docs/White_Paper_Incredible_India_2_0_final_.pdf

Indicator 6.03: Effectiveness of marketing and branding to attract tourists

Definition: “How effective is your country’s marketing and branding campaigns at attracting tourists?”

Source: World Economic Forum, Executive Opinion Survey

Value: On a scale of 1 to 7 (1 = not effective at all, 7 = extremely effective)



Graph 6.07 indicates the historic trend of India’s rank in indicator 6.03. In 2017, India’s rank decreased by 13 positions as compared to year 2015. This indicator contributes 1.25% to the country score.

TABLE 6.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reasons
United Arab Emirates	1	6.59	1	6.63	Top Performer
New Zealand	2	6.22	2	6.23	Top Performer
Ireland	5	5.98	3	6.19	Top Performer
Australia	40	5.09	18	5.37	Best Practice
China	53	4.84	36	4.92	Asian Peer
Germany	76	4.39	61	4.49	Best Practice
India	81	4.23	94	3.78	

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- For China social media marketing is vital, and WeChat and Weibo are vital platforms helping it to build a destination tourism presence and to engage with potential visitors. WeChat is like an operating system where they can scan our ID and can communicate with us through WeChat, while Weibo on the other hand is a great platform for marketing where a lot of bloggers, media outfits, government departments and users share their ideas. **Therefore, India’s Ministry of tourism on the similar lines, can use these type of social media platforms to help tourists with their travel decision-making process** and where travel brands can interact with users, reply to comments and messages, share rich content, launch competitions and deliver targeted advertising

campaigns. Hence, the first step would be to set up an official account on the right social media platforms, and then begin to share expertly crafted content, imagery, video, reviews and other engagement approaches.¹⁴²

Medium Term Plan

- **Allow corporate sponsorship for heritage building:** One of the biggest charms of Indian Tourism is its architecture and wealth of historic monuments but its regular maintenance remains an unsolved problem. A German based company, Kärcher, as a part of their cultural sponsorship programme, have been actively involved in supporting the preservation of historical monuments and buildings.¹⁴³ Hence, **an effective solution for the above mentioned issue would be to outsource the maintenance and exterior lighting of the heritage monument to corporate giants like Kärcher, in return for some branding opportunity at the monument.**

Long Term Plan

- **Promotion of Domestic Tourism:** India's international arrivals are forecast to reach 15.3 million by 2025, according to the World Tourism Organization. Travel and tourism currently accounts for 9.6% of India's GDP (88% of which comes from domestic travel) and supports 9.3% of the country's total jobs (or 40.3 million jobs). As marketing campaign under Incredible India primarily focuses on to promote India's tourism to international market while the Executive Opinion Survey (EOS) captures the opinion of Indian executives. Therefore, Ministry of T could also promote Incredible India in the domestic market as this would help in improving India's ranking in EOS indicators.

¹⁴²<https://www.marketmechina.com/7-tips-for-china-outbound-tourism-success-how-to-market-your-destination-to-chinese-tourists/>

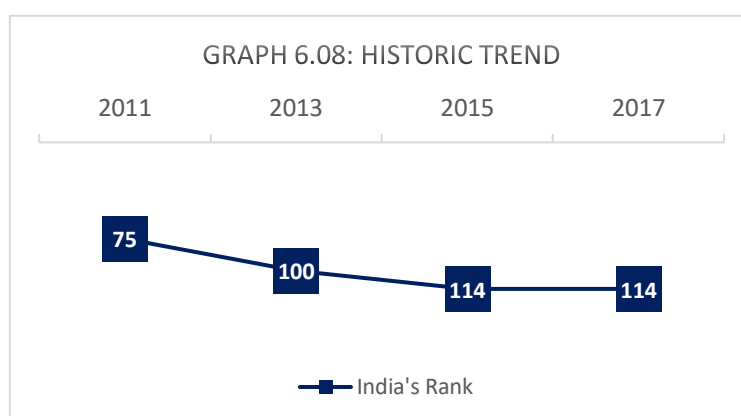
¹⁴³<https://www.kaercher.com/in/inside-kaercher/sponsoring/cultural-sponsorship.html>

Indicator 6.04: Comprehensiveness of annual T&T Data.

Definition: The indicator refers to how many of the yearly data provided by National administration on 30 different concepts from the UNWTO Compendium of Tourism Statistics are available.

Source: World Tourism Organization (UNWTO)

Value of country = Number of data available (0 = no data, 120 = all selected indicators are available)



Graph 6.08 indicates the historic trend of India's rank in indicator 6.04. In 2017, India's rank retained its 114th position as compared to year 2015. This indicator contributes 0.625% to the country score.

TABLE 6.05: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Saudi Arabia	1	120	1	116	Top Performer
Lithuania	2	116	2	113	Top Performer
Spain	2	116	2	113	Top Performer
Malaysia	82	61	95	53	Asian Peer
India	114	43	114	39	

Scoring Criteria

The value of this indicator is calculated based on how many of the yearly data is provided by National Administration on 30 different concepts from the UNWTO Compendium of Tourism Statistics. It covers data provided in 2012 through 2016. The scores range from a minimum of 0 to a maximum of 120, where 120 can be obtained by a country providing data for all the 30 concepts in all of the four years taken into consideration. (0= no data, 120= all selected indicators are available)

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- For the past few years, Ministry of Tourism has not been able to provide the data for accommodation details, same day visitors, their purpose of visit, mode of transport adopted by them and their average expenditure per day. Therefore, to capture the above data, **Ministry of Tourism can develop a centralized App for foreign tourists, which can collect this data and can provide some promotional benefits like discounts in hotels to incentivise tourists to fill the data. Also, Ministry can conduct regular survey to count number of domestic tourists in our country.**

Medium Term Plan

- Tourism Malaysia conducts various surveys annually to collect data about International and Domestic tourists and has presented it through a report on 'Measuring the Economic Impact of Tourism': The Tourism Satellite Account for Measuring Tourist Demand. Tourism of India can also follow the below mentioned three surveys which Malaysia used.
 - **Departing Visitor Survey (DVS):** A survey on foreign tourist at select exit points to calculate tourist expenditure and demographic profile.
 - **Excursionist Survey:** Excursionist are day trippers who spend less than 24 hours. This survey is conducted in select border towns.
 - **Domestic Tourism Survey:** This survey is for collecting data regarding domestic tourism focusing on Demographic profile, purpose, expenditure etc.

Through these surveys, following data problems can be resolved:

- Data about the expenditure
- Number of visitors
- Number of Trips and Duration
- Travelling Pattern
- Demographic Profile¹⁴⁴

Long Term Plan

- **Pan India Hotel and Travel Agency Survey**
 - Recently, Municipal Corporation of cities like Agra and Thiruvananthapuram conducted survey and identified unregistered hotels, lodges, PGs and guest houses illegally operating in the city. **On similar lines, Ministry of Tourism can also conduct a Pan India survey for hotels and travel agencies with the help of a third party with an aim to ensure proper data collection thus**

¹⁴⁴http://cf.cdn.unwto.org/sites/all/files/pdf/item_9_malaysia.pdf

enabling administration to crack down the defaulters. Pan India Hotel Survey conducted by a third party will not only provide data about unregistered hotels and travel agencies but can also help in tracking the reasons that lead to non-registration by the owners. The Survey should include some of the following questions:

- Year of Inauguration
- No. of bookings
- No. of Rooms
- Facilities
- Reasons for not registering the hotel/travel agency
- Estimate Income
- Area etc.

Reference Table

The following table shows the yearly data which the government has to provide to UNWTO.

S. No.	Concepts from the UNWTO Compendium of Tourism Statistics	Data provided to UNWTO
1.	INBOUND TOURISM	
	Data	
	Arrivals	
1.1	Total	
1.2	◆ Overnight visitors (tourists)	Yes
1.3	◆ Same-day visitors (excursionists)	No
1.4	* of which, cruise passengers	
	Arrivals by region	
1.5	Total	Yes
1.6	◆ Africa	Yes
1.7	◆ Americas	Yes
1.8	◆ East Asia and the Pacific	Yes
1.9	◆ Europe	Yes
1.10	◆ Middle East	Yes
1.11	◆ South Asia	Yes

1.12	◆ Other not classified	Yes
1.13	* of which, nationals residing abroad	Yes
	Arrivals by main purpose	
1.14	Total	Yes
1.15	◆ Personal	Yes
1.16	* holidays, leisure and recreation	Yes
1.17	* other personal purposes	Yes
1.18	◆ Business and professional	Yes
	Arrivals by mode of transport	
1.19	Total	Yes
1.20	◆ Air	Yes
1.21	◆ Water	Yes
1.22	◆ Land	Yes
1.23	* railway	Yes
1.24	* road	Yes
1.25	* others	Not applicable in India's case
	Arrivals by form of organization of the trip	
1.26	Total	Yes
1.27	◆ Package tour	Yes
1.28	◆ Other forms	Yes
	Accommodation	
	Total	No
1.29	◆ Guests	No
1.30	◆ Overnights	No
	Hotels and similar establishments	
1.31	◆ Guests	No

1.32	◆ Overnights	No
	Expenditure	
1.33	Total	Yes
1.34	◆ Travel	Yes
1.35	◆ Passenger transport	Yes
	Expenditure by main purpose of the trip	
1.36	Total	Yes
1.37	◆ Personal	Yes
1.38	◆ Business and professional	Yes
	Indicators	
1.39	Average size of travel party	Yes
	Average length of stay	Yes
1.40	Total	
1.41	◆ For all commercial accommodation services	No
1.42	* of which, "hotels and similar establishments"	No
1.43	◆ For non-commercial accommodation services	
1.44	Average expenditure per day	Yes

2. DOMESTIC TOURISM

Data

Trips

2.1	Total	No
2.2	◆ Overnight visitors (tourists)	Yes
2.3	◆ Same-day visitors (excursionists)	No
	Trips by main purpose	
2.4	Total	
2.5	◆ Personal	No

2.6	* holidays, leisure and recreation	No
2.7	* other personal purposes	No
2.8	◆ Business and professional	No
	Trips by mode of transport	
2.9	Total	
2.10	◆ Air	No
2.11	◆ Water	No
2.12	◆ Land	No
2.13	* railway	No
2.14	* road	No
2.15	* others	No
	Trips by form of organization	
2.16	Total	
2.17	◆ Package tour	No
2.18	◆ Other forms	No
	Accommodation	
	Total	
2.19	◆ Guests	No
2.20	◆ Overnights	No
	Hotels and similar establishments	
2.21	◆ Guests	No
2.22	◆ Overnights	No
	Indicators	
2.23	Average size of travel party	No
	Average length of stay	No
2.24	Total	No

2.25	◆ For all commercial accommodation services	No
2.26	* of which, "hotels and similar establishments"	No
2.27	◆ For non-commercial accommodation services	No
2.28	Average expenditure per day	No

3. **OUTBOUND TOURISM**

Data

Departures

3.1	Total	
3.2	◆ Overnight visitors (tourists)	Yes
3.3	◆ Same-day visitors (excursionists)	No

Expenditure

3.4	Total	Yes
3.5	◆ Travel	Yes
3.6	◆ Passenger transport	Yes

Expenditure by main purpose of the trip

3.7	Total	Yes
3.8	◆ Personal	Yes
3.9	◆ Business and professional	Yes

Indicators

3.10	Average length of stay	
3.11	Average expenditure per day	

4. **TOURISM INDUSTRIES**

Data

Number of establishments

4.1	Total	
-----	-------	--

4.2	◆ Accommodation for visitors	No
4.3	* of which, "hotels and similar establishments"	Yes
4.4	◆ Food and beverage serving activities	No
4.5	◆ Passenger transportation	No
4.6	◆ Travel agencies and other reservation services activities	No
4.7	◆ Other tourism industries	No
Accommodation for visitors in hotels and similar establishments		
Monetary data		
4.8	◆ Output	No
4.9	◆ Intermediate consumption	No
4.10	◆ Gross value added	No
4.11	◆ Compensation of employees	No
4.12	◆ Gross fixed capital formation	No
Non-monetary data		
4.13	◆ Number of establishments	Yes
4.14	◆ Number of rooms	Yes
4.15	◆ Number of bed-places	Yes
Indicators		
4.16	Occupancy rate / rooms	No
4.17	Occupancy rate / bed-places	No
4.18	Average length of stay	No
4.19	Available capacity (bed-places per 1000 inhabitants)	Yes
Travel agencies and other reservation service activities		
Monetary data		
4.20	◆ Output	No
4.21	◆ Intermediate consumption	No

4.22	◆ Gross value added	No
4.23	◆ Compensation of employees	No
4.24	◆ Gross fixed capital formation	No
Non-monetary data		
◆ Domestic trips		
4.25	* with package tour	
4.26	* without package tour	
◆ Inbound trips		
4.27	* with package tour	
4.28	* without package tour	
◆ Outbound trips		
4.29	* with package tour	
4.30	* without package tour	

5. EMPLOYMENT

Data

Number of employees by tourism industries

5.1	Total	
◆ Accommodation services for visitors (hotels and similar establishments)		
5.2		Yes
5.3	◆ Other accommodation services	Yes
5.4	◆ Food and beverage serving activities	Yes
5.5	◆ Passenger transportation	Yes
5.6	◆ Travel agencies and other reservation services activities	Yes
5.7	◆ Other tourism industries	Yes

Number of jobs by status in employment

5.8	Total	
5.9	◆ Employees	Yes

5.10	◆ Self employed	Yes
	Indicators	
	Number of full-time equivalent jobs by status in employment	
5.11	Total	Yes
5.12	◆ Employees	Yes
5.13	* male	Yes
5.14	* female	Yes
5.15	◆ Self employed	Yes
5.16	* male	Yes
5.17	* female	Yes

6. COMPLEMENTARY INDICATORS

Demand

6.1	Gross travel propensity	Yes
6.2	(1.2 inbound tourists + 2.2 domestic tourists) / population	Yes
	Macroeconomic indicators related to international tourism	
6.3	Inbound tourism expenditure over GDP	Yes
6.4	Outbound tourism expenditure over GDP	Yes
6.5	Tourism balance (inbound minus outbound tourism expenditure) over GDP	Yes
6.6	Tourism openness (inbound plus outbound tourism expenditure) over GDP	Yes
6.7	Tourism coverage (inbound over outbound tourism expenditure)	Yes
6.8	Inbound tourism expenditure over exports of goods	Yes
6.9	Inbound tourism expenditure over exports of services	Yes
6.10	Inbound tourism expenditure over exports of goods and services	Yes
6.11	Inbound tourism expenditure over current account credits	Yes
6.12	Outbound tourism expenditure over imports of goods	Yes

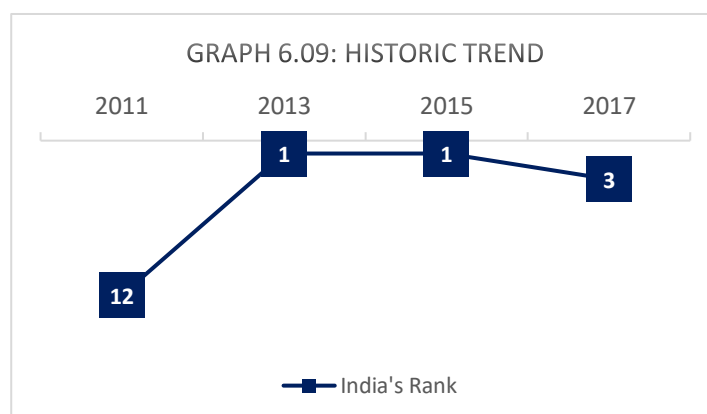
6.13	Outbound tourism expenditure over imports of services	Yes
6.14	Outbound tourism expenditure over imports of goods and services	Yes
6.15	Outbound tourism expenditure over current account debits	Yes

Indicator 6.05: Timeliness of providing monthly/quarterly T&T data

Definition: This indicator refers to the availability of two key T&T indicators (international tourist arrivals and tourism receipts) on a monthly or quarterly basis.

Source: World Tourism Organization (UNWTO)

Value of Country = Number of latest data available (0 = no data, 22.5 = data reported for all the periods considered)



Graph 6.09 indicates the historic trend of India's rank in indicator 6.05. In 2017, India's rank decreased by 2 positions as compared to year 2015. This indicator contributes 0.625% to the country score.

TABLE 6.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Uruguay	1	21	1	22.5	Top Performer
Vietnam	86	14	1	22.5	Asian Peer
India	1	21	3	22	

World Tourism Barometer: Scoring Criteria

- UNWTO World Tourism Barometer¹⁴⁵ is a publication of the World Tourism Organisation (UNWTO) that monitors short-term tourism trends on a regular basis to provide global tourism stakeholders with up-to-date analysis on international tourism.
- UNWTO collects data from government of different countries by sending each government an email where they are asked to fill in the tourism related data. Specifically, for this indicator WEF gives points on the basis of the regulatory of a government to submit data for International Tourist Arrival and International Tourist Receipt.

¹⁴⁵<http://www2.unwto.org/ca/node/50680>

- The UNWTO has calculated the score of each country based on the data included in the latest available UNWTO World Tourism Barometer by adding the number of months for which data on the international tourist arrivals are available to the number of months for which data on international tourism receipts are available. Half weight has been applied to the lower of the two scores, so the scores range from a minimum 0 to a maximum of 22.5.

Proposed Action Plan

Ministry: Ministry of Tourism

Medium Term Plan

- India provides data to UNWTO on timely basis which has helped India attain 3rd position in the world. India is providing data based on international tourists but is lacking in providing data for same day tourist, because of which India scored 22 out of 22.5. This problem of same day tourist data can be solved through the below mentioned method:

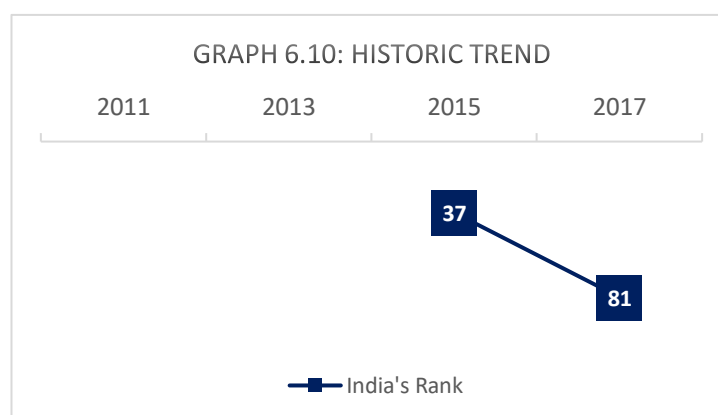
Development of a centralized App to ensure data collection for tourists visiting India:

- Development of a centralized App for Foreign tourists to get data on place of visit, reason for visit, accommodation details, mode of transport, estimated budget, etc. which will track the data for tourists visiting India.
- Uploading data on the App can be made mandatory for the foreign tourists to ensure their security and accurate data collection. This will ensure data pertaining to cruisers and daily travellers.
- Ministry of Tourism can collaborate with Ministry of External Affairs / Bureau of Immigration to get the data of same day tourist through the data of arrivals and departures marked against each foreign passport.

Indicator 6.06: Country Brand Strategy Rating

Definition: This indicator evaluates the accuracy of the strategy of National Tourism Organizations (NTO) by a formula that compares the most popular brand tags (as measured by the proprietary Digital Demand D2 tool) for a specific country to the brand tags most heavily promoted by that country's NTO. A country brand receives a higher rating if that country's NTO focuses its strategic and promotional positioning on the tourism-related brand tags with the highest demand (as measured by total online searches) from international tourists. A poor rating can suggest either the inappropriate promotion of the least popular brand tags (as measured by total online searches) by an NTO or the lack of focus on the brand tags in highest demand.

Source: Bloom Consulting Country Brand Ranking, Tourism Edition



Graph 6.10 indicates the historic trend of India's rank in indicator 6.06. This indicator was introduced in 2015. In 2017, India's rank decreased by 44 positions as compared to year 2015. This indicator contributes 1.25% to the country's score.

TABLE 6.07: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	CBS Rating*	Reason
Paraguay	3	97.6	1	98.8	AAA	Top Performer
Germany	1	100	2	95.55	AA	Top Performer
Luxembourg	5	93.6	3	94.43	AAA	Top Performer
Australia	81	65	71	74.04	A	Best Practise
India	37	77.3	81	72.55	BBB	

Country Brand Strategy (CBS) rating: Very Strong - AAA , Strong –AA, Slightly Strong - A , Very Good – BBB, Good – BB, Slightly Good – B ¹⁴⁶

¹⁴⁶https://www.bloom-consulting.com/pdf/rankings/Bloom_Consulting_Country_Brand_Ranking_Tourism.pdf

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- **Ministry of Tourism needs to focus more on sharply focused marketing campaigns** rather than mass marketing. This will improve the efficiency of India's marketing spend, help maintain a strong brand presence and address the seasonality factor. Ministry of Tourism should collaborate with PR firms and/or marketing agencies to develop sharply focused marketing plans which will be helpful in highlighting lesser-known brand tags in the hopes of finding new markets. For example, following niche areas can be marketed exclusively:
 - **Rural Tourism:** The potential for the development of rural tourism in India is high as most of its population resides in rural areas. This can benefit the local community economically & socially by facilitating interaction between tourists & locals for a mutually enriching experience.
 - **Ecotourism:** India is often termed as a hotspot of bio-diversity & this rich natural heritage is unparalleled in many ways. Such valuable resource base gives impetus for the practice of variety of alternate tourism forms & many of which are already in existence. For example: The national parks, wildlife sanctuaries & biosphere reserves¹⁴⁷.

Medium Term Plan

- **Subscribe to D2© tool**¹⁴⁸
 - D2© is a Big Data company that provides analytic insights and intelligence about countries, regions and cities. Their proprietary software gathers all searches performed on a global level towards countries, regions & cities and reveals its appeal. Every year, the digital country & digital city indexes are measured on the basis of the interest & performance of countries & cities in various areas like tourism, investment, export, talent & national prominence.
 - D2-tool for tourism analytics has been subscribed by tourism organisations of Sweden, Portugal, Germany, Finland, Costa Rica, Norway, European travel commission etc. **Ministry of Tourism can also subscribe to this tool to gain insights drawn from the analysis to overview the various target markets.**

Long Term Plan

- Australia.com is now one of the world's most popular destination pages on Facebook, with more than six million followers. They have adopted a number of interesting techniques that have

¹⁴⁷ <https://www.ibef.org/download/Tourism-and-Hospitality-January-2018.pdf>

¹⁴⁸ <https://www.weforum.org/agenda/2017/10/india-tourism/>

boosted their appeal and drawn in millions of followers from across the globe. India too can adopt online marketing strategies to increase its CBS rating through the following mentioned ways:

- **Hire a stellar social media marketing team**

Ministry of Tourism can hire a social media marketing team like Australia.com's social media team which should be specialized, proficient, passionate and creative when it comes to reaching out to their followers. This will enable the ministry to massively expand its following and gain immense international appeal.

- **Rely on followers for content**

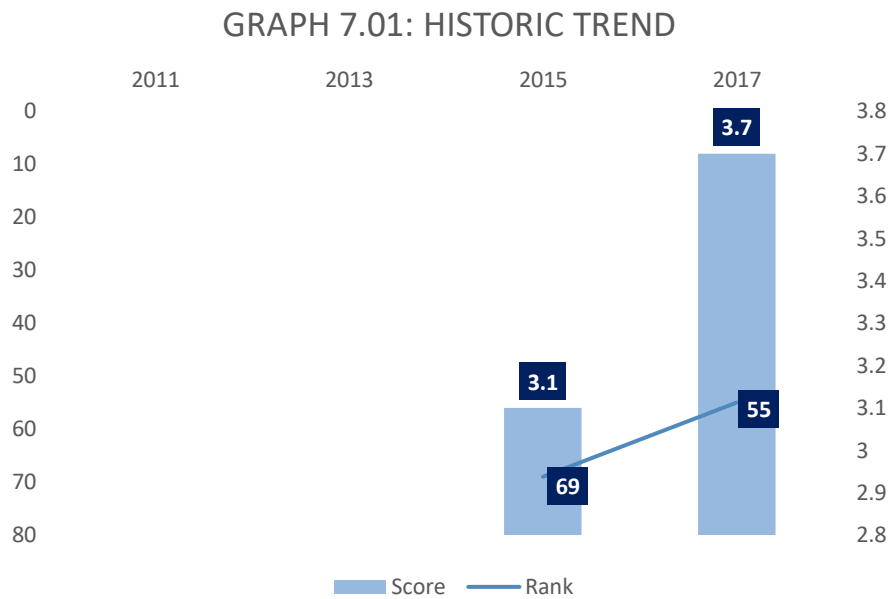
Another strategy can be used by India where India can use online platforms to publish photos sent in by various tourists visiting any location. Then, the best images will be published on the ministry's social media platforms. Through this method, ministry can automatically encourage the tourist to become heavily engaged with the brand¹⁴⁹. Similar initiative has also been taken by Australia with their Australia.com platform.

¹⁴⁹<https://www.8ways.ch/en/digital-news/3-social-media-marketing-lessons-tourism-australia/>

Pillar 7: International Openness

Definition: This pillar measures how open a country is to people travel and services. **Pillar 7** has a total of **3 indicators** stated below -

1. Visa requirements
2. Openness of bilateral Air Service Agreements
3. Number of regional trade agreements in force



Graph 7.01 indicates the historic trend of India in Pillar 7. This pillar was introduced in 2015. India's rank has increased from 69th position in 2015 to 55th position in 2017

Weightage Shift:

GRAPH 7.02: WEIGHTAGE SHIFT



Graph 7.02 indicates the overall contribution of Pillar 7 i.e. International openness in India's score.

At present, 6.25% weightage is given to this pillar in India's overall score in 2017.

TABLE 7.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in Weightage (%)
Visa requirements	0.74	2.08	181
Openness of bilateral Air Service Agreements	0.74	2.08	181
Number of regional trade agreements in force	NA	2.08	NA

NA = Not Applicable as the indicator was not introduced in that year

These indicators were present in Pillar 1 (Policy rules and regulations) till 2013 but in the year 2015, pillar "Policy rules and regulations" was dissolved and a new pillar was formed named "International Openness" was formed where these 3 indicators were introduced.

Table 7.01 shows the percentage of contribution that each indicator has on the overall score of India.

Indicator 7.01: Visa Requirements

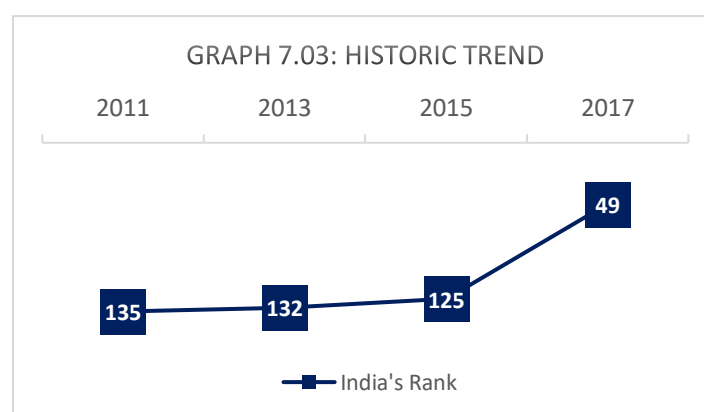
Definition: This indicator measures Visa requirements for entry in the destination country for a tourism visit of a limited duration for visitors from worldwide source markets. It takes into account the extent to which a destination country is facilitating inbound tourism through its visa policy, distinguishing whether the country can be visited without a visa, a visa can be obtained on arrival or an electronic visa is available.

Source: UNWTO Visa Openness Report 2015

Value =

$$\frac{(\text{PoC exempt from visa} \times 1) + (\text{PoC provided visa on arrival} \times 0.7) + (\text{PoC that uses e-visa} \times 0.5) \times 100}{\text{Total World Population visiting source country}}$$

**PoC means Population of Source Countries*



Graph 7.03 indicates the historic trend of India's rank in indicator 7.01. In 2017 India's rank increased by 76 positions as compared to year 2015. This indicator contributes 2.08% to the country score.

TABLE 7.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Ecuador	NA	NA	1	89	Top Performer
Indonesia	28	53	2	86	Asian Peer
Hong Kong SAR	3	80	3	80	Top Performer
India	125	9	49	37	

Change in Calculation

Till 2013, this indicator was calculated as the total number of countries with different visa requirements but since 2015 it has been changed to percentage of population share with different visa requirements.

Government Initiatives

- Government of India introduced online e-Tourist Visa for 43 countries on 27.11.2014. Further, under the liberalization and simplification of visa regime in India, e-visa scheme for Tourist, Business and Medical purposes have been implemented w.e.f 01.04.2017.
- As of 2018, visa policies of Indian Government distinguish between three categories as listed below:
 - **Exempt from visa**
 - India is allowing entry to nationals from 2 countries namely, Nepal and Bhutan, without a visa.
 - **Visa on Arrival**
 - Visa on Arrival is provided for citizens of 2 countries namely Japan and South Korea, that too only at six designated International Airports namely, Bangalore, Chennai, Delhi, Hyderabad, Kolkata and Mumbai.
 - **Electronic Visa**
 - Persons holding e-visa are allowed to enter into India only through 26 international airports and 5 major Indian seaports whereas such persons holding e-Visa can depart from any of the authorized Immigration Check Posts in India.¹⁵⁰
 - Applicants of the eligible countries/territories may apply online minimum 4 days in advance of the date of arrival with a window of 120 days. Duration of stay in India under e-Visa is maximum upto 60 days from the day of arrival in India. e-Visa can be availed for maximum of three times in a calendar year i.e. between January to December.
 - In the case of e-Medical Visa, extension may be granted up to 6 months on case to case basis on merits of each case by the Foreigners Regional Registration Officer (FRRO)/ Foreigners Registration Officer (FRO) concerned.

Proposed Action Plan

Ministry: Ministry of Home Affairs | Bureau of Immigration

Long Term Plan

- **Indonesia's policy for exemption of visa**
 - As of 2018, Indonesia is providing exemption of visa to the nationals of 140 countries with a clause that the purpose of visit can be tourism and the visit can only be for a maximum time period of 30 days which can't be extended. However, visa on arrival is provided to the nationals of 60 countries where tourists can stay for no longer than 60 days.¹⁵¹
 - Similarly, Ministry of External and Home Affairs can extend its visa on arrival policy to more countries, at least to countries/territories which are providing exemption from visa/visa on arrival to Indian passport holders.

¹⁵⁰ https://mha.gov.in/PDF_Other/AnnexIII_01022018.pdf

¹⁵¹ <https://www.bali.com/visa-indonesia-entry-requirements-bali.html>

- India can also extend the policy of visa on arrival to the airports of Goa, Varanasi, Bodhgaya, and Jaipur, among other primary tourist destinations of the country. This would further help to promote tourism bolstering the country's tourism market in India.
- Below is the list of countries/territories that are providing exemption from visa/visa on arrival /e-visa facility to Indian passport holders. However, passport holders of these countries are still required to follow the traditional method of acquiring visa not provided with e-visa facility in India. Therefore, Ministry of External and Home Affairs of India can extend this e-visa facility to the nationals of these countries/territories.

TABLE 7.03: COUNTRIES¹⁵²

Countries/Territories (10)	
Northern Cyprus	Maldives
Reunion	Ethiopia
Svalbard and Jan Mayen	Togo
British Virgin Island	Guinea-Bissau
Pitcairn Islands	Niue

¹⁵² <https://www.makemytrip.com/blog/visa-on-arrival-for-indians>, <https://www.bankbazaar.com/visa/list-of-visa-free-countries-for-india.html?ck=Y%2BziX71XnZjIM9ZwEflsyDYIRL7gaN4W0xhuJSr9Iq7aMYwRm2IPACTQB2XBBtGG&rc=1>

Indicator 7.02: Openness of Bilateral Air Service Agreements

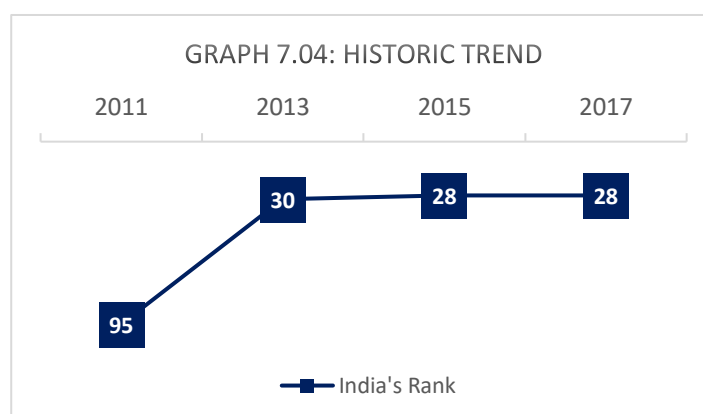
Definition: The index measures the weighted average openness of all bilateral Air Service Agreements concluded by International Civil Aviation Organization (ICAO) signatories as registered in ICAO's World's Air Services Agreements database.

- The weights are the bilateral scheduled passenger traffic taking place under each Air Service Agreement.
- Regulatory data comes from ICAO'S WASA database and traffic data is obtained from IATA.

Source: World Trade Organization (WTO)

Value = Index measuring the average openness of air service agreements (0 = most restricted, 38 = most liberal)

Note: A bilateral air service agreement is concluded between two contracting countries and liberalizes commercial civil aviation services between those countries. The bilateral air services agreements allow the designated airlines of those countries to operate commercial flights that covers the transport of passengers and cargoes between two countries. Also, they normally regulate frequency and capacity of air services between countries, pricing and other commercial aspects.



Graph 7.04 indicates the historic trend of India in this indicator. In 2017, India's rank has increased by 2 positions as compared to year 2013. This indicator contributes 2.08% to the country score.

TABLE 7.04: PERFORMANCE OF COUNTRIES

Country	Rank 2015	Value 2015	Rank 2017	Value 2017	Reason
New Zealand	1	35.59	1	35.59	Top Performer
El Salvador	2	27.77	2	27.77	Top Performer
Taiwan, China	3	27.5	3	27.5	Top Performer
India	28	14.57	28	14.57	

Government Initiatives

- India held negotiations with 17 countries and a “Memorandum of Understanding” was signed with 12 countries. The major issues resolved at these negotiations as per the directions in National Civil Aviation Policy (NCAP 2016) are:¹⁵³
 - **Open Skies agreement as per National Civil Aviation Policy (NCAP 2016):** This agreement allows unlimited number of flights to six metro airports of six metropolitans, namely Delhi, Mumbai, Hyderabad, Kolkata, Bengaluru and Chennai, was signed with six countries namely Jamaica, Guyana, Czech Republic, Finland, Spain and Sri Lanka. The new arrangement will encourage connectivity and passenger travel between India and these countries.
- The table below shows the agreements between India and various countries along with the year in which the agreement is signed.

TABLE 7.05: MOST RECENT AIR SERVICES AGREEMENTS

Agreement between countries	Agreement Year
India and New Zealand ¹⁵⁴	2016
India and Greece ¹⁵⁵	2017
India and Morocco ¹⁵⁶	2018
India and Serbia ¹⁵⁷	2018

- As on 2016, India has Air Service Agreements (ASA) with 109 countries covering aspects relating to the number of flights, seats, landing points and code-share.
- Under the new civil aviation policy (2016), no new flying rights, also called bilateral air services agreement, will be increased till Indian carriers utilise at least 80% of their capacity entitlements.¹⁵⁸ For e.g. the bilateral entitlements with Dubai, where carriers from both sides have utilised over 90% of the existing quota, the Indian government did not agree on increasing flying rights with Dubai, as Dubai authorities did not agree with the demands of the Indian government to provide specific desired slots at Dubai airport.¹⁵⁹
- Only the ASA with the U.S. is an open skies agreement without restriction on capacity, routing or pricing. Although not open skies, the ASA with the UK was also significantly liberalised in 2004. It should be noted that governments typically require reciprocity when negotiating the terms of an ASA. Therefore, it is possible that restrictions within an ASA are not due to the policies of the Indian government but due to the policies of the opposite country.

¹⁵³ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=155471>

¹⁵⁴ https://www.mea.gov.in/Images/attach/ASA_English_version.pdf

¹⁵⁵ <https://currentaffairs.gktoday.in/india-greece-sign-air-services-agreement-11201750322.html>

¹⁵⁶ <http://www.dgca.nic.in/>

¹⁵⁷ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=183613>

¹⁵⁸ http://www.civilaviation.gov.in/sites/default/files/Final_NCAP_2016_15-06-2016-2_1.pdf

¹⁵⁹ <https://economictimes.indiatimes.com/industry/transportation/airlines/-aviation/indian-airlines-exhaust-80-of-flying-quota-on-key-foreign-routes/articleshow/65554699.cms>

Proposed Action Plan

Ministry: Ministry of Civil Aviation & Ministry of External Affairs

Long Term Plan

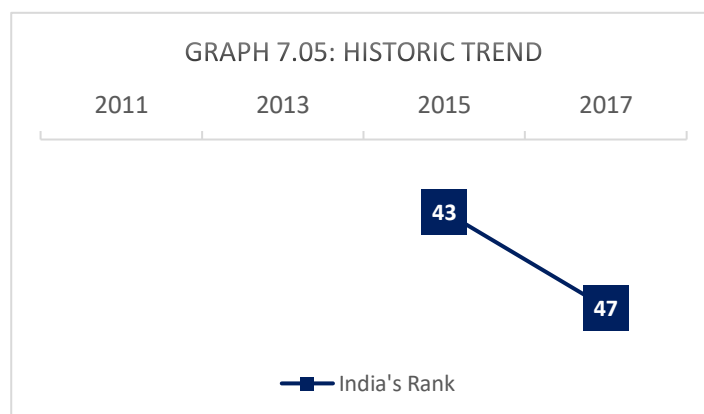
- Trends observed from previous years' reports of TTCR show that the data base considered for this indicator is updated in every 6 years. Data base considered for TTCR 2007, 2009 and 2011 was of 2005 and data base considered for 2013, 2015, 2017 is of 2011. As per this trend, data to be used for this indicator in TTCR 2019, 2021, 2023 has been submitted in 2017.
- The next update in database will now be made in 2023 for TTCR 2025, 2027, 2029. As a long-term plan, Ministry of Civil Aviation should update UNWTO regularly as soon as all requirements for an Air Service agreement are fulfilled so that there are no cases of pending updates when the year considered for database changes.

Indicator 7.03: Number of regional trade agreements in force

Definition: This indicator assesses the level of openness of a country to foreign goods and service as measured by the sum of the number of Regional Trade Agreements (RTA) and the number of Economic Integration Agreements (EIA) in force to the World Trade Organization (WTO). Members entering into RTAs are required to notify RTA to the WTO, either under article XXIV of the General Agreement on Tariff and Trade (GATT) 1994 or the Enabling Clause (for RTAs covering trade in goods), or under Article V of the General Agreement on Trade and Service (GATS) (for RTAs covering trade in services). In case of an RTA covering both goods and services, two notifications are required. The notification should be made following ratification of the RTA and before the application of preferential treatment between the parties.

Source: World Trade Organisation (WTO); Regional Trade Agreements Information System (RTA-IS)

Value = The sum of the number of Regional Trade Agreements (RTA) and the number of Economic Integration Agreements (EIA) in force to the WTO.



Graph 7.05 indicates the historic trend of India in this indicator. This indicator was introduced in 2015. In 2017, India's rank decreased by 4 positions as compared to year 2015. This indicator contributes 2.08% to the country score.

TABLE 7.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Germany	1	46	1	53	Top Performer
France	1	46	1	53	Top Performer
Netherlands	1	46	1	53	Top Performer
Portugal	1	46	1	53	Top Performer
Bulgaria	1	46	1	53	Top Performer
India	43	19	47	20	

28 countries have 1st rank in this indicator as all of them have same value.

Procedure for Regional Trade Agreements (RTAs) under WTO:

- **Step 1: Early Announcement**

Members participating in new negotiations aimed at the conclusion of an RTA should inform the WTO Secretariat of such negotiations. Members which are parties to a newly signed RTA should send information on the RTA to Secretariat including RTA's official name, scope, date of signature, any foreseen timetable for its entry into force or provisional application, relevant contact points and/or website addresses, and any other relevant unrestricted information.

- **Step 2: Notification**

The notification of an RTA by Members should take place as early as possible as, in general no later than the parties' ratification of the RTA or any party's decision on the application of the relevant parts of an agreement and before the application of preferential treatment between the parties. Parties should specify under which provision(s) of the WTO agreements the RTA is notified and provide the full text and any related schedules, annexes and protocols, in one of the WTO's official languages.

- **Step 3: Procedures to Enhance Transparency**

The consideration by Members of a notified RTA shall be normally concluded within one year after the date of notification. The WTO Secretariat will draw up a precise timetable for the consideration of the RTA in consultation with the parties at the time of the notification. Parties to an RTA shall make data available to the Secretariat normally within a period of ten weeks (or 20 weeks in the case of RTAs involving only developing countries) after the date of notification of the agreement.

As a rule, a single formal meeting will be devoted to the consideration of each notified RTA; any additional exchange of information should take place in written form. The WTO Secretariat's factual presentation, as well as any additional information submitted by the parties, is to be circulated in all WTO official languages not less than eight weeks in advance of the relevant The Committee on Regional Trade Agreements (CRTA) meeting. Members' written questions or comments on the RTA under consideration are to be transmitted to the parties through the Secretariat at least four weeks before the CRTA meeting and will be distributed, together with the replies, to all Members at least three working days before the meeting.

- **Step 4: Subsequent Notification and Reporting**

Any changes affecting the implementation of an RTA, or the operation of an already implemented RTA should be notified to the WTO as soon as possible after changes occur at the end of the RTA's implementation period, the parties shall submit to the WTO a short-written report on the realization of liberalization commitments in the RTA as originally notified.

Proposed Action Plan

Ministry: Ministry of External Affairs, Ministry of Commerce and Industry.

Short Term Plan

- WTO statistics/count of RTAs are based on number of “in force” RTAs that have been notified to WTO rather than the RTAs present in the database which are only “in force” but not notified. India has 17 agreements signed and in effect as given in Table 7.07 and Table 7.08. There are 12 regional agreements proposed and under consultation. Since WTO takes into consideration the notification date of an RTA rather than its date of force, Ministry of Commerce and Industry in collaboration with Ministry of External Affairs should notify WTO as soon as an RTA’s comes into force so that the RTA’s year of force and year of notification is same.
- **Conversion to Dual Agreement-** Ministry of Commerce and Industry in collaboration with Ministry of External Affairs can put additional focus on the existing agreements that are either goods agreement or service agreement to convert them into dual agreements that is, both goods and service agreement so as to increase their count in the value calculation.

Long Term Plan

- India has 14 RTA negotiations under WTO given in Table 7.07 and Table 7.08. Hence, Ministry of Commerce and Industry can rectify these negotiations and bring them under force and notify WTO about these RTA.
- WTO counts RTA under following category given below: -
 - Goods RTA – Number of RTA counted as 1
 - Service RTA - Number of RTA counted as 1
 - Goods & Services RTA - Number of RTA counted as 2

Since RTAs under Goods and Services are counted twice by WTO, the Ministry of Commerce and Industry in collaboration with Ministry of External Affairs should focus on signing more RTAs which fall under this category.

Table 7.07: Status and Number of agreements

Status	No. of Agreements	Goods	Services	Goods and Services
Signed and In Effect	17	12	-	5
Negotiations launched	14	2	-	-
Proposed/Under consultation and study	12	-	-	-
(FA) signed	1	-	-	-

Table 7.07 consists of regional trade agreements ‘signed and in effect’ till year 2017 but value generated for TCR 2017 has been calculated using trade agreements in force till year 2015.

Table 7.08: List of Agreements¹⁶⁰

Agreements	Status	Year	Notification Year	Coverage
ASEAN-India Comprehensive Economic Cooperation Agreement	Signed and In Effect	2010	2010	Goods and Services
India-Afghanistan Preferential Trading Agreement	Signed and In Effect	2003	2010	Goods
India-Bhutan Trade Agreement	Signed and In Effect	2006	2008	Goods
India-Chile Preferential Trading Agreement	Signed and In Effect	2007	2009	Goods
India-MERCOSUR Preferential Trade Agreement	Signed and In Effect	2009	2010	Goods
India-Singapore Comprehensive Economic Cooperation Agreement	Signed and In Effect	2005	2007	Goods and Services
India-Sri Lanka Free Trade Agreement	Signed and In Effect	2001	2002	Goods
India-Thailand Free Trade Area	Signed and In Effect	2014	2017	Goods
India-[Republic of] Korea Comprehensive Economic Partnership Agreement	Signed and In Effect	2010	2010	Goods and Services
Indo-Nepal Treaty of Trade	Signed and In Effect	2002	2010	Goods
Japan-India Comprehensive Economic Partnership Agreement	Signed and In Effect	2011	2011	Goods and Services
Malaysia-India Comprehensive Economic Cooperation Agreement	Signed and In Effect	2011	2011	Goods and Services
South Asian Free Trade Area	Signed and In Effect	2006	2008	Goods
Asia Pacific Trade Agreement (APTA)- Accession of China	Signed and In Effect	2004	2004	Goods
South Asia Preferential Trade Agreement (SAPTA)	Signed and In Effect	1997	1997	Goods
Global System of Trade Preference among Developing Countries (GSTP)	Signed and In Effect	1989	1989	Goods

¹⁶⁰ https://www.wto.org/english/tratop_e/region_e/rta_participation_map_e.htm

South Asian Free Trade Agreement- Accession of Afghanistan	Signed and In Effect	2016	2016	Goods
Comprehensive Economic Partnership for East Asia (CEPEA/ASEAN+6)	Proposed/Under consultation and study	2005	-	
India-Colombia Preferential Trading Arrangement	Proposed/Under consultation and study	2004	-	
India-Ecuador FTA	Proposed/Under consultation and study	2017	-	
India-Georgia FTA	Proposed/Under consultation and study	2017	-	
India-Iran Free Trade Agreement	Proposed/Under consultation and study	2015	-	
India-Russian Federation Comprehensive Economic Cooperation Agreement	Proposed/Under consultation and study	2006	-	
India-Turkey Free Trade Agreement	Proposed/Under consultation and study	2009	-	
India-United Kingdom FTA	Proposed/Under consultation and study	2017	-	
India-Uruguay Preferential Trading Arrangement	Proposed/Under consultation and study	2004	-	
India-Venezuela Preferential Trading Arrangement	Proposed/Under consultation and study	2004	-	
People's Republic of China-India Regional Trading Arrangement	Proposed/Under consultation and study	2003	-	
Taipei, China-India FTA	Proposed/Under consultation and study	2014	-	

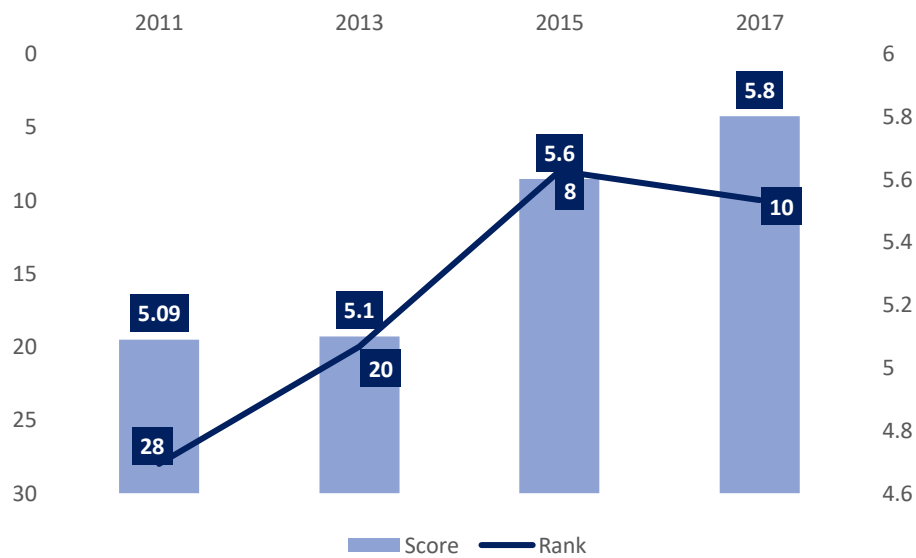
Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) Free Trade Area	Negotiations launched	2014	-	Goods
India - Eurasian Economic Union	Negotiations launched	2015	-	
India-Australia Free Trade Agreement	Negotiations launched	2011	-	
India-Canada Economic Partnership Agreement	Negotiations launched	2010	-	
India-Egypt Preferential Trade Agreement	Negotiations launched	2002	-	
India-European Free Trade Association Free Trade Agreement	Negotiations launched	2008	-	
India-European Union Free Trade Agreement	Negotiations launched	2007	-	
India-Indonesia Comprehensive Economic Cooperation Arrangement	Negotiations launched	2011	-	
India-Israel Free Trade Agreement	Negotiations launched	2006	-	
India-Mauritius Comprehensive Economic Cooperation and Partnership Agreement	Negotiations launched	2005	-	
India-Southern African Customs Union Preferential Trade Agreement	Negotiations launched	2007	-	Goods
New Zealand-India Free Trade Agreement	Negotiations launched	2010	-	
Peru-India Free Trade Agreement	Negotiations launched	2016	-	
Regional Comprehensive Economic Partnership	Negotiations launched	2013	-	
India-Gulf Cooperation Council Free Trade Area	(FA) signed	2006	-	

Pillar 8: Price Competitiveness

Definition: This pillar measures how costly it is to travel or invest in a country. **Pillar 8** has a total of **4 indicators** stated below-

1. Ticket taxes and airport charges
2. Hotel price index
3. Purchasing power parity
4. Fuel price levels

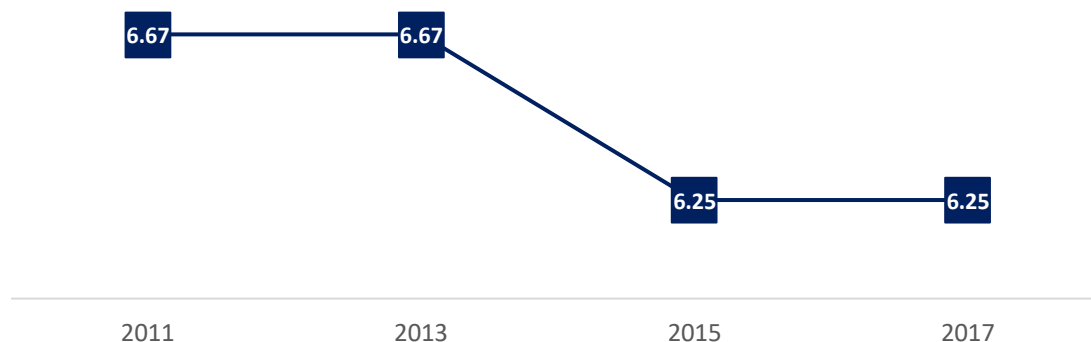
GRAPH 8.01: HISTORIC TREND



Graph 8.01 indicates the historic trend of India's rank and value in Pillar 8. India's rank has increased from 28th position in 2011 to 10th position in 2017.

Weightage Shift:

GRAPH 8.02: WEIGHTAGE SHIFT



Graph 8.02 indicates the overall contribution of Pillar 8 i.e. Price Competitiveness in India's score. At present, 6.25% weightage is given to this pillar. The weightage of this pillar has decreased by 6.30% in the year 2015.

TABLE 8.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicators	2011-2013 (%)	2015-2017 (%)	Change in weightage (%)
Ticket taxes and airport charges	1.33	1.56	17.29
Hotel price index	1.33	1.56	17.29
Purchasing power parity	1.33	1.56	17.29
Fuel price levels	1.33	1.56	17.29

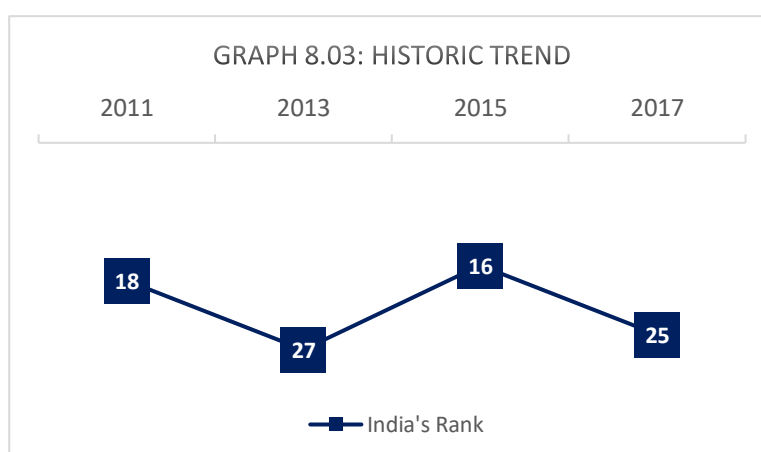
Table 8.01 shows the percentage of contribution that each indicator has on the overall score of India.

Indicator 8.01: Ticket Taxes and airport charges

Definition: This index measures the relative cost of access to international air transport services based on the level of airport charges, passenger ticket taxes and value-added taxation. It reflects the cost associated with a narrow-body and wide-body passenger plane arrival and departure at major international airports in each country.

Source: International Air Transport Association, SRS Analyser

Value of country: An SRS Analyser tool is used to calculate the value where landing, terminal navigation, passenger charges, security charges, ticket taxes and airport charges are calculated as per international standards. Per-passenger charges are calculated by applying a 75% load factor to a typical seating configuration of each type of aircraft. Value-added taxes (VATs) are calculated based on an average ticket price for each country, applied to half of the departing passengers, because the VAT is normally charged only on itineraries originating in the country concerned. A higher score indicates a lower level of charges and taxes.



Graph 8.03 indicates the historic trend of India's rank in indicator 8.01. In 2017, India's rank decreased by 9 positions as compared to year 2015. This indicator contributes 1.56% to the country score.

TABLE 8.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Lebanon	65	80.46	1	100	Top Performer
Botswana	4	96.09	2	98.51	Top Performer
Tanzania	95	72.86	5	95.34	Best Practise
Kazakhstan	53	82.89	24	90.01	Best Practise
India	16	91.1	25	88.01	
France	114	61.78	51	80.15	Best Practise

Key Terminologies:

- All the charges enlisted below comes under Airport Services Charges except for Ticket tax
 - **Landing charges** is a charge paid by an aircraft to an airport company for landing at a particular airport. It is calculated by rounding the maximum permissible take-off weight to the nearest ton.
 - **Security charges** are levied on all aircrafts departing from any Airport.
 - **Parking charges** are the fees related to parking an aircraft at an airport. These charges are normally levied on the basis of time for which an aircraft is parked but can also be related to aircraft size or weight.
 - **Passenger charges:** These are fees that are charged per on-board passenger by the airport. These charges are normally billed to the airline, which then passes this cost onto the passenger.
 - **Ticket Taxes:** Taxes which are collected at the time of ticket sale and which appear in the tax box of a ticket or which are sometimes included in the price of a ticket. Taxes, normally on a per passenger basis, are levied by the state and often across the entire state but sometimes on an individual airport level.

Proposed Action Plan

Ministry: Ministry of Civil Aviation

Disclaimer: Ticket Taxes and Airport Charges are dependent on many complex factors such as fuel prices, airport service expenses, revenue generated, et cetera. The decision for finalizing ticket taxes and airport charges are taken cohesively by the Airport Authority of India and, Ministry of Civil Aviation after post in depth market evaluation of the market. Hence, we can offer suggestions, in place of a concrete actionable plan, in the form of are not in a position to propose any action plan for the same instead, we are suggesting some policy interventions that could reduce airport service charges.

Medium Term Plan

- **Need for Consultation**
 - **Ministry of Civil Aviation** can open talks for consultation with international organisations as their principal consultants for formulation of policies and strategies of civil aviation. An ideal organisation could be **International Air Transport Association (IATA)** since they are pioneers in this sector and have openly addressed challenges faced by India and their willingness to work with the Indian Government. Their clientele list includes **the Government of Austria, Scotland, Brazil, Japan, South Africa etc.**

Long Term Plan

- **Reduction in Taxes and Duties**

- **French Airport Tax:** France has taken a new approach where they are not charging airlines at the airports whose yearly annual average air traffic is less than 5000 units (1 unit = 1 passenger or 100 kg of freight). Further, they have classified airports into groups depending on the volume of air traffic and are charging taxes based on this classification. **Ministry of Civil Aviation could adopt a similar policy for its airports in remote areas as this would attract high air traffic to remote airports.**
- **UK's under 16s exemption from Air Passenger Duty (APD):** United Kingdom has exempted children under 16 years of age from the air passenger duty, which saved money for both customers and airlines. Whereas India is providing an exemption form APD for children under 2 years of age. This age limit which can be increased to 16 years on lines similar to that of age as followed by UK. **This could help in decreasing air fares and thereby increasing air passengers.**
- **Reduced Ticket Taxes:** Countries such as Tanzania & Kazakhstan are charging 2% VAT on air tickets while India is charging 5% and to 12% GST on Economic Class and Business Class tickets, respectively. Ministry of Civil Aviation can also look into reducing the GST charged on flight tickets as it will provide a needed price relaxation to the customers and **would increase the number of flyers.**

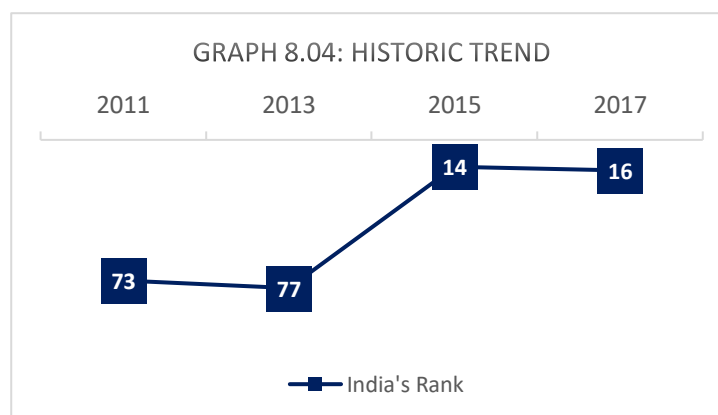
Indicator 8.02: Hotel Price Index

Definition: This index measures the average price (in USD) of first-class hotel accommodation in each country. The index is calculated by using the average room rate achieved by first-class hotels* in each country over a 12-month period.

*First class hotels consist of five-star hotels.

Source: Deloitte-STR Global and Smith Travel Research Inc.

Value of country = Average Room Rate (in \$) of First- Class hotels over a 12-month period



Graph 8.04 indicates the historic trend of India's rank in indicator 8.02. India's rank decreased by 2 positions as compared to year 2015. This indicator contributes 1.56% to the country score.

TABLE 8.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Lithuania	1	70.49	1	68.24	Top Performer
Poland	4	79.89	2	69.17	Top Performer
Namibia	6	83.64	3	71.54	Top Performer
India	14	93	16	84.54	

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- **Single Window Clearance for granting of new hotel projects**
 - There are numerous licenses and approval that one needs to get in present times to open a hotel in India leading to loss of time, effort and money. Furthermore, the various bodies giving approvals/issuing licenses tend to work in independent silos, leaving the coordination of getting these approvals/licences up to the applicant. At present, a hotel has to take more than one license such as including building permit, fire safety permit, police license, health trade

licence, business registration, bar license, FSSAI food business license, service tax license, VAT registration etc. under the state excise for various locations within the same premises.

- As done by Government of India in the allocation of mineral blocks where a single window clearance system has been put for obtaining environmental and other clearances, **Ministry of Tourism on similar lines can also adopt such a single window clearance system for granting all licenses for Hotel Industries**¹⁶¹.

Medium Term Plan

- **Formulating Investment Strategies**

- In India, 100% foreign direct investment (FDI) is permissible in the hospitality sector. International hotel brands such as Carlson, Hampton, Hilton Garden Inn, Conrad, Hilton Hotels group is aiming to increase the number of its hotels in India¹⁶². West Bengal Tourism Demand Corporation (WBTDC) launched an investment strategy to take the advantage of interested investors by increasing the availability of branded hotel accommodations throughout the state.
- On a similar model of cashing in on the opportunity and meeting the demands of branded hotels, MoT should encourage State Tourism Development Corporations (STDCs) of those states which have high inflow of tourists but limited number of 5- star hotels. Such states are listed below in the table 8.04. MoT should assist in formulating investment strategies for these STDCs and further promote those investment plans in the tourism sector worldwide to attract investors.
- In addition to cater the increasing demand of branded hotels, this would also facilitate in increasing competition among hotels, thereby leading to decreased prices for consumers.

TABLE 8.04: STATE WISE TOURIST INFLOW WITH PERCENTAGE OF 5 STAR HOTELS¹⁶³

States	Percentage share of 5 Star Hotels	Percentage share in Domestic and Foreign tourist visits
Manipur	0	26.12
Andhra Pradesh	2	10.87
West Bengal	4	10.80
Tamil Nadu	6	40.42
Uttar Pradesh	6	25.90

¹⁶¹ <http://www.iosrjournals.org/iosr-jbm/papers/Vol16-issue9/Version-1/J016916973.pdf>

¹⁶² <https://www.rediff.com/business/report/hilton-100-hotels-in-india-very-soon/20180623.htm>

¹⁶³ Indian Tourism Statistics 2017: Market Research Division Ministry of Tourism

Long Term Plan

- **Reducing GST on Five-star hotels**

- The five- star hotels in India are under the GST tax slab of 28% that is the highest tax slab in the country. However, four- and three-star hotels lie under the tax slab of 18%. This gap between tax slabs in five- star and four- star hotels increases the hotel price. There is an urgent need of lowering the levied tax, to incentivize and attract more investments into the sector.
- **Department of Revenue, Ministry of Finance** should also provide service tax exemption for new developments and a longer tax holiday for new hotels and resorts, as it will help in attracting investments into the industry.

Indicator 8.03: Purchasing Power Parity

Definition: The World Bank defines the purchasing power parity (PPP) conversion factor as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as a US dollar would buy in the United States. Official exchange rate refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the US dollar).

Source: The World Bank, World Development Indicators

$$\text{Value of country} = S \text{ and } S = \frac{P_1}{P_2}$$

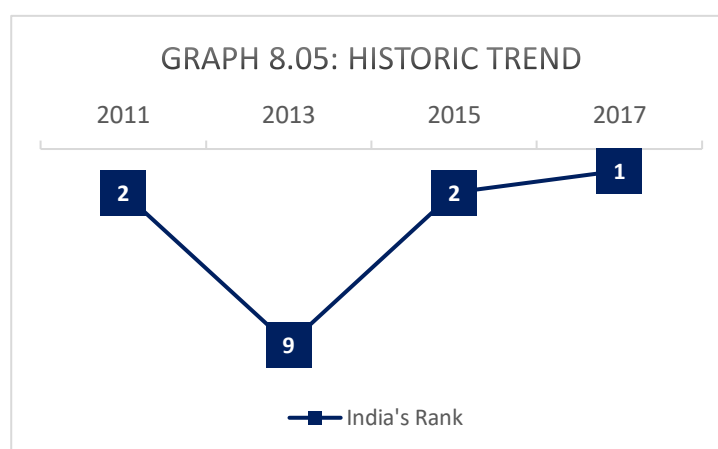
where

S represents the exchange rate of currency 1 to currency 2

P₁ represents the cost of good X in currency 1

P₂ represents the cost of good X in currency 2

For example: Suppose that 1 USD = 100 INR. In USA, bread for \$1 while in India, they sell for 30 Rupees which means that for every dollar spent on a bread in the USA, Rupees 30 would have to be spent in India to obtain the same quantity and quality - or, in other words, the same volume - of bread. And say that the Market Exchange Rate is \$1 is 100 INR. Hence, the Value of the Country on PPP is 30 (PPP Conversion Factor) ÷ 100 (Market Exchange Rate) = 0.3



Graph 8.05 indicates the historic trend of India's Rank in indicator 8.03. In 2017, India's rank increased by 1 position as compared to year 2015. This indicator contributes 1.56% to the country score.

TABLE 8.05: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
India	2	0.277	1	0.261	
Ukraine	NA	NA	2	0.266	Top Performer
Madagascar	12	0.337	3	0.274	Top Performer

The indicator 8.03 i.e., Purchasing Power Parity, is very specialised and is purely based on various government policy level interventions. This indicator lies in the purview of Ministry of Finance, Ministry of Statistics and Programme Implementation and Reserve Bank of India. These bodies are already familiar with the constraints of implementing any policy or law and that every implementation has numerous repercussions.

Purchasing Power Parity- The theory that postulates change in the exchange rate between two currencies is proportional to the change in the ratio in the two countries' general price levels.

There are two approaches to the theory:

- **Absolute PPP**

- The Absolute purchasing-power parity theory postulates that the equilibrium exchange rate between two currencies is equal to the ratio of the price levels in the two nations.

Specifically:

$$R = P / P^*$$

where R is the exchange rate or spot rate and P and P* are, respectively, the general price level in the home nation and in the foreign nation.

- **Relative PPP**

- The more refined relative purchasing-power parity theory postulates that the change in the exchange rate over a period of time should be proportional to the relative change in the price levels in the two nations over the same time period.
- $R_1 = (P_1/P_0) / (P^*_1/P^*_0) \cdot R_0$
- The subscript 0 refer to the base period and the subscript 1 to a subsequent period, where R1 and R0 are, respectively, the exchange rates in period 1 and in the base period.

Ministry: Ministry of Finance, Ministry of Statistics and Programme Implementation

Factors that affect and influence the Purchasing Power Parity are listed below

- **Income**

- The Balassa-Samuelson effect postulates that rich countries are relatively more productive in the traded goods sectors than in the non-traded services sectors. This could be because the former rely more on markets for purchased inputs and that such transaction-intensive sectors function more effectively in higher-income, better-managed countries. The effect is a rise in wages in both the non-traded and traded sectors, and an increase in the relative prices of non-traded goods.
- The underestimation of GDP levels in poor countries would have an effect on the shape of the PPP relationship by contributing to the “flat tail” at low income levels.

- **Subsidies and Taxes**
 - All of the high-income states with low PPP price levels relative to income maintain large subsidies on fuel consumption as do the low- and middle-income states with below expected cost levels. Energy subsidies are likely to have large economy-wide price and cost effects, so that countries that spend more on subsidies could have relatively low PPP price levels for their income levels. When government sales taxes, such as value-added tax (VAT), are high in one country relative to another, this means goods will sell at a relatively higher price in the high-tax country.

- **Prices**
 - Inflation is the process whereby prices slowly rise throughout all sectors in an economy, effectively reducing the purchasing power of fixed assets and current income levels. The **Consumer Price Index (CPI)** is used to measure purchasing power by tracking price changes for commonly purchased goods. The rate at which the price of goods (or baskets of goods) is changing in countries can indicate the value of those countries' currencies. Such relative PPP overcomes the need for goods to be the same when testing absolute PPP.

- **Market competition**
 - Goods might be deliberately priced higher in a country because the company has a competitive advantage over other sellers, either because it has a monopoly or is part of a cartel of companies that manipulate prices.

- **Non-traded services**
 - There are some services that cannot be traded. Therefore, those costs are unlikely to be at parity internationally. These costs can include the storefront, insurance, utility expense and the cost of labour. According to PPP, in countries where non-traded service costs are relatively high, goods will be relatively expensive, causing such countries' currencies to be overvalued relative to currencies in countries with low costs of non-traded services.

- **Government intervention**
 - Import tariffs add to the price of imported goods. Where these are used to restrict supply, demand rises, causing the price of the goods to rise as well. In countries where the same good is unrestricted and abundant, its price will be lower. Governments that restrict exports will see a goods' price rise in importing countries facing a shortage and fall in exporting countries where its supply is increasing.

- **Exchange rate**
 - A PPP exchange rate is defined as the ratio of prices for a representative basket of final goods and services in two countries, with the prices expressed in the two national currencies. At this exchange rate, the purchasing power of the different currencies is equal in terms of the

specific quality of a specific bundle of goods or services that can be purchased. Because these PPP exchange rates reflect differences in the national prices of both non-traded and traded goods, they are useful for international comparisons of standards of living. Although the construction of a PPP exchange rate may, seem straightforward, in practice it is difficult.

- **Currency Considerations**

- Fluctuating exchange rates affect purchasing power in relation to other currencies. As one nation's currency devalues against another, goods in the second country will be higher in the first country's currency. This fact in itself does not necessarily affect purchasing power for domestic purchases, but businesses that rely on suppliers in the second country can experience dramatic price increases for imported goods. These businesses may pass their higher costs on to consumers, contributing to inflation and diminished domestic purchasing power.

- **Interest rate parity**

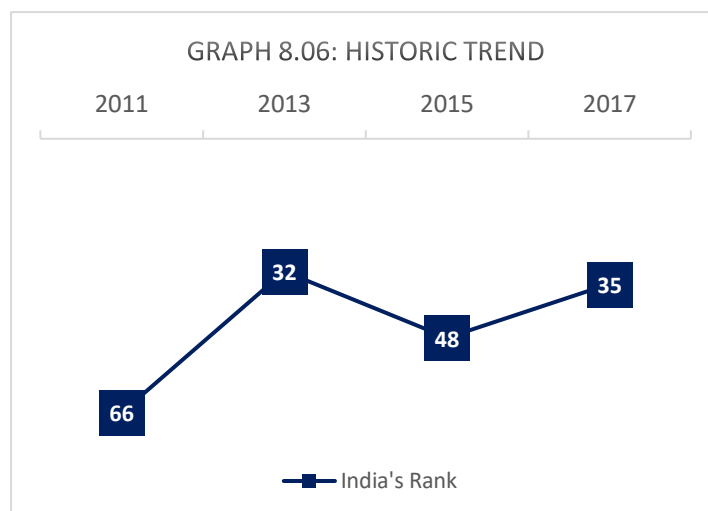
- It states that the difference between the interest rate in two countries is equal to the differential between the forward rate and the spot rate of those two countries. This equality does not always exist, and thus allows traders to arbitrage option positions to earn riskless returns. Interest rate parity exists when the expected nominal rates are the same for both domestic and foreign assets. Any difference is due to expected appreciation or depreciation in the foreign or domestic currencies.

Indicator 8.04: Fuel price levels

Definition: This indicator refers to the pump prices of the most widely sold grade diesel fuel.

Source: The World Bank, World Development Indicators

Value of a country: Retail diesel fuel prices expressed as US cents per litre.



Graph 8.06 indicates the historic trend of India's rank in indicator 8.04. In 2017, India's rank increased by 13 positions as compared to year 2015. This indicator contributes 1.56% to the country score.

TABLE 8.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Venezuela	1	2.3	1	0.8	Top Performer
Saudi Arabia	2	16	2	7	Top Performer
Algeria	6	29	3	16	Top Performer
India	48	125	35	91	
United States	27	97	38	97	Best Practice

Proposed Action Plan

Ministry: Ministry of Petroleum and Natural Gas.

Policy Intervention

In India, presently the market for fuel is open to international buyers and sellers which is immensely affecting the fuel prices and if this continues, the rank of our country is bound to fall in coming reports.

The prices of petrol and diesel are determined by numerous factors such as:

- The cost of crude oil purchased by refineries

- Refining costs and profits
- Distribution, marketing, and retail station costs and profits
- Taxes (federal, state, county, and local government)

India's average monthly diesel consumption was about 6.6 million tonnes, or about 1.6 million barrels per day (bpd), in 2017. That was up about 3.1% percent from 2016, when average monthly consumption was 6.4 million tonnes. For India, the switchover to electric vehicles and green fuel is crucial as it will help reduce the oil import bill and emission of greenhouse gases. Below are few suggestions that might be adopted by the Government of India:

- **Electric vehicles (EV)**

- Some electric cars available in India are - Eddy Current Controls Love Bird, Mahindra e2oPlus, Mahindra e-Verito, Tata Tigor Electric, Mahindra e-KUV 100, and Tata Tiago Electric.
- An incentive programme to encourage adoption of electric vehicles is desirable in the initial period. **Department of heavy industry, Ministry of Heavy Industries and Public Enterprises can target this through interest subventions on EV car loans or outright incentives on car purchases by providing a subsidy on the base price of EVs.** Other measures include a waiver of road taxes and other local charges and non-fiscal incentives like preferred access and parking benefits.
- A programme to support 1,00,000 four-wheelers annually for five years will require INR 2000 crores of annual subsidy (assuming 20% of the vehicle cost is subsidized) while an interest subvention of 5% will require funding to the tune of INR 720 crores per year¹⁶⁴.

- **Bio-fuel**

- Unlike fossil fuels, bio fuels are a renewable energy source because they are derived from crops that can be harvested annually, or in the case of algae, monthly. Hence, bio fuels are theoretically unlimited¹⁶⁵.
- Chhattisgarh has immense potential for production of bio-fuel. Chhattisgarh can become a novel state for bio-fuel production in the country since the state has an immense growth rate of agriculture sector. Bio-fuel produced from Jatropha plant in Chhattisgarh was used in the first bio fuel-powered flight which took off from Dehradun and landed in Delhi recently¹⁶⁶.
- In the United States, ethanol is created from corn. The largest crop produced in the United States, roughly 72,700,000 acres of land go towards growing corn. Approximately 7% of the national corn yield went into making ethanol in 2001 and that increased to about 39% in 2010. Ministry of Petroleum and Natural Gas should set up ethanol plants where fuel can be produced from paddy straw, wheat straw, sugarcane, corn and municipal waste as the use of bio-fuel will result decreased demand of diesel in the country.

¹⁶⁴ <https://assets.kpmg.com/content/dam/kpmg/in/pdf/2017/11/Electric-Vehicles.pdf>

¹⁶⁵ <http://biofuel.org.uk/advantages-of-biofuels.html>

¹⁶⁶ <https://www.financialexpress.com/auto/car-news/chhattisgarh-can-become-bio-fuel-production-hub-nitin-gadkari/1309334/>

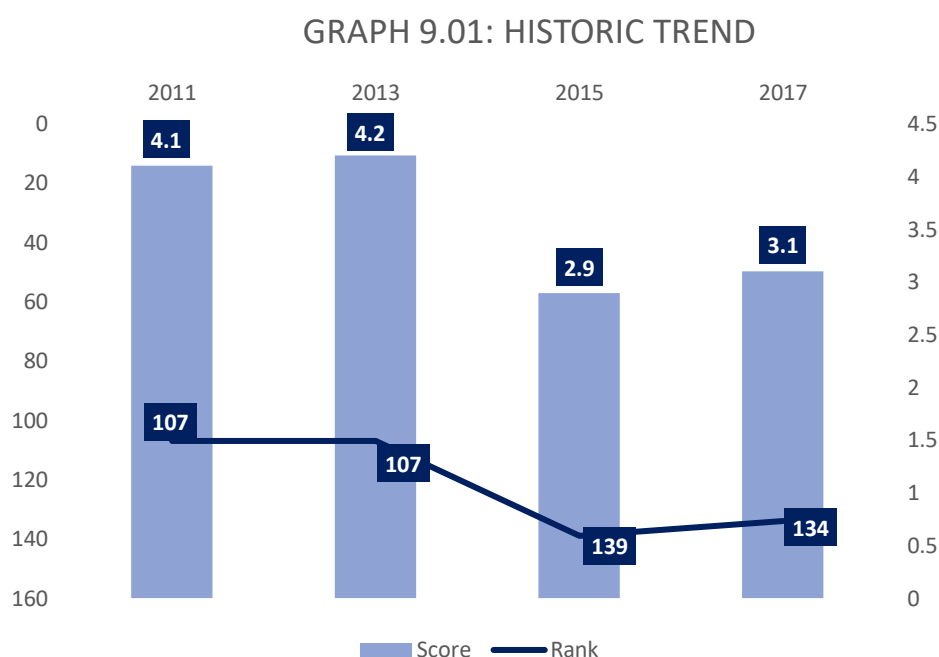
- **Encouraging Use of Public Transport**

- There is a direct correlation between fuel demand and fuel price. Encouraging public transport will help us curb this situation to some extent. As we know that a constant and high scale enhancement of the metro structure is already under place, this network can act as an excellent measure to ease the situation. There are few measures that Ministry of Road Transport and Highways can adopt to encourage people to use public transport:
 - Providing feeder services, such as minivans, to and from areas that have reduced transport frequency.
 - Providing offers to travellers such as one free ride for every hundred trips, special concessions for senior citizens, and other benefits for travellers. Delhi and other state metros can offer such kind of incentives.
 - Employing more drivers and conductors in case of buses. This reduces the pressure on the existing workers, who have to run extra shifts many times. This can also enable a greater number of trips, even if the number of buses is not increased. Also, a major grievance of commuters is the impolite behaviour of drivers and conductors. There should be regular programs organized focussing on improving communication skills and customer interaction. Some public transport organizations already have such training programs for their employees.
 - Attempting to reduce the autos on the road by assimilating the auto drivers into the public transport workforce.

PILLAR 9: ENVIRONMENTAL SUSTAINABILITY

Definition: This pillar measures the extent to which environmental protection limited to those aspects that impact tourists directly. **Pillar 9** has a total of **10 indicators** stated below –

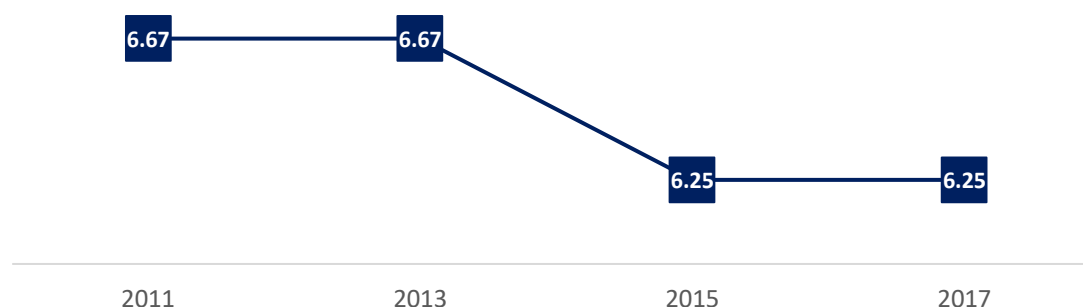
1. Stringency of environmental regulations
2. Enforcement of environmental regulations
3. Sustainability of travel and tourism industry development
4. Particulate matter (2.5) concentration
5. Environmental treaty ratification
6. Baseline water stress
7. Threatened species
8. Forest cover change
9. Wastewater treatment
10. Costal shelf fishing pressure



Graph 9.01 indicates the historic trend of India's rank and value in Pillar 9. India's rank increased from 139th position in year 2015 to 134th position in year 2017.

Weightage Shift:

GRAPH 9.02: WEIGHTAGE SHIFT



Graph 9.02 indicates the overall contribution of Pillar 9 i.e. Environmental Sustainability in India's score. At present 6.25% weightage is given to this pillar. The weightage of this pillar has decreased by 6.30% as compared to 2013.

TABLE 9.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in Weightage (%)
Stringency of environmental regulations*	0.95	0.34	-64.21
Enforcement of environmental regulations*	0.95	0.34	-64.21
Sustainability of travel and tourism industry development	0.95	0.69	-27.37
Particulate matter (2.5) concentration	0.95	0.69	-27.37
Environmental treaty ratification	0.95	0.69	-27.37
Baseline water stress	N/A	0.69	N/A
Threatened species	0.95	0.69	-27.37
Forest cover change	N/A	0.69	N/A
Wastewater treatment	N/A	0.69	N/A
Costal shelf fishing pressure	N/A	0.69	N/A

NA = Not Applicable, the indicator was not introduced in that year

*These indicators are combined applying a simple average aggregation to form one single indicator. Consequently, they are implicitly weighted by a factor of 0.5.

Table 9.01 shows the percentage of contribution that each indicator has on the overall score of India.

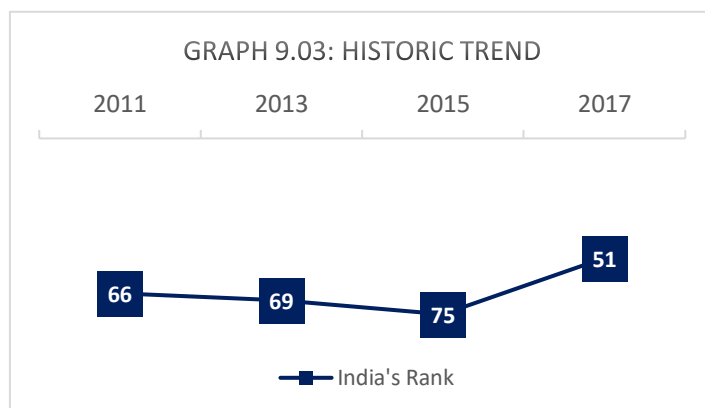
Note: Indicator 9.01 & 9.02 are being shown as a single indicator as they are inter-related and will have a common action plan for assessing the Environment Policy of India.

Indicator 9.01- Stringency of Environmental Regulations

Definition: “How would you assess the stringency of your country’s environmental regulations?”

Source: World Economic Forum, Executive Opinion Survey

Value: On scale of 1 to 7 (1 = very lax, among the worst in the world; 7 = among the world’s most stringent)



Graph 9.03 indicates the historic trend of India’s rank in indicator 9.01. In 2017, India’s rank increased by 24 positions as compared to year 2015. This indicator contributes 0.34% to the country score.

TABLE 9.02 PERFORMANCE OF COUNTRIES

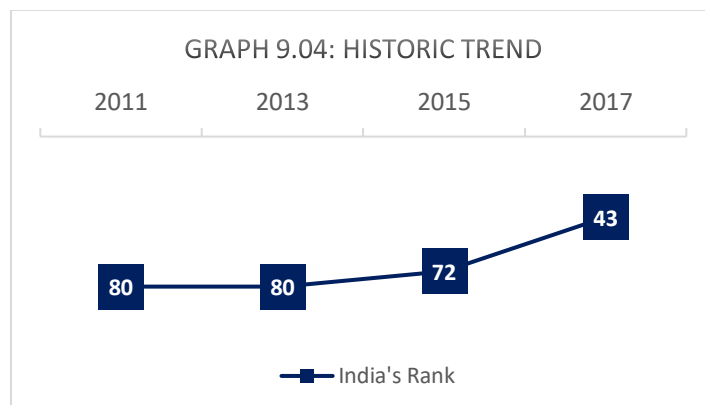
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Switzerland	2	6.33	1	6.24	Top performer
Sweden	11	5.87	2	6.22	Best Practice
Finland	3	6.23	3	6.21	Top Performer
India	75	3.95	51	4.42	

Indicator 9.02: Enforcement of environmental regulations

Definition: “In your country, how would you assess the enforcement of environmental regulations?”

Source: World Economic Forum, Executive Opinion Survey

Value: On scale of 1 to 7 (very lax, among the worst in the world; 7 = among the world’s most stringent)



Graph 9.04 indicates the historic trend of India’s rank in indicator 9.02. In 2017, India’s rank increased by 29 positions as compared to year 2015. This indicator contributes 0.34% to the country score.

Table 9.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Finland	1	6.26	1	6.21	Top Performer
Switzerland	3	6.17	2	6.17	Top Performer
Austria	7	5.99	3	6.08	Top Performer
India	72	3.77	43	4.36	

Proposed Action Plan

Ministry: Ministry of Environment, Forest and Climate Change, Central Pollution Control Board, State Pollution Control Board

Short Term Plan

- **Third party evaluation for industries**
 - A third-party audit should be conducted to check if all norms which are laid down by the government are being followed or not. For example, **Gujarat** has introduced an **Environmental Audit Scheme**⁶ aiming at ascertaining the performance of environmental management systems in various industries functioning in the state¹⁶⁷. It is a management tool that comprise of a systematic, periodically documented, and objective evaluation of how well

¹⁶⁷ <https://www.gpcb.gov.in/images/environment-audit-scheme.pdf>

the environment management systems are performing. Below mentioned are the primary aim of the tool:

- Waste prevention and reduction
- Assessing compliance with regulatory requirements
- Facilitating control of environment practices by a company management
- Placing environmental information in the public domain

Hence, Ministry of Environment, Forest and Climate Change on similar lines can adopt the model followed by Gujarat government and can implement it nationwide. In addition, along with Gujarat model Ministry should also aim at providing certificates to industries, which follow and implement the environmental regulations.

Medium Term Plan

- **Strict implementation of Environment Laws:**
 - According to Counterview Organisation¹⁶⁸, India's environmental regulations are of world standard, but their **enforcement is very weak**.
 - However, our neighbouring country China has very strict enforcement of the environmental laws. The authorised environmental supervision institutions, which are subordinated to the administrative departments for environmental protection at all levels, can conduct on-site inspections in enterprises emitting pollution.
 - Environmental administrative authorities at country level or above can take various enforcement measures, such as on-site inspections, seizing and impounding the polluting facilities and equipment, and so on.
 - Subsequently, China's strengthening of the implementation of environmental laws is yielding results. The number of polluting companies that got punished almost doubled in 2017. In 2017, 3,416 new cases of violations of environmental law and regulations were registered nationwide and year-on-year increase of 92% has been observed.¹⁶⁹
 - **Ministry of Environment, Forest and Climate Change on similar lines as of China, should ensure proper enforcement of the laws across India with an aim to ensure environment protection.**

Long Term Plan

- **Independent regulatory body for evaluation of Environment Policy**
 - According to an article by Live Law "One of the main reasons for lack in enforcement is absence of independent regulatory body for environmental governance". Currently, it is looked after by the Ministry of Environment Forest and Climate Change (MoEFCC). Due to excessive interference in the functioning of the ministry, there is poor implementation of

¹⁶⁸ <https://counterview.org/2017/08/28/indias-environmental-regulations-are-of-world-standard-but-their-enforcement-is-very-weak/>

¹⁶⁹ http://www.chinadaily.com.cn/china/2017-09/05/content_31602351.htm

environmental law in India.¹⁷⁰ One of the examples is the implementation of the Environmental Impact Assessment Notification in India. The 'Environmental Impact Assessment Notification, 2006' requires prior environmental impact assessment for the clearance of the large-scale projects and the final authority on the same is of MoEFCC. Since the MoEFCC is completely controlled by the ruling government, there has been constant relaxation in environmental impact assessment norms and therefore, many arbitrary clearances are being provided for the projects. In this process, the vested interest of the ruling government influences environmental decision-making¹⁷¹.

- Also, as stated in the report on Environmental Regulatory Bodies by Cercenvis¹⁷², there is an urgent need to create and restructure regulatory institutions for better environmental governance. The independent environmental regulator could contribute towards effective environmental governance. This could help to stop the overuse and misuse of natural resources as well as will protect the rights of the marginal communities. It could also help in the process of project monitoring which in the past, has been criticized frequently for their ineffectiveness. The institutional restructuring in environmental governance will also contribute towards the goals of sustainable development. The mandates of the new regulator can be as follows:
 - The regulator will have powers to appraise industrial projects for environment clearance
 - The regulator would oversee the process of accreditation of environment impact assessment
 - The regulator would ensure enforcement of the conditions stated in the environment clearances
 - The announcement is in contrast to the recommendations of the high-level committee constituted by the Union environment ministry under former Cabinet Secretary TSR Subramanian to review environment laws
 - The committee had suggested an independent National Environment Management Authority and State Environment Management Authority to take the powers of the existing pollution control boards
- According to an article on Business Standards, India has setup numerous regulators. However, every regulator is either grounded in a law or has a parent department handled by the ruling government. In **Sweden**, government has made an independent climate policy council which would provide an independent assessment of how the overall policy, presented by the Government is compatible with the climate goals. The council evaluates how the direction of various policy areas will increase or reduce the likelihood of achieving the climate goals. In this process, government has to provide clear reports on how the work is progressing which then

¹⁷⁰ <https://blog.iplayers.in/poor-implementation-environmental-laws/>

¹⁷¹ <https://www.livelaw.in/taking-environmental-law-seriously-indian-perspective/>

¹⁷² http://cercenvis.nic.in/PDF/Reg_Bodies_National.pdf

will be reviewed by the **independent climate policy council**¹⁷³. Thus, **Ministry of Environment, Forest and Climate Change** on similar lines can form an independent regulatory body which will contribute towards effective environmental governance.

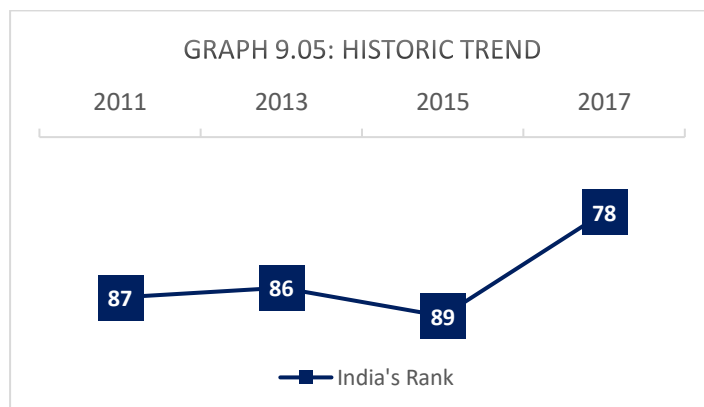
¹⁷³ <https://www.government.se/495f60/contentassets/883ae8e123bc4e42aa8d59296ebe0478/the-swedish-climate-policy-framework.pdf>

Indicator 9.03: Sustainability of travel and tourism industry development

Definition: “How effective is your government’s efforts to ensure that the Travel & Tourism sector is being developed in a sustainable way?”

Source: World Economic Forum, Executive Opinion Survey

Value: On scale of 1 to 7 (1 = very ineffective, development of the sector does not take into account issues related to environmental protection and sustainable development; 7 = very effective, issues related to environmental protection and sustainable development are at the core of the government’s strategy).



Graph 9.05 indicates the historic trend of India’s rank in indicator 9.03. In 2017, India’s rank increased by 11 positions as compared to 2015. This indicator contributes 0.69% to the country score.

Table 9.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reasons
United Arab Emirates	1	6.49	1	6.27	Top Performer
New Zealand	4	5.87	2	5.85	Top Performer
Rwanda	3	5.92	3	5.84	Top Performer
Slovenia	103	3.82	46	4.66	Best Practice
China	58	4.6	63	4.41	Asian Peer
India	89	4.08	78	4.17	

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- **Sustainable/Impact Tourism in Rural India**

- Ministry of Tourism implemented the 12th Five Year Plan on Sustainable Tourism with focus on social awareness campaign under the 'Atithi Devo Bhava' initiative. Involvement of schools, NGOs, industry associations, etc. has been done to carry out sustained cleanliness drives at important tourist destinations.¹⁷⁴ However, lack of sustainable tourism in rural India where a large part of the rural population is living on frugal agrarian, has been observed.
- Hence, Impact tourism could be adopted in rural areas. It is a community and tourist-centred approach in which tourism is leveraged to help and deliver sustainable community infrastructure. As per the article in WEF, village-based impact tourism model can boost India's tourism by \$25 billion by bringing 15 million extra tourists to villages alone, and simultaneously creating 100,000 village-level entrepreneurs in the process.¹⁷⁵
- For example, in India, there are 13 Globally Important Agricultural Heritage sites (GIAHs) (as shown in below table) identified by Food and Agriculture Organization based on the ingenuity and uniqueness of agricultural heritage which can be leveraged to promote impact tourism. These sites have high potential for creating income and livelihood security if managed with the point of view of niche agriculture and sustainable tourism.¹⁷⁶
- **Therefore, Ministry of Tourism can collaborate with local state governments that can work hand-in-hand with social organisations, to identify key development sites and systems in various villages, and then use the impact tourism model to help develop these sites by promoting them as tourist destinations. This would achieve two objectives at once: giving tourists an experience and memories to last for a lifetime and providing villagers with opportunities to improve their livelihoods.**

¹⁷⁴ <http://pib.nic.in/newsite/PrintRelease.aspx?relid=137882>

¹⁷⁵ <https://www.weforum.org/agenda/2017/10/secret-india-tourism/>

¹⁷⁶ <http://www.mssrf.org/content/biodiversity-and-sustainable-tourism-development>

Globally Important Agricultural Heritage sites (GIAHs) – Certified, Under Review & Provisional

Activity	State
Koraput Traditional Agriculture System (tribal agriculture)	Odisha
Kuttanad Below Sea Farming System (Below sea level Rice farming)	Kerala
Saffron Heritage (Family Farming in Saffron cultivation)	Jammu & Kashmir
Grand Anicut (Kallanai) Farming system	Tamil Nadu
Catamaran Fishing system	Tamil Nadu
Koranganadu Silvo-pastoral system	Tamil Nadu
Soppina Bettas Systems	Western Ghats
Tribal Agricultural Systems of Sethamphat	Andhra Pradesh
Apatani Rice Fish Culture system	Arunachal Pradesh

Source: Food and Agriculture Organization

Medium Term Plan

- **Public Private Partnership (PPP) for implementation of Smart Tourism**
 - India current ICT system lacks in connecting tourist to proper destination information and also have certain limitations. For instance, accessing information through Internet and www is an intelligent mean of getting the information, but many a times, the information that anyone get is highly fragmented. One only finds the relevant content only after intelligent navigation, which is time consuming. Sometimes, presentation of information on the web is not attractive enough.¹⁷⁷
 - To overcome the above issue, China government launched its “Smart Tourism” initiative in 2011 in Nanjing city. They developed ICT-integrated tourism platform, which uses information technology to integrate various tourism information sources. It used artificial intelligence to provide explicit information and satisfactory services to tourists based on the development of innovative mobile communication technology. Public Private Partnership between local government (i.e., Nanjing Tourism Committee) and tourism businesses has led to establishment of following tourism projects:
 - Established a smart tourism central management platform, which handles tourism information more effectively.
 - Developed a smart tourism APP which provides detailed information about the city’s scenic spots, hotels, restaurants, transportations.
 - Constructing a rural smart tourism marketing platform, and collecting information about tourism resources in suburban areas, along with information relating to the local hospitality facilities and culture.

¹⁷⁷ <https://pdfs.semanticscholar.org/111e/eabb4c758252fc3a507969ec74ec9b53300d.pdf>

- Conducting pilot projects to improve the experience of tourists at Nanjing’s major scenic spots.
- Constructing interactive experience terminals offering tourism-related information from 42-inch touch-screen displays at every tourist attraction in Nanjing.¹⁷⁸
- **Therefore, Ministry of Tourism can adopt a similar model as China and can collaborate with various private organizations to promote smart tourism in India which will help in establishing new future for India’s tourism sector.**

Long Term Plan

- **Implementation of Green Policy Programme**

- In Slovenia, each destination that wants to receive the Slovenia Green label is required to sign a green development policy as a sign of official commitment and have to carry out a 7-step process including raising awareness, creating a destination profile, and collecting statistical data. Once certified, destination coordinators have to submit annual progress reports to enter a re-evaluation phase every two to three years. According to the level of sustainability that has been maintained, destinations can rise up from bronze to platinum in their certification. Hotels are also encouraged to obtain an internationally recognised green certification such as Green Globe, Travelife, or the EU Ecolabel, before they qualify for the Slovenia Green certificate. These initiatives have ensured a steady growth of tourist inflows in Slovenia.¹⁷⁹
- On the other hand, lack of competition among local tourist destination for sustainable tourism is a major issue in India. **Therefore, to improve the same, Ministry of Tourism can also set up a holistic certification scheme. Each destination should be recognized with green certification and in order to attain these certifications, eventually they have to sign a green development policy.**

¹⁷⁸ http://cf.cdn.unwto.org/sites/all/files/pdf/global_report_public_private_partnerships_v8.pdf

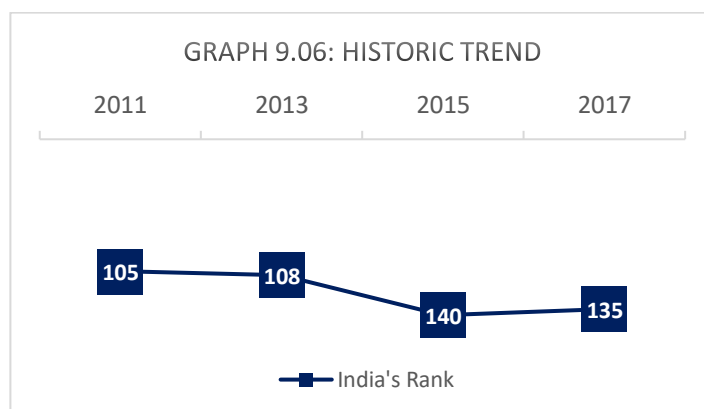
¹⁷⁹ <https://www.slovenia.info/en>

Indicator 9.04: Particulate matter (2.5) concentration

Definition: This indicator refers to population-weighted exposure to PM2.5 (micro-grams (10⁻⁶) per cubic meter)

Source: Environment Performance Index by Yale and Columbia University

Value of country = Average exposure is calculated by multiplying the PM2.5 concentrations by the population exposed.



Graph 9.06 indicates the historic trend of India's rank in Indicator 9.04. In 2017, India's rank increased by 5 positions as compared to year 2015. This indicator contributes 0.69% to the country score

TABLE 9.05: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Mauritius	2	1.46	1	0.6	Asian Peer
New Zealand	3	2.14	2	1.2	Top Performer
Barbados	9	3.02	3	1.4	Top Performer
USA	65	7.47	58	6.8	Best Practice
India	140	31.98	135	32.9	
China	141	48	136	47.2	Asian Peer

Proposed Action Plan

Ministry: Central Pollution Control board, Ministry of Environment, Forest and Climate Change

Short Term Plan

- **Installation of Air Purifier in Top 5 Polluted cities** ¹⁸⁰
 - In 2018, 7 Indian cities topped the list of the world most polluted cities in the world with their PM 2.5 content ranging between 144-175ug/m³.
 - China is also facing a similar situation of pollution and to overcome this issue, China's Institute of Earth Environment has constructed the world's largest air purifier in the most polluted northern city of Xian. The experimental smog-sucking tower stands at over 100 meters tall and is designed to improve air quality in the city, where air is found to be 70-75% cleaner. The system comprises a series of specially-adapted greenhouses situated at the base of the tower, which suck in polluted air and heat it using solar energy. The air then rises through layers of cleaning filters before being released into the atmosphere. Pollution monitoring stations in the surrounding area, discovered that levels of PM2.5 fell 15% during times of heavy pollution, as compared to the average level on a normal day.
 - **Therefore, Central Pollution Control Board along with Ministry of Environment, Forest and Climate Change can adopt similar technological advancements to combat pollution in major cities of India.**

Medium Term Plan

- Major sources of air pollution in India are fuelwood and biomass burning, fuel adulteration & vehicle emission. In autumn and winter months, large scale crop residue burning in agriculture fields (a low-cost alternative to mechanical tilling) is a major source of smoke, smog and particulate pollution. However, India has a low per capita emission of greenhouse gases but the country as a whole is the third largest emitter after China and the United States.¹⁸¹ Hence, to tackle this issue, initiation and promotion of Clean Air Mission India campaign can be done in India which is described as follows:

¹⁸⁰ <https://www.weforum.org/agenda/2018/02/china-has-built-the-world-s-largest-air-purifier-to-battle-smog/>

¹⁸¹ <http://documents.worldbank.org/curated/en/223591468164352248/pdf/multi0page.pdf>

- **Clean Air Mission India¹⁸²**

- On the lines of the Clean India (Swachh Bharat) mission, Government of India should launch a Clean Air Mission to combat the pollution in India which can be done by drafting and implementation national level strategies.
- The objective of the mission should be to meet the prescribed ambient air quality standards at all locations in the country in a stipulated timeframe.
- This Clean Air Mission [CAMINDIA] can aim to implement government policies formed specifically for air pollution mitigation across several ministries dealing with transport, power, construction, agriculture, rural development, and environment, as well as across city and state jurisdictions.
- Proposed components of Clean Air Mission India are:
 - **Air quality monitoring and assessment of sources:** Monitoring, emission inventories and regional source apportionment
 - **Targeted air quality management:** Sectoral strategies for control
 - **Multi-scale and Cross-Sectoral Coordination:** Coordination between Central Ministries, State departments
 - **Capacity building:** Institutional strengthening of CPCB (Central Pollution Control Board) and SPCBs (State Pollution Control Boards)
 - Public awareness and participation

Long Term Plan

- **Enforcement of Emission Trading Scheme in Industries¹⁸³**

- The Central Pollution Control Board (CPCB) has identified 17 categories of the most polluting industries which contribute heavily to the environment in terms of suspended particulate matter, gases and effluents.¹⁸⁴ There has been wide acknowledgement that India is increasingly becoming a large contributor to climate change problems. Accepting an emissions trading scheme would mean that India would also have to agree on the emission cap for itself.¹⁸⁵ **Emission trading schemes (ETS)** are developed and enforced for large industries to control the industrial pollution. This parallels carbon trading schemes wherein a cap on emissions is assigned for a region and for each of the contributing industry, an allocation is made. It is a system for controlling carbon emissions and other forms of atmospheric pollution by which an upper limit is set on the emission amount which any given business or other organization may produce. It also allows further capacity to be bought from other organizations that have not used their full allowance. Similar programmes have been introduced in the USA as cap-and-trade mechanisms of Sulfur dioxide.¹⁸⁶

¹⁸² <http://www.teriin.org/sites/default/files/2018-03/policy-brief-air-pollution-in-urban-centres-of-India.pdf>

¹⁸³ <http://www.teriin.org/sites/default/files/2018-03/policy-brief-air-pollution-in-urban-centres-of-India.pdf>

¹⁸⁴ <https://www.downtoearth.org.in/tag/industry>

¹⁸⁵ <https://www.lawctopus.com/academike/emission-trading-scheme-overview-indian-perspective/>

¹⁸⁶ <https://environmentallaw.uslegal.com/federal-laws/clean-air-act/>

- **Therefore, State Pollution Control Boards (SPCBs) in collaboration with Central Pollution Control Board (CPCB)** can enforce emission trading scheme through which they can determine the caps for industries based on desired pollutant concentrations and emission permits for the area. Upper limit can then be set to these industries, which can either comply with their caps or can buy credits from the market. This programme will prove to be cost effective and will also spur innovation.

- **Development of Sustainable Model in eradicating residue burning¹⁸⁷**
 Agricultural activities generate dust and further aggravate the problem of air pollution. There is a need to enforce a full ban on burning of these residues which can be done by development and adoption of a business model for collection, transport, and management of this residue on guidelines mentioned below:
 - Developing and implementing appropriate legislation on prevention and monitoring of on-farm crop residues burnings through incentives and punishment.
 - Introducing C-credit schemes to benefit the farmers who follow conservation agriculture for carbon sequestration and GHGs mitigation.
 - Including the component of conservation agriculture in soil health card for proper monitoring of crop residues retention/burning and its impact on soil health.
 - Classifying crop residues as amendments (like lime or gypsum) and their use in agriculture can attract subsidy like any other mineral fertilizer or amendment.¹⁸⁸

There is need to set up a State/National level procurement agency for agro-residues procurement from the farmers. In particular, this will involve village level institutions and local entrepreneurs for collection, storage and supply of biomass materials. This can also be linked with MNREGA (Mahatma Gandhi National Rural Employment Generation Act) and PMEGP (Prime Minister's Employment Generation Program). Through this, wild fluctuation of biomass material prices during season and off-season period can also be addressed by setting up biomass depots facilities.

Ministry of Environment, Forest and Climate Change can implement the above strategies to achieve sustainable models in eradicating residue burning in India.

¹⁸⁷ <http://www.teriin.org/sites/default/files/2018-03/policy-brief-air-pollution-in-urban-centres-of-India.pdf>

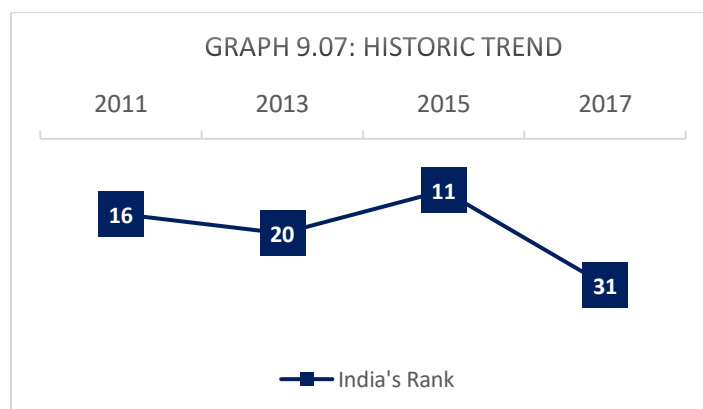
¹⁸⁸ http://www.iari.res.in/files/Important_Publications-2012-13.pdf

Indicator 9.05: Environmental treaty ratifications

Definition: This indicator refers to the total number of international treaties from a set of 27 for which a state is a participant. A state is acknowledged as a participant whenever its status for each treaty appears as Ratified, Accession, or in-force.

Source: The International Union for Conservation of Nature (IUCN), Environmental Law Centre ELIS Treaty Database.

Value of country = Total number of ratified environmental treaties (0-32 scale, where 32 is best)



Graph 9.07 indicates the historic trend of India's rank in indicator 9.05. In 2017, India's rank decreased by 20 positions as compared to year 2015. This indicator contributes 0.69% to the country score.

TABLE 9.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Denmark	1	25	1	30	Top Performer
Netherlands	4	24	7	29	Top Performer
Bulgaria	11	23	10	28	Top Performer
India	11	23	31	24	

6 countries have 1st rank in this indicator as all of them have same value of 30

- For 2017 TTCI report, treaties signed and came in force till year 2015 were only counted. The 27 treaties that India signed till 2015 are presented below in table.

Table 9.07: List of International Treaties Status (India)¹⁸⁹

S. No	Treaties	Accession	Ratification	In force
1	The International Convention for the Regulation of Whaling, 1948 Washington	9-Mar-81		9-Mar-81
2	The International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended in 1962 and 1969, 1954 London		4-Mar-74	4-Jun -74
3	The Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971 Ramsar	2-Dec-77		2-Apr-78
4	The Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972 Paris		19-Dec-95	19-Mar-96
5	The Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 Washington		20-Jul-76	18-Oct-76
6	The International Convention for the Prevention of Pollution from Ships (MARPOL) as modified by the Protocol of 1978, London	25-Jun-85		25-Sep-85
7	The Convention on the Conservation of Migratory Species of Wild Animals, 1979 Bonn	12-Jul-83		1-Nov-83
8	The United Nations Convention on the Law of the Sea, 1982 Montego Bay		29-Jun-95	29-Jul-95
9	The Convention on the Protection of the Ozone Layer, 1985 Vienna	18-Mar-91		16-Jun-91
10	The Protocol on Substances that Deplete the Ozone Layer, 1987 Montreal	19-Jun-92		17-Sep-92
11	The Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 Basel		24-Jun-92	23-Sep-92
12	The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 London		21-Jun-93	13-May-95
13	The United Nations Framework Convention on Climate Change, 1992 New York		1-Nov-93	21-Mar-94
14	The Convention on Biological Diversity, 1992 Rio de Janeiro		18-Feb-94	19-May-94

¹⁸⁹ <https://www.ecolex.org/>

15	The International Convention to Combat Desertification in Those countries Experiencing Serious Drought and/or Desertification, particularly Africa, 1994 Paris		17-Dec-96	26-Dec-96
16	The Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, 1994 New York		29-Jun-95	28-Jul-96
17	The Agreement relating to the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995 New York	19-Aug-03		18-Sep-03
18	The Kyoto Protocol to the United Nations Framework Convention on the Climate Change, Kyoto 1997	26-Aug-02		16-Feb-05
19	The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 1998 Rotterdam	24-May-05		24-Aug-05
20	The Cartagena Protocol of Biosafety to the Convention on Biological Diversity, 2000 Montreal		17-Jan-03	11-Sep-03
21	The Stockholm Convention on Persistent Organic Pollutants, 2001 Stockholm		13-Jan-06	13-Apr-06
22	The International Treaty on Plant Genetic Resources for Food and Agriculture, 2001 Rome	4-Mar-04		29-Jun-04
23	The International Tropical Timber Agreement, 2006 Geneva		25-Jul-08	7-Dec-11
24	The Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, 2010 Nagoya - Kuala Lumpur		19-Dec-14	5-Mar-18
25	The Protocol on Access to Genetic Resources and their Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, Nagoya 2010		9-Oct-12	12-Oct-14
26	The Convention on Mercury, Minamata, 2013		18-Jun-18	16-Sep-18
27	The Paris Agreement 2015		2-Oct-16	4-Nov-16

Source: ECOLEX

Prospective Status of India

- Government of India has signed three new treaties which came “In force” in the year 2016 and 2018 as shown in Table 9.08. Hence, it can be said that if each country performs same in year 2019 as of year 2017, India’s rank will increase in the upcoming 2019 TCI report.

Table 9.08: List of International Treaties (Signed but not included, India)

Treaties	Accession	Ratification	In force
The Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, 2010 Nagoya - Kuala Lumpur		19-Dec-14	5-Mar-18
The Convention on Mercury, Minamata, 2013		18-Jun-18	16-Sep-18
The Paris Agreement 2015		2-Oct-16	4-Nov-16

Proposed Action Plan

Ministry: Ministry of Environment, Forest and Climate Change

Long Term Plan

- Government of India has not signed six treaties under any category namely accession, ratified or in force as shown below in table 9.09. Hence, a long term plan for Government of India and Ministry of Environment, Forest and Climate Change is to consider signing these treaties.

Table 9.09: List of International Treaties (Not Signed, India)

Treaties	Accession	Ratification	In force
The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 London, Mexico City, Moscow, Washington	–	–	–
The Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 1992	–	–	–
The Convention on the Law of the Non-navigational Uses of International Watercourses, 1997	–	–	–
The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 1998	–	–	–
The Protocol on Preparedness, Response and co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000 London	–	–	–
The Protocol on Pollutant Release and Transfer Registers 2003	–	–	–

Source: ECOLEX

Note – Indicator 9.06 & 9.09 are being shown as a single indicator as both are interdependent and depends on same criteria of water management to eradicate water stress.

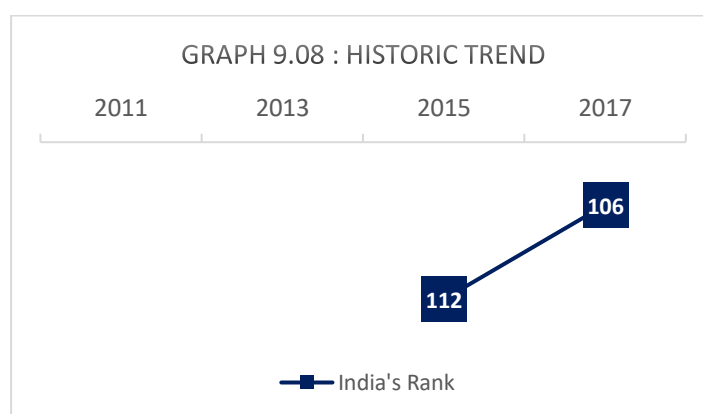
Indicator 9.06: Baseline Water stress

Definition: This indicator refers to the projected future country-level water stress for 2020 under a business as-usual (BAU) scenario based on annual water withdrawal data.

Source: World Resources Institute, Aqueduct

$$\text{Value of country*} = \frac{\text{Total annual water withdrawal} \times 100}{\text{Total annual available surface water}}$$

*The value of country is normalized to scale of (0-5) after calculation.



Graph 9.08 indicates the historic trend of India’s rank in indicator 9.06. This indicator was introduced in year 2015. In 2017, India’s rank increased by 6 positions as compared to year 2015. This indicator contributes 0.69% to the country score.

Table 9.10: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Bhutan	32	0.45	1	0	Asian Peer
Burundi	1	0	1	0	Top Performer
Rwanda	1	0	1	0	Top performer
Zambia	12	0.07	1	0	Top Performer
Malawi	14	0.1	1	0	Top Performer
Japan	93	3.06	78	2.31	Asian Peer
India	112	3.58	106	3.69	

7 countries have 1st rank in this indicator as all of them have same value 0.

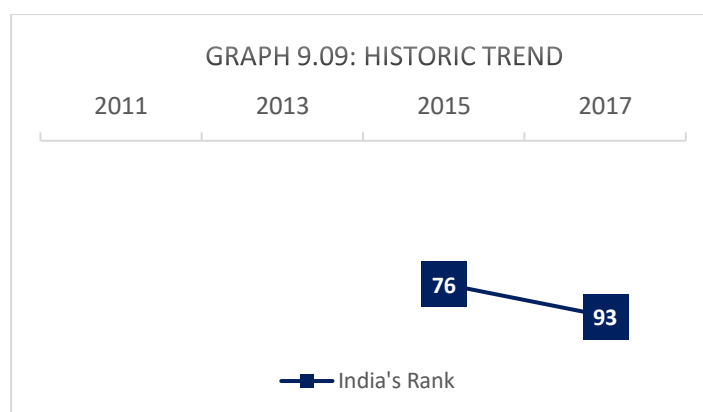
Background of Indicator: Water stress measures total annual water withdrawals (municipal, industrial, and agricultural) expressed as a percentage of the total annual available fresh water. Higher values indicate more competition among users. Water stress is measured from 0-5 scale where [0-1] is low (<10%) and [4-5] is extremely high (>80%)

Indicator 9.09: Wastewater Treatment

Definition: This indicator refers to the percentage of wastewater that is treated before it is released back into the ecosystem.

Source: Yale Centre for Environmental Law & Policy (YCELP) and the Centre for International Earth Science Information Network (CIESIN) at Columbia University, Environmental Performance

$$\text{Value of country} = \frac{\text{Total volume of wastewater treated} \times 100}{\text{Total wastewater collected}}$$



Graph 9.09 indicates the historic trend of India’s rank in the indicator 9.09. This indicator was introduced in year 2015. In 2017, India’s rank decreased by 17 positions as compared to year 2015. This indicator contributes 0.69% to the country score.

TABLE 9.11: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Singapore	1	99.65	1	100	Asian Peer
Netherlands	2	98.81	2	99.27	Top Performer
Luxembourg	6	95	3	96.84	Top Performer
Japan	25	71.26	36	56.53	Asian Peer
India	76	10.48	93	2.24	

Proposed Action Plan

Ministry: Ministry of Water Resources, River development & Ganga rejuvenation, Ministry of Environment, Forest and Climate Change

Short Term Plan

- **Sulabh Jal initiative**

- In the past years, groundwater in many parts of Bihar has been severely affected by arsenic and other chemical contamination. Excess use of arsenic in drinking water over prolonged period has led to primary, secondary and tertiary health impacts on the lives of people. Agricultural activity is also getting hampered due to decline in soil fertility, productivity, and, disruption of food chain. Therefore, to combat potable water scarcity, Sulabh International has introduced the project Sulabh Jal in Bihar in 2018 which aims to convert contaminated pond water into safe drinking water.
- Installation cost of the project is around Rupees 20 lakhs and it would have a capacity to produce 8,000 litres of potable water per day which is being sold at the rate of 50 paisa per one litre of bottle¹⁹⁰.
- With the declining recharge rates and sharply increasing extraction pace, the groundwater situation needs urgent attention. The problem of groundwater contamination further deteriorates the situation. In India, 19 states have reported fluoride contamination of water and groundwater in at least 10 states is contaminated with arsenic. **Hence, it becomes most important for Ministry of Water Resource to implement innovative practices like Sulabh Jal all over India to ensure affordability and availability of potable water.**

Medium Term Plan

- **Increasing the capacity of Sewage Treatment Plants (STPs)**

- Currently a total of 746 sewage treatment plants with a total capacity of 22649 million litres per day are present in India out of which only 522 are operational. 224 sewage treatment plants are either under construction or currently non-operational. 70 new sewage treatment plants have been proposed by the government. The capacity of 522 functional STPs is 18883.2 million litres per day¹⁹¹ as shown in below table.

¹⁹⁰ <http://www.sulabhinternational.org/sulabh-jal-innovation-approach-to-provide-cheapest-drinking-water-in-bihars-darbhanga/>

¹⁹¹ https://nrcd.nic.in/writereaddata/FileUpload/NewItem_210_Inventorization_of_Sewage-Treatment_Plant.pdf

TABLE 9.12: STATUS OF STPs

STATUS	NO OF STPs	CAPACITY[MLD]
Operational	522	18883.2
Non-Operational	79	1237.16
Under Construction	145	2528.36
Proposed	70	628.64
Total	816	23277.36

- However, there is an unequal distribution of sewage treatment plants in the country. States like Arunachal Pradesh, Andaman Nicobar Islands, Chhattisgarh, Manipur, and Nagaland don't have any sewage treatment plant in their territory which can also be seen through table 9.13.
- According to a report, around 78% of sewage waste generated in India remains untreated¹⁹². Therefore, there is an urgent need for effective steps to bridge the gap between treated and untreated wastewater. This can be done by building new STPs in the states mentioned in the table 9.13 or can be resolved by turning all 746 STPs functional so that they can operate at their full capacity. Increasing the capacity of current STPs can be one of the way. **Therefore, Central Pollution Control Board should collaborate with all State Pollution Control Board and take appropriate actions for the same.**

TABLE 9.13: STATES WITH NO SEWAGE TREATMENT PLANT (STP) IN OPERATION

State/Union Territory	Sewage Generation, in urban areas (million liters per day)
Andaman & Nicobar Islands	22
Arunachal Pradesh	50
Chhattisgarh	951
Dadra & Nagar Haveli	26
Daman & Diu	29
Lakshadweep	8
Manipur	132
Nagaland	92
Total	1,310

¹⁹² <https://www.downtoearth.org.in/news/waste/-78-of-sewage-generated-in-india-remains-untreated--53444>

Long Term Plan

- **Adoption of effective technology**

- Already more than 60% of Indian population lives in areas where current water supply will not be able to meet the future demand. If water is not managed more prudently, the crises observed today will become the catastrophes of tomorrow¹⁹³. Hence, Ministry of Environment, Forest and Climate Change should adopt effective technologies to overcome the above-mentioned issue.
 - **Desalination Project by Japan:** For many years, Fukuoka City (Japan) suffered from prolonged water supply restrictions due to water shortages. Therefore, the Fukuoka District Water Agency launched a seawater desalination facility in 2005 which is currently one of the largest desalination facilities in Japan. The method of the desalination adopted in Fukuoka is a reverse osmosis membrane method (RO). In recent years, many countries have adopted this method because of its low set-up. It is composed of five lines with each line of 10,000 m³/day capacity¹⁹⁴. It employs cutting-edge technology to achieve 60% freshwater recovery ratio (amount of freshwater recovered from seawater).
- **On similar lines, Ministry of Water Resource can collaborate with apex technical institutes like IITs and NITs to develop technologies for saltwater conversion and for recycling of sewage water so that dependency on freshwater resource can be reduced.**

- **Adoption of Ground Water Replenishment model in collaboration with local NGOs**

- Restoration of local water cycles and water resources by Tarun Bharat Singh's NGO had an enormous impact in Rajasthan. It was based on the construction of small-scale water harvesting structures and combining it with the regeneration of forests and soils, particularly in upper catchments, to improve the recharge of groundwater resources.
- The impact through this has been significant and water has been brought back to 1,000 villages across the state. Five rivers that used to run dry after the annual monsoon season are now flowing again with fisheries in them re-established. Groundwater levels have risen by an estimated six metres and productive farmland has increased from 20% to 80% of the catchment. **Therefore, Ministry of Water Resource can collaborate with such NGOs and can implement this type of model all over India to ensure ground water replenishment and regeneration of ground water resources.**

¹⁹³ <http://wateraidindia.in/publication/water-gap-state-worlds-water-2018/>

¹⁹⁴ <https://www.niph.go.jp/soshiki/suido/pdf/h21JPUS/abstract/r9-2.pdf>

Indicator 9.07: Threatened species

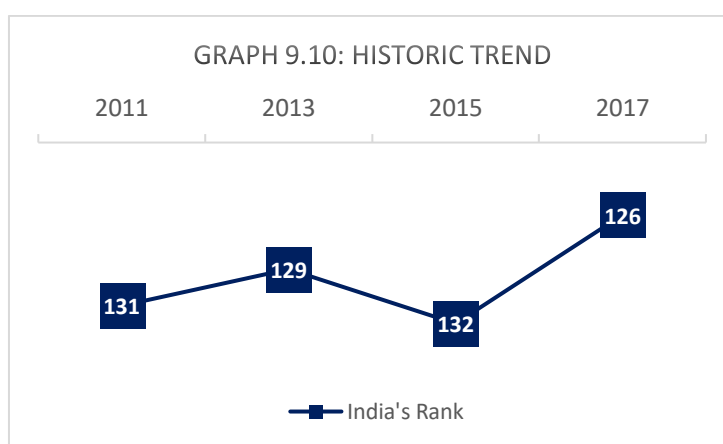
Definition: This indicator refers to the total number of **Critically Endangered (CR)**, **Endangered (EN)** and **Vulnerable (VU)** species as a percentage of total known species for mammals (M), birds (B) and amphibians (A).

Source: The International Union for Conservation of Nature (IUCN), Red List of Threatened Species

Value of country =

$$\frac{(\text{Total Number of CR species} + \text{Total Number of EN species} + \text{Total Number of VU species}) \times 100}{\text{Total known species}}$$

where these species include mammals, birds and amphibians



Graph 9.10 indicates the historic trend of India's rank in indicator 9.07. In 2017, India's rank increased by 6 positions as compared to year 2015. This indicator contributes 0.69% to the country score.

TABLE 9.14: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Luxembourg	1	0.39	1	1.56	Top Performer
Barbados	10	2.1	2	2.52	Top Performer
Trinidad and Tobago	17	2.67	3	2.88	Top Performer
Nepal	98	6.64	79	6.44	Asian Peer
China	125	11.54	120	11.74	Asian Peer
India	132	13.55	126	13.49	

Proposed Action Plan

Ministry: Ministry of Environment, Forest and Climate Change

Short Term Plan

- **Immediate action plan for endangered species**

- The IUCN Species Programme working with the IUCN Species Survival Commissions provides authoritative information and advice to international conventions, governments and nations. Using the work of the IUCN Species Survival Commissions (SSC), specialist groups and partner organizations, the IUCN Species Programme provides advice to the scientific authorities of various governments, Convention on International Trade in Endangered Species of Fauna and Flora (CITES) and on the Convention on Biological Diversity (CBD).
- To assist in the development of policy, the IUCN SSC have produced a specific specialist group for mammals, amphibians and birds as mentioned below:
 - **Mammal:** IUCN SSC Mammal Specialist Groups provides various specialists from all around the world to contribute to better survival of the species.¹⁹⁵
 - **Amphibian:** IUCN SSC Amphibian Specialist Group and Amphibian Survival Alliance is instrumental in gathering new knowledge and implementing effective conservation action for amphibians.¹⁹⁶
 - **Birds (Aves):** IUCN SSC Bird Specialist Groups provides various specialist from all around the world to contribute to better survival of the species.¹⁹⁷
- **Therefore, Ministry of Environment, Forest and Climate Change must collaborate with IUCN species program to seek advice on formulation of regional conservation policy for endangered species from each specialist group for mammals, amphibians and birds.**

Medium Term Plan

- **Captive breeding and reintroduction of Threatened Species**

- India being a megadiverse country with only 2.4% of the world's land area, accounts for 7-8% of all recorded species, including over 45,000 species of plants and 91,000 species of animals.¹⁹⁸ However, as extinction rates are going up, it is being predicted that 20-50% of the world's species will become extinct in the next couple decades¹⁹⁹. Even in India, many animals are on the verge of extinction. Four of the most Critically Endangered Animals in India are: Hangul, Great Indian Bustard, Sangai and Dugong.
- **Reintroduction:** Some species which are in danger of extinction in the wild are being brought into captivity to safeguard them from imminent extinction and to also increase the population

¹⁹⁵<https://www.iucn.org/ssc-groups/mammals>, <https://globalmammal.org/>

¹⁹⁶ <http://www.iucnredlist.org/initiatives/amphibians>, <http://www.amphibians.org/redlist/>

¹⁹⁷ <https://www.iucn.org/ssc-groups/birds>, <http://www.birdlife.org/worldwide/partnership/about-birdlife>

¹⁹⁸ <https://www.iucn.org/asia/countries/india>

¹⁹⁹ <https://link.springer.com/article/10.1007/BF00114044>

numbers through captive breeding and mating. However, such practices among wild animals in the zoos are not actively encouraged in India and no study has been conducted by any expert on this issue.²⁰⁰

- WWF-Panda campaign was launched in China where approaches such as artificial insemination, either with freshly collected or with frozen and thawed sperm, were introduced to increase the species population. The process is now routine at panda breeding centres, both in China and other countries as well.^{201 202}
- **Hence, Ministry of Environment, Forest and Climate Change should collaborate with World Wide Fund (WWF) - Nature to develop similar strategies so that they can conserve the highly critically endangered, endangered and vulnerable species.**

Long Term Plan

- **Adoption of Zero Poaching Policy**

- Wildlife Protection Society of India (WPSI), a wildlife conservation organization has recorded over 20,000 wildlife crime cases. The most threatened wildlife species in India are tigers, elephants, leopards and rhinos. According to WPSI data, the agency has recorded the loss of over 120 elephants and death of 66 tigers in year 2014.²⁰³
- **Innovation in Nepal:** In Nepal, 400 community units are working throughout the country and patrolling critical areas like wildlife corridors to provide vital information on illegal activity. The country was an early adopter of technologies like unmanned aerial vehicles (UAVs) through which they improved anti-poaching operations within protected areas. It has also embraced Spatial Monitoring and Reporting Tools (SMART), a site-based approach used to monitor and improve the effectiveness of conservation management. Specially trained sniffer dogs are being deployed in national parks to assist the park staff and Nepal Army in anti-poaching patrols.
- **Thus, Ministry of Environment, Forest and Climate Change on the similar lines, can take steps to reduce the unwanted increased poaching in various parts of India through collaboration with various local small communities living around the forests.**²⁰⁴

²⁰⁰ <https://timesofindia.indiatimes.com/city/nagpur/breeding-in-captivity-or-celibacy/articleshow/59814858.cms>

²⁰¹ <https://gizmodo.com/giant-panda-breeding-efforts-have-actually-been-really-1614308529>

²⁰² <http://science.sciencemag.org/content/330/6010/1503>

²⁰³ <https://www.downtoearth.org.in/news/over-20000-wildlife-crimes-recorded-in-india--48209>

²⁰⁴ [wwf.panda.org](https://www.panda.org) › Knowledge Hub › Publications & Resources

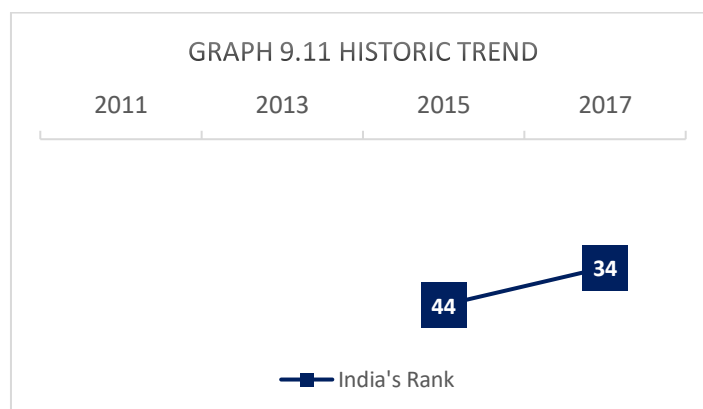
Indicator 9.08: Forest Cover Change

Definition: This indicator refers to the loss in the sum of annual tree cover between 2000 and 2014 in areas with greater than 30% tree cover, divided by 2000 forest extent.

Source: Environmental Performance Index by Yale and Columbia University, Global Forest Watch

$$\text{Value of country} = \frac{(\text{TCL in year 2001}) + (\text{TCL in year 2002}) + \dots + (\text{TCL in year 2014})}{\text{Total forest area in year 2000 (Hectares)}}$$

where TCL stands for Tree Cover Loss



Graph 9.11 indicates the historic trend of India's rank in indicator 9.08. This indicator was introduced in year 2015. In 2017, India's rank increased by 10 positions as compared to year 2015. This indicator contributes 0.69% to the country score.

Table 9.16: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Iran, Islamic Rep.	15	-0.1	1	0.002018	Top Performer
Jordan*	N/A	N/A	2	0.002357	Top Performer
Georgia	15	-0.1	3	0.002836	Top Performer
Nepal	21	-0.4	10	0.007461	Asian Peer
India	44	-1.6	34	0.026641	

*2015 rank and value for Jordan was not available in TTCI 2105 report.

Proposed Action Plan

Ministry: Ministry of Environment, Forest and Climate Change

Short Term Plan

- **Persistent Effort for Bonn Challenge**
 - The Bonn Challenge is a global effort to bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and a total of 350 million hectares by 2030.
 - India is among the 56 countries who have agreed to increase the forest hectares by year 2030. India has committed to restore a total of 21 million hectares of degraded land i.e. 13 million hectares by 2020 and another 8 million hectares by 2030.
 - **Hence, short term plan for Ministry of Environment, Forest and Climate Change would be to set up a committee which will ensure that the target set for the Bonn challenge are being met properly.**

Medium Term Plan

- **Adoption of the Master Plan for the Forestry Sector²⁰⁵**
 - For decades, India has been consistently trying to achieve its target of keeping 33% of its geographical area under forest cover, but according to State of Forest report, it is still struggling to get above 22% value²⁰⁶. Peoples' rights under proposed National Community Forest Management Mission, does not lay out any framework for the division of conservation and management roles. This mission seems a little misdirected and poorly planned, as even 10 years after the enactment of the 2006 Forest Rights Act, fewer than three percent of community forest rights have been recognized in India.²⁰⁷
 - Nepal in 1989 had set out a 25-year policy and planning framework for the forestry sector. The objectives of the Plan aimed to meet people's needs for forest products on a sustained basis, to conserve ecosystems and genetic resources, to protect land against degradation & other effects of ecological imbalance and to contribute to local & national economic growth.²⁰⁸
 - Hence, Ministry of Environment, Forest and Climate Change on similar lines as Nepal, can implement such Master Plan for the Forestry Sector that can foster the small community's needs. The objective of such a master plan can include management of national forests, distribution of seedlings, promotion of the use of fuel-efficient stoves, updating of legislation, strengthening of forestry organizations, training of forestry professionals and undertaking of

²⁰⁵<https://theredddesk.org/countries/plans/master-plan-forestry-sector-nepal>

²⁰⁶ <http://fsi.nic.in/isfr2017/isfr-forest-cover-2017.pdf>

²⁰⁷ <https://www.aljazeera.com/indepth/opinion/india-forests-threat-180425104442969.html>

²⁰⁸<https://www.globalforestwatch.org/>

research and development for the management of forests and the establishment of an effective monitoring and evaluation system.

Long Term Plan

- **Global Forest Financing Facilitation Network (GFFFN)**

- GFFFN is a platform where countries like India can get financial support for protection of forests as well as guidance in policy making. GFFFN has 3 major roles defined as follows:
 - Promote the design of national forest financing strategies to mobilize resources for sustainable forest management (SFM)
 - Facilitate access to existing and emerging financing mechanisms, including the Global Environment Facility and the Green Climate Fund
 - Serve as a clearing house on existing, new and emerging financing opportunities and as a tool for sharing lessons learned from successful projects.²⁰⁹
- Since its inception in 2015, the GFFFN has facilitated various countries by providing access to financial resources, used to implement SFM.
 - At the national level, the Network has helped 13 countries to mobilize resources from different sources: Cameroon, Ecuador, Fiji, Guinea, Iran, Madagascar, Niger, Nigeria, Papua New Guinea, Senegal, Uganda, Ukraine and Zimbabwe.
 - At the regional and sub-regional level, the Network has organized training workshops on accessing funds from multilateral financing mechanisms. These regions are the ECO region (Central Asia), SADC region (Southern Africa), Southeast Asia, SPC region (Pacific) and the African Union. In just two years, the network has trained over 300 government representative, civil society and academia in formulating project proposals on sustainable forest management.
 - The GFFFN is collaborating with a wide range of organisations, including members of the Collaborative Partnership on Forests (CPF) such as FAO, the GEF, IUCN, UNCCD and UNDP as well as other partners, notably the Green Climate Fund, the African Development Bank, African Forest Forum and Conservation International.
- **Thus, Ministry of Environment, Forest and Climate Change can also collaborate with GFFFN as it will not only give financial support for protection of forests but will also give proper guidance for policy making.**

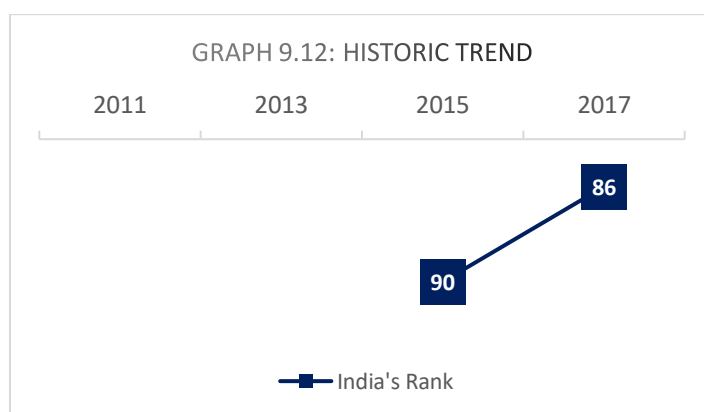
²⁰⁹<http://www.un.org/esa/forests/forum/capacity-development/forest-financing/index.html>

Indicator 9.10: Coastal shelf fishing pressure

Definition: This indicator refers to the trawling catch per exclusive economic zone (EEZ). It assesses the total catch from trawling and dredging equipment divided by the total area of each country’s exclusive economic zone (EEZ).

Source: Yale Centre for Environmental Law & Policy (YCELP) and the Centre for International Earth Science Information Network (CIESIN) at Columbia University, Environmental Performance Index 2014.

$$\text{Value of country} = \frac{\text{Trawling catch (tonnes)}}{\text{Exclusive Economic Zone (EEZ)(square kilometre)}}$$



Graph 9.12 indicates the historic trend of India’s rank in this indicator 9.10. This indicator was introduced in year 2015. In 2017, India’s rank increased by 4 positions as compared to year 2015.

This indicator contributes 0.69% to the country score.

Table 9.17: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Barbados	1	0.000015	1	0.000015	Top Performer
Mauritius	3	0.000034	2	0.000034	Asian Peer
Georgia	4	0.000045	3	0.000045	Top Performer
Sri Lanka	7	0.000438	6	0.000438	Asian Peer
India	90	0.62	86	0.62	

Proposed Action Plan

Ministry: Ministry of Agriculture and Farmers Welfare, Ministry of Environment, Forest and Climate Change

Medium Term Plan

- **Expansion of Exclusive Economic Zones (EEZs)**
 - The **Area beyond National Jurisdiction (ABNJs)** commonly called the high seas, are those areas of ocean for which no one nation has sole responsibility for management. In all, these make up 40% of the surface of planet, comprising 64% of the surface of the oceans and nearly 95% of its volume.²¹⁰
 - The current allowed region for fishing has been overly exhausted and India is still in the negotiation phase to sign the treaty of ABNJ. Thus, if this treaty ratifies, the pressure on Exclusive Economic Zone (EEZs) of India would reduce significantly as then fishing would be allowed in ABNJs or High Sea areas.
 - The Indian Government has been petitioning the United Nations (UN) to accept its claim of extending the EEZ for India to about double its present area. Since India does not have a geo-scientific mapping of EEZ, there is no specified area of EEZ in India. Several other countries have initiated systematic mapping and exploration programs of their EEZs, which is important for sustainable practices in the seas including the EEZs.
 - **Thus, Ministry of Agriculture and Farmers Welfare can also start geo-scientific mapping of EEZ so as to specify its area of EEZ.**²¹¹

Long Term Plan

- **More Stringency in Rules and Regulations**
 - Bottom trawling is an ecologically destructive practice. The practice involves trawlers dragging weighted nets along the sea-floor, causing great depletion of aquatic resources. This causes irreparable damage to marine ecosystem²¹². Tamil Nadu and Kerala boats which operate from various harbours are following destructive fishing practices like pair bottom trawling and pair pelagic trawling²¹³.
 - Sri Lanka has banned the destructive fishing practice of bottom- trawling in their water.²¹⁴ Sri Lanka has amended its Fisheries and Aquatic Resources Act, according to which a violation will now attract a possible two-year prison term and a fine of Rupees 50,000. Although the

²¹⁰ <https://www.thegef.org/topics/areas-beyond-national-jurisdiction>

²¹¹ <https://www.geographyandyou.com/economy/development/exclusive-economic-zone-seas-around-india/>

²¹² <https://www.2thepoint.in/bottom-trawling/>

²¹³ <http://www.newindianexpress.com/cities/kochi/2018/aug/05/tn-boats-fishing-practices-harm-marine-environment-1853379.html>

²¹⁴ <https://thewire.in/external-affairs/bottom-trawling-india-sri-lanka>

Government of India has announced its plans to eradicate bottom trawling, these efforts will show substantial effects only in the long run.²¹⁵

- **Hence, Ministry of Agriculture and Farmers Welfare must take immediate action to ban the traditional method of bottom trawling and should take action against those who still practise it.**

²¹⁵ <https://www.thehindu.com/news/national/tamil-nadu/sri-lankas-bottom-trawling-ban-indias-deep-sea-fishing-all-you-need-to-know/article19396217.ece>

SUB-INDEX C

INFRASTRUCTURE

The Infrastructure sub-index, captures the availability and quality of physical infrastructure of each economy. Connectivity and hospitality infrastructure are clearly distinctive drivers of travel & tourism, this sub-index allows them to be assessed more clearly, revealing when they require policy attention.

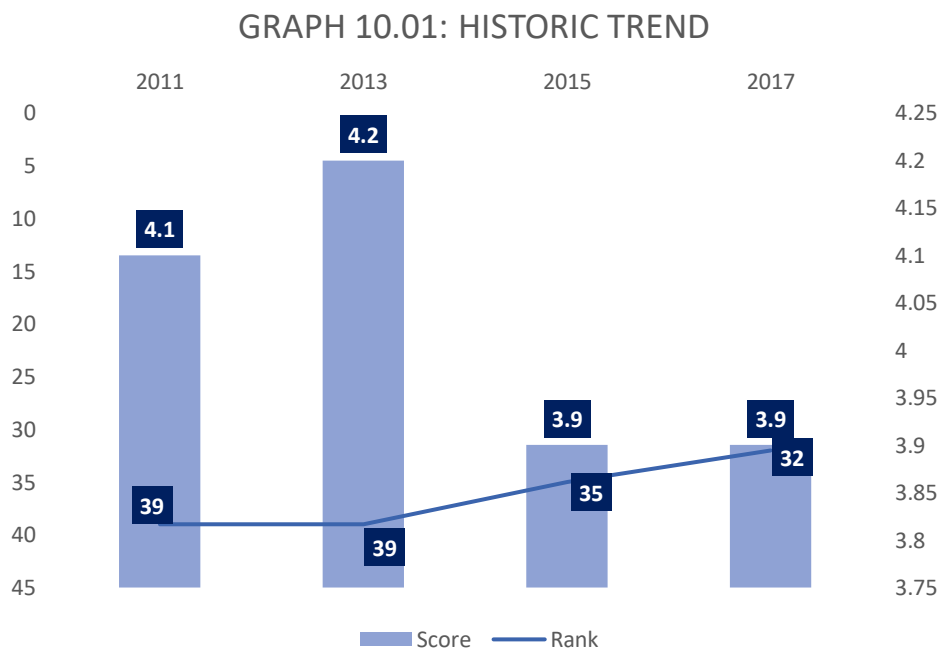
This Sub-index comprises 3 pillars:

- 1. Air Transport Infrastructure (6 indicators)**
- 2. Ground and Port Infrastructure (7 indicators)**
- 3. Tourist Service Infrastructure (4 indicators)**

Pillar 10: Air Transport Infrastructure

Definition: This pillar measures to what extent a country offers sufficient air connectivity for traveler's access to and from countries, as well as movement within many countries. **Pillar 10** has a total of **6 indicators** stated below –

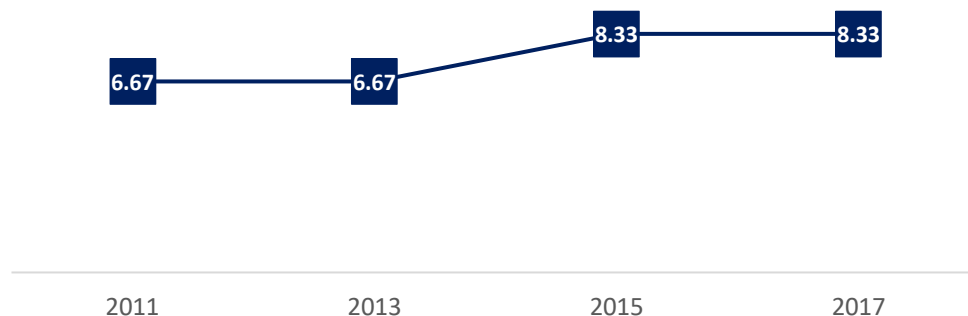
1. Quality of air transport infrastructure
2. Available seat kilometers, domestic
3. Available seat kilometers, international
4. Aircraft departures
5. Airport density
6. Number of operating airlines



Graph 10.01 indicates the historic trend of India's rank and value in Pillar 10. India's rank increased from 39th position in 2011 to 32nd position in 2017.

Weightage Shift:

GRAPH 10.02: WEIGHTAGE SHIFT



Graph 10.02 indicates the overall contribution of Pillar 10 i.e. Air Transport Infrastructure in India's score. At present, 8.33% weightage is given to this pillar. The weightage of this pillar has increased by 25% in the year 2015.

TABLE 10.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in Weightage (%)
Quality of air transport infrastructure	1.11	1.66	49.55
Available seat kilometers, domestic	0.55	0.83	50.91
Available seat kilometers, international	0.55	0.83	50.91
Aircraft departures	1.11	1.66	49.55
Airport density	1.11	1.66	49.55
Number of operating airlines	1.11	1.66	49.55

Table 10.01 shows the percentage of contribution that each indicator has on the overall score of India.

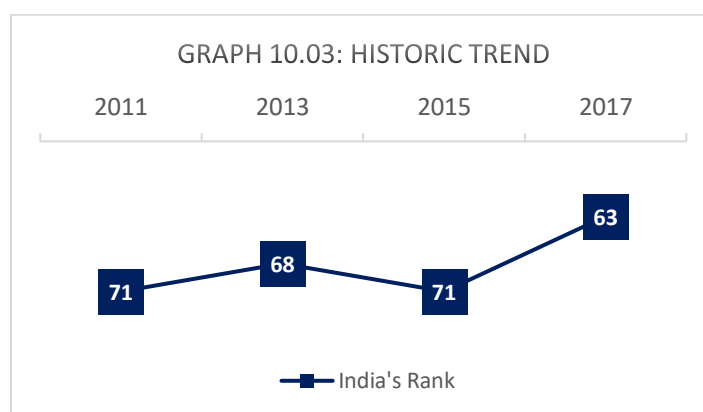
Note: Indicator 10.01, 10.02, 10.03, 10.04, 10.05 & 10.06 are being shown as a single indicator as they are inter-related and will have a common action plan. A common strategy aimed at improving air transport infrastructure can have desired effects on all the indicators.

Indicator 10.01: Quality of air transport infrastructure

Definition: “How would you assess the quality of air transport infrastructure in your country?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1 = extremely underdeveloped, among the worst in the world; 7 = extensive and efficient, among the best in the world).



Graph 10.03 indicates the historic trend of India’s rank in indicator 10.01. In 2017, India’s rank increased by 8 positions as compared to year 2015. This indicator contributes 1.66% to the country score.

TABLE 10.02: PERFORMANCE OF COUNTRIES

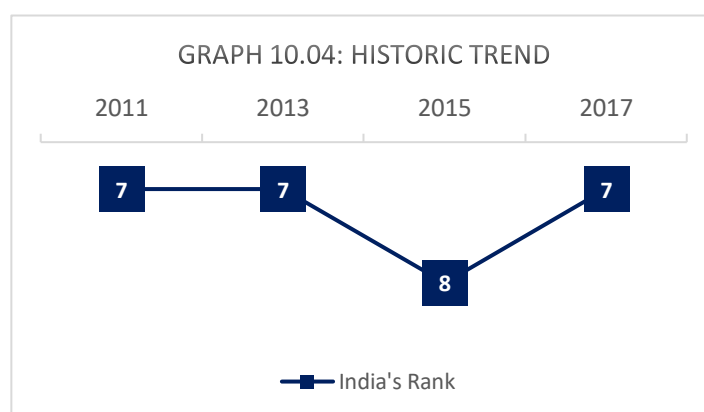
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Singapore	1	6.75	1	6.85	Asian Peer
United Arab Emirates	2	6.71	2	6.74	Top Performer
Hong Kong SAR	3	6.63	3	6.61	Top Performer
India	71	4.27	63	4.49	

Indicator 10.02: Available seat kilometres, Domestic

Definition: This indicator refers to an airline’s passenger-carrying capacity. It is composed of the number of seats available on each domestic flight multiplied by the flight distance in kilometres. The final value represents the weekly average for the year (Jan-Dec), taking into account flights scheduled beforehand by airline companies.

Source: International Air Transport Authority, SRS Analyser

$$\text{Value of country} = \frac{\text{No. of seats available on each domestic flight} \times \text{Flight Distance}}{52}$$



Graph 10.04 indicates the historic trend of India’s rank in indicator 10.02. In 2017, India’s rank increased by 1 position as compared to year 2015. This indicator contributes 0.83% to the country score.

TABLE 10.03: PERFORMANCE OF COUNTRIES

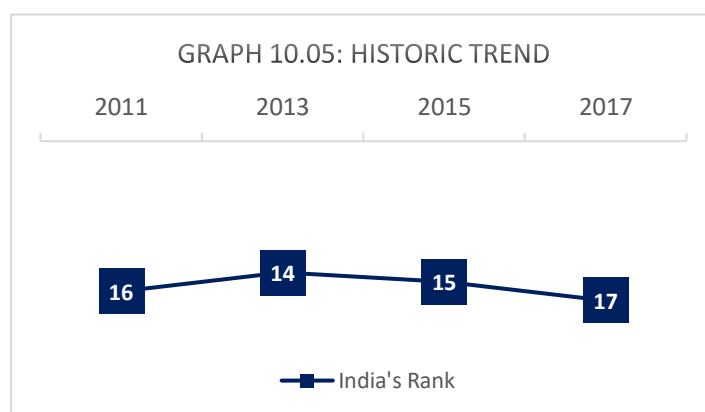
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United States	1	21884.84	1	22812.24	Best Practice
China	2	10264.49	2	11208.56	Asian Peer
Brazil	3	2282.38	3	2257.42	Top Performer
India	8	1612.12	7	1763.42	

Indicator 10.03: Available seat Kilometres, International

Definition: This indicator measures an airline’s passenger-carrying capacity. It is composed of the number of seats available on each international flight multiplied by the flight distance in kilometres. The final value represents the weekly average for the year (Jan-Dec), taking into account flights scheduled beforehand by airline companies.

Source: International Air Transport Authority, SRS Analyser

$$\text{Value of country} = \frac{\text{No of seats available on each International flights} \times \text{Flight distance}}{52}$$



Graph 10.05 indicates the historic trend of India’s rank in indicator 10.03. In 2017, India’s rank decreased by 2 positions as compared to year 2015. This indicator contributes 0.83% to the country score.

TABLE 10.04: PERFORMANCE OF COUNTRIES

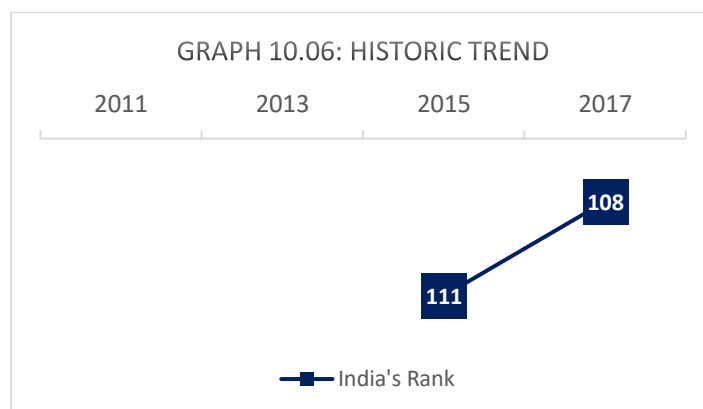
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United States	1	12182.49	1	12994.45	Best Practice
United Kingdom	2	6418.57	2	6195.12	Top Performer
United Arab Emirates	3	4849.48	3	5461.64	Top Performer
China	5	3926.255	5	4489.14	Asian Peer
India	15	1907.39	17	2013.8	

Indicator 10.04: Aircraft Departures

Definition: This indicator refers to the number of domestic and international take-offs of air carriers registered in the country. It is calculated as the number of aircraft departures per 1000 population.

Source: World Bank, World Development Indicator

$$\text{Value of country} = \frac{\text{Total Number of Aircraft Departures} \times 1000}{\text{Total Population}}$$



Graph 10.06 indicates the historic trend of India's rank in indicator 10.04. This indicator was introduced in year 2015. In 2017, India's rank increased by 3 positions as compared to year 2015.

This indicator contributes 1.67% to the country score.

TABLE 10.05: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Ireland	2	145.7	1	147.1	Top Performer
Iceland	3	83.4	2	93.4	Top Performer
Luxembourg	4	72.3	3	85.3	Top Performer
India	111	0.5	108	0.6	

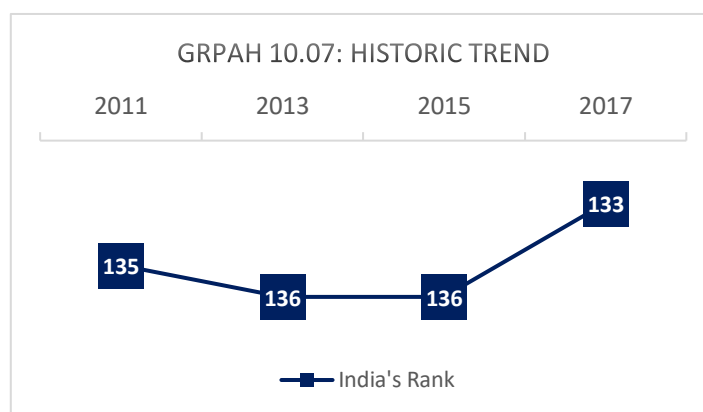
Indicator 10.05: Airport Density

Definition: This indicator refers to the number of airports with at least one scheduled flight per million of urban population. Urban population refers to people living in urban areas as defined by national statistical offices. It is calculated using World Bank pollution estimates and urban ratios from United Nations World Urbanization Prospects.

Source: International Air Transport Association, SRS Analyzer and World Bank, World Development Indicators.

Value of country = Number of airports with at least one scheduled flight per million of urban population

***Rank is derived from taking into account total number of functional airports with at least one scheduled flight per million of population.**



Graph 10.07 indicates the historic trend of India's rank in indicator 10.05. In 2017, India's rank increased by 3 position as compared to year 2015. This indicator contributes 1.67% to the country score.

TABLE 10.06: PERFORMANCE OF COUNTRIES

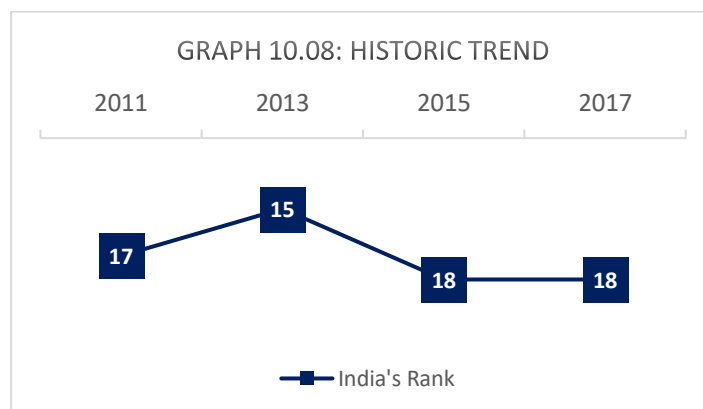
Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Iceland	2	26.36	1	25.68	Top Performer
Cape Verde	3	21.87	2	20.52	Top Performer
Trinidad and Tobago	4	17.20	3	17.41	Top Performer
United States	29	2.50	26	2.49	Best Practice
India	136	0.18	133	0.17	

Indicator 10.06: Number of Operating Airlines

Definition: This indicator refers to number of airlines with scheduled flights originating in country.

Source: International Air Transport Association, SRS Analyzer

Value of country: Number of airlines with scheduled flights originating in country



Graph 10.08 indicates the historic trend of India's rank in indicator 10.06. India's rank remained consistent in 2017 and 2015 at 18th position. This indicator contributes 1.67% to the country score.

TABLE 10.07: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United States	1	223	1	220	Best Practice
France	2	195	2	183	Top Performer
Germany	3	181	3	172	Top Performer
India	18	90	18	89	

- **Government Initiatives**

- Allocation of budget to Civil Aviation Ministry has been tripled to Rs 6,602.86 crore (US\$ 1,019.9 million) under Union Budget 2018-19.²¹⁶
- **UDAN** (Making air travel affordable and expanding network) "Ude-Desh-ka-Aam-Nagrik" is a regional airport development and connectivity scheme. The scheme aims at two broad themes:
 - Developing and expanding footprint of aviation infrastructure in the country. This includes development of both existing airports, regional airports and new airports at underserved and unserved locations.

²¹⁶ <https://www.ibef.org/industry/indian-aviation.aspx>

- To add several hundred financially-viable capped-airfare new regional flight routes to connect more than 100 underserved and unserved airports in smaller towns with each other as well as with well served airports in bigger cities by using "Viability Gap Funding" (VGF) where needed.
- Government of India has approved 15 Greenfield PPP Projects which are expected to increase the air traffic in India.²¹⁷
- In September 2018, Jharsuguda Airport in Odisha and Pakyong Airport in Sikkim were inaugurated. Pakyong airport is Sikkim's first ever airport and AAI's first greenfield airport construction.²¹⁸
- Policy reforms have also taken place with respect to the 5/20 rule, which historically required domestic commercial carriers to have five years of operational experience and a fleet of at least 20 aircraft to fly overseas. The policy was recently diluted to 0/20, only requiring a domestic airline to deploy a minimum of 20 aircraft on the domestic sector before flying internationally.⁴
- The government also capped fares on regional routes at 2,500 rupees (\$37) per hour of travel to facilitate travel to and from underserved destinations, while leaving the most popular routes, such as Delhi to Mumbai, untouched.²¹⁹

Proposed Action Plan

Ministry: Ministry of Civil Aviation, Airport Authority of India (AAI)

Short Term Plan

- **Surveying the passengers**

- A unified survey should be conducted to identify loopholes in the services provided in different classes of airlines with an aim to improve consumer satisfaction index. This survey can be conducted on different levels. For example, forms can be provided to the passengers while they are boarding the plane and can be collected at the time of de-boarding. Feedback from the people sitting in waiting areas can be another option. This would act as a feedback to the Indian Aviation Industry.
- There are a few airlines that continuously rank under the best airlines in the world by also retaining their cost effectiveness. Business model of these airlines can be studied and insights can be utilised to enhance the service sector of Indian Aviation Industries.

²¹⁷ <https://www.ibef.org/download/Aviation-July-2017.pdf>

²¹⁸ <https://www.ibef.org/industry/indian-aviation.aspx>

²¹⁹ http://www3.weforum.org/docs/White_Paper_Incredible_India_2_0_final_.pdf

Medium Term Plan

- **Need for Consultation**

- A report by the International Air Transport Association (IATA) predicted India to overtake the UK to become the third largest air passenger market by 2025. Moreover, by 2036, India will have 478 million airline passengers, more than those of Japan and Germany combined. Unfortunately, a boom in flying is going to have some unanticipated blowbacks if not addressed immediately. There has been a surge in aviation sector's consumer complaints in the past few years. While 30.5% of the flyers blamed customer service, 16% pointed fingers at flight problems like sudden cancellation and delay, 22% had issues with their baggage and 7.5% didn't like staff behaviour.²²⁰
- **Ministry of Civil Aviation can consider hiring international organisations as their principal consultants for such issues related to customer service.** An ideal organisation could be IATA (International Air Transport Association) since they are pioneers in this sector and have openly addressed challenges faced by India and their willingness to work with the Indian government. Their clientele list already includes the Government of Austria, Scotland, Brazil, Japan, South Africa etc.

- **Maintenance, Repair and Overhauling (MRO) Challenge**

- MRO is considered to be a Rs. 9,000-10,000 crore hub in India. Slow growth has been accounted due to taxation issues and lack of dedicated hangars at large airports to house full-fledged MRO services. Sending aircrafts to foreign country for MRO services in turn hits the aircraft utilization and entails an additional cost of logistics from India to the MRO destination country. Currently, a GST rate of 18% is applicable on MRO services. Spares and vital parts are imported in the country with domestic manufacturing limited only to low value products. **Therefore, Ministry of Civil Aviation should develop a centrally located MRO hub with a balanced taxation regime that could help contain the cost of maintenance of aircrafts which otherwise are being serviced at foreign countries like Singapore.**²²¹


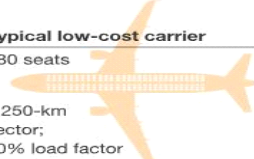
²²⁰ <https://economictimes.indiatimes.com/industry/transportation/airlines/-aviation/a-blowback-in-indias-booming-aviation-industry-surge-in-consumer-complaints/articleshow/61705471.cms>

²²¹ <http://www.careratings.com/upload/NewsFiles/Studies/Airlines%20and%20Airports.pdf>

Long Term Plan

- Re-designing of airplane:

Narrow-body-aircraft example

Line item	Typical full-service carrier	Typical low-cost carrier
	156 seats  1,250-km sector; 65% load factor	180 seats  1,250-km sector; 80% load factor
Aircraft	\$/month	\$/month
	BH ¹ /day	BH ¹ /day
Fuel	Gallons/BH	Gallons/BH
	\$/gallon	\$/gallon
Maintenance	\$/BH	\$/BH
Cockpit crew	Annual salary	Annual salary
	Benefit load	Benefit load
	Annual training	Annual training
	BH/month	BH/month
Cabin crew	Annual salary	Annual salary
	Benefit load	Benefit load
	Cabin crew	Cabin crew
	BH/month	BH/month
HOTAC ²	\$/crew member	\$/crew member
Airport/nav	\$/turn, aircraft	\$/turn, aircraft
	\$/leg, Ldg/nav ³	\$/leg, Ldg/nav ³
	\$/pax, ⁴ handling	\$/pax, ⁴ handling
Onboard	\$/pax	\$/pax
S&D ⁵	\$/pax	\$/pax
G&A ⁶	\$/pax	\$/pax
Cost per available seat kilometer	8.19¢	4.71¢

¹ Block hour.

² Hotel accommodations.

³ Landing and navigation.

⁴ Passenger.

⁵ Sales and distribution.

⁶ General and administrative.

McKinsey&Company | Source: Perform Model

(Source: McKinsey & Company)

- A typical full-service carrier has only 156 seats as compared to a low-cost carrier which has 24 more seats i.e. 180 seats. This is one of the major factors while calculating the value of the country in indicator 10.02 and 10.03. The load factor also increases from 65% to 80% in low-cost carrier.
- The maintenance of low-cost carrier is also cheaper by 16% as compared to that of full-carrier service. Most importantly, the cost per available seat kilometre is cheaper by almost 73% in a low-cost carrier service.²²²
- Major players like Jet airways, Air India and Vistara airlines do not fly low cost carrier aircrafts. **Therefore, Ministry of Civil Aviation should promote the use of Low-Cost Carrier (LCC) among the major players as it will increase available seat kilometres and will also be economically feasible.**
- **Increasing number of seats:** USA's United Airline has reconfigured their latest carrier seating on the Boeing 777-200 to add 21 additional seats. To fit the extra seats, the Economy and Economy Plus seats will be arranged in rows of 10 across instead of nine. American Airlines

²²² <https://www.mckinsey.com/industries/travel-transport-and-logistics/our-insights/a-better-approach-to-airline-costs>

has already configured some of its Boeing 777-200s with ten seats across to fit 289 passengers, 42 more than under a previous layout.

- **Ministry of Civil Aviation along with private airlines can also adopt this strategy of restructuring airplane to add-on the seats.** There are almost 25 Boeing 777 with Air India itself. This strategy to put extra seats in these aircrafts would increase seats by almost 400 in totality.²²³

- **Amelioration in Traffic and Congestion:**

- Airport congestion at peak times is caused by the meeting of inbound and outbound waves of traffic, which cause costly delays in terms of airline operations and underutilization of airport assets between the peaks (or, alternatively, wasteful overprovision of airport infrastructure).²²⁴ According to Centre for Asia Pacific Aviation, India's domestic air traffic is expected to grow by 18-20% and touch 150 million in the year ending March 2019²²⁵. Thus, the following measures can be implemented by Government to reduce congestion:
 - AI (Artificial Intelligence) manages fast check-ins, immigration, porter duties and a whole lot more around airport operations and security. For example, a self-service baggage robot can check-in and collect passengers' bags when they arrive at an airport to process them faster for flights.
 - USA's United Airlines has tied up with Amazon Alexa to help customers check in and learn about their flights. Delta Air Lines is using self-service kiosks that use facial recognition technology to verify customer identity by matching customer faces to passport photos.²²⁶

Therefore, Ministry of Civil Aviation and Ministry of Electronics and Information Technology can also initiate artificial intelligence across all airports in India, same as is done at Bangalore Airport.

- **Moving towards Sustainable Aviation**

- Aircraft engines generally combust fuel efficiently, and jet exhausts have very low smoke emissions. However, pollutant emissions from aircraft at ground level are increasing with aircraft movements. In addition, a large amount of air pollution around airports is also generated by surface traffic.²²⁷
- **Sustainable aviation fuel** represents a huge opportunity for aviation to reduce its environmental impact. These fuels are almost chemically identical to traditional fossil-based fuels and can be up to 80% less carbon-intensive over their lifecycle. They can be synthesised

²²³ <https://www.latimes.com/business/la-fi-travel-briefcase-united-boeing-20171021-story.html>

²²⁴ <https://timesofindia.indiatimes.com/city/chennai/long-queues-at-immigration-counters-in-airport-irk-flyers/articleshow/64240053.cms>

²²⁵ <https://www.bloombergquint.com/business/indias-congested-airports-slowing-down-air-traffic-growth#gs.pGtj8RM>

²²⁶ <https://emerj.com/ai-sector-overviews/airlines-use-artificial-intelligence/>

²²⁷ <https://www.environmental-protection.org.uk/policy-areas/air-quality/air-pollution-and-transport/aviation-pollution/>

using a number of sustainable, renewable feedstocks such as used cooking oil, forestry residue or municipal waste.

- In 2016, two major sustainable alternative fuel initiatives were announced, with Oslo Airport becoming the first international hub to offer the fuel to all airlines departing the Norwegian capital and United Airlines becoming the first airline to operate all flights out of its base, Los Angeles, using this fuel.²²⁸

Thus, Ministry of Civil Aviation in collaboration with private firms can push forward for the implementation of policies that would allow the commercialisation of these alternative fuels which will help in achieving the industry’s long-term emissions reduction goal.

- **Include Fuel Prices under GST:**

- The number of domestic air passengers in India registered a slower growth of 16.53% during May, 2018 on account of rising fuel prices that led to increase in fares.
- Aviation Turbine Fuel (ATF) is one of the important sections of the industry. Indian government does not reduce the jet fuel prices in proportion to the fall in international crude oil prices, whereas when there is a rise in crude prices, the fuel price increases which eventually increases the operational cost of airlines. Besides, it compels airlines to go for an upward fare revision to offset the increased cost of operations. The jet fuel accounts for 45% of an airline's cost of operation. For the year 2018, the ATF price has witnessed an increase of nearly 30% and around 25% in just last six months (2018).

Hence, Ministry of Civil Aviation can consider including fuel prices under GST as a new policy initiative. According to report in the Economic Times, if Government of India introduces GST on Aircraft fuels, it could earn Rs.10,353 crore i.e. 7% more than what it earns now, and airlines could earn a combined annual input tax credit of Rs.5,220 crore.²²⁹ Following are the fuel taxes which are applicable in other countries.

TABLE 10.08: FUEL TAX

Country	Tax on Fuel (%)
USA	18.40%
China	20%
Russia	20%
India	40%-50%

Source: The Hindu

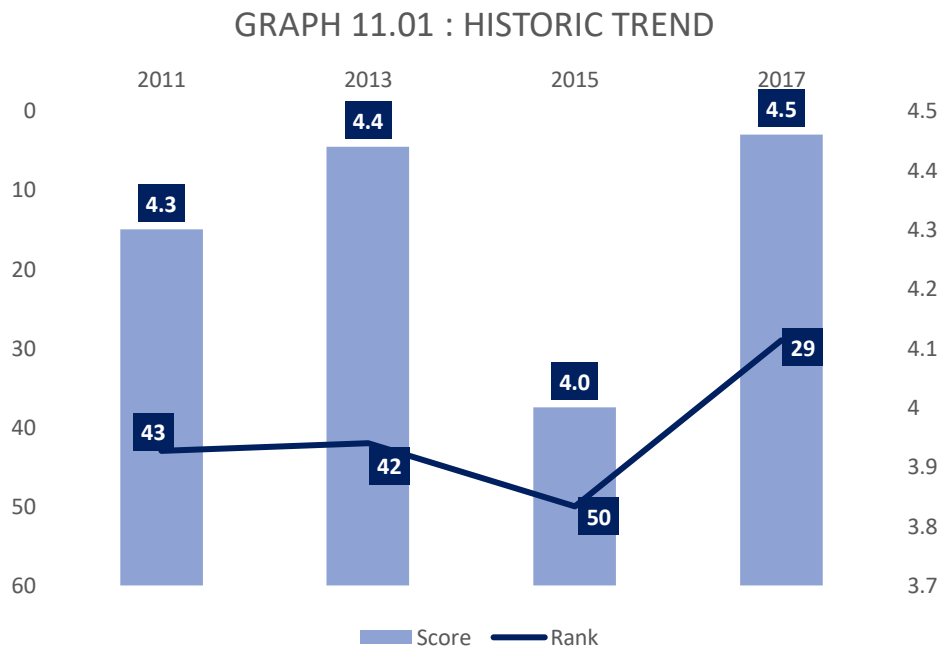
²²⁸ <https://www.atag.org/our-activities/sustainable-aviation-fuels.html>

²²⁹ <https://www.businesstoday.in/sectors/aviation/gst-jet-fuel-could-earn-airlines-rs-5220-crore-input-tax-credit-7-percent-more-tax-revenue-govt/story/277350.html>

Pillar 11: Ground and Port Infrastructure

Definition: This pillar measures the availability of efficient and accessible transportation to key business centres and tourist attractions. **Pillar 11** has a total of **7 indicators** stated below-

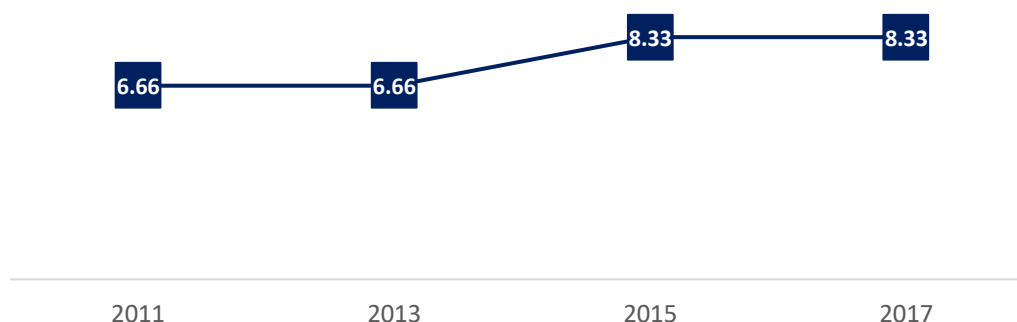
1. Quality of Roads
2. Road Density
3. Paved Road Density
4. Quality of Railroad Infrastructure
5. Railroad Density
6. Quality of Port Infrastructure
7. Ground Transport Efficiency



Graph 11.01 indicates the historic trend of India's rank and value in Pillar 11. India has increased its rank from 50th position in 2015 to 29th position in 2017.

Weightage Shift:

GRAPH 11.02: WEIGHTAGE SHIFT



Graph 11.02 indicates the overall contribution of Pillar 11 i.e. Ground and Port Infrastructure in India's score. At present 8.33% weightage is given to the pillar. The weightage of this pillar has sustained in the year 2015 and 2017.

Indicators-wise Weightage Shift:

TABLE 11.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicators	2011-2013(%)	2015(%)	2017(%)	Change in Weightage (%)*
Quality of Roads	1.33	1.39	2.08	49.64
Road Density	1.33	0.69	0.52	-24.64
Paved Road Density	NA	0.69	0.52	-24.64
Quality of Railroad Infrastructure	1.33	1.39	0.52	-62.59
Railroad Density	NA	1.39	0.52	-62.59
Quality of Port Infrastructure	1.33	1.39	2.08	49.64
Ground Transport Efficiency	1.33	1.39	2.08	49.64

NA = Not Applicable, the indicator was not introduced in that year

Two new indicators i.e., Paved Road Density and Railroad Density were added in this pillar in 2015.

*Change in weightage is shown in comparison to 2015

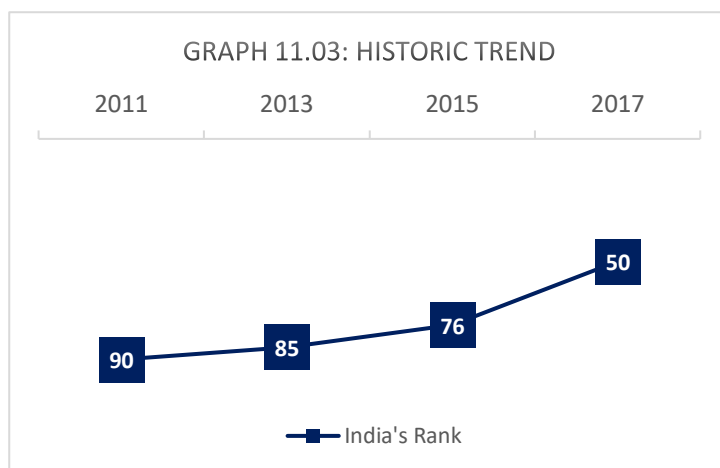
Table 11.01 shows the percentage of contribution each indicator has on the overall score of India.

Indicator 11.01: Quality of Roads.

Definition: “How would you assess the quality of roads in your country?”

Source: World Economic Forum, Executive Opinion Survey.

Value: On 1 to 7 scale (1=extremely underdeveloped, among the worst in the world; 7= extensive and efficient, among the best in the world)



Graph 11.03 indicates the historic trend of India’s rank in indicator 11.01. In 2017, India’s rank increased by 26 positions as compared to 2015. This indicator contributes 2.08% to the country score.

TABLE 11.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United Arab Emirates	1	6.6	1	6.5	Top Performer
Singapore	6	6.05	2	6.28	Asian Peer
Hong Kong	7	6.04	3	6.15	Asian Peer
Japan	10	5.91	5	6.12	Asian Peer
India	76	3.79	50	4.42	

Proposed Action Plan

Ministry: Ministry of Road Transport and Highways (MoRTH)

Medium Term Plan

- **Improving Road Quality**

- Substandard quality of material used, outdated techniques and lack of timely maintenance leads to poor quality of roads thus leading to accidents. For instance, In India, in majority cases, the old asphalt is not removed and a new layer is added which deteriorates the quality of road.

- Poor quality of roads reduces their life and leads to issues like potholes. In 2017, potholes took a deadly toll, claiming 3,597 lives, a more than 50% rise over the toll of 2016. According to data shared by states with the centre, the list of worst performing states includes UP with 987 casualties, Maharashtra with 726, Haryana with 522 and Gujarat with 228 casualties.
- However, the quality of Indian roads can be improved by adopting the technique used in Japan. There the process of laying of asphalt is a continuous one until the road is levelled with a hundred meters stretch of asphalt is laid flat and tight at once. This practice has helped Japan in constructing perfectly levelled roads. Therefore, roads last longer and do not need much maintenance. Ministry of Road Transport and Highways should collaborate with National Highway Authority of India and various state departments to implement regulation so that **the above**-mentioned issues can be rectified.
- Pilot project to test the methods implemented in Japan can be initiated so as to form a framework for sustainable infrastructure based on the analytical insights derived from data gathered from the pilot projects.

Long Term Plan

- **Road Quality Assessment**

- **Ministry of Road Transport and Highways has collaborated with Quality Council of India (QCI)** to create a framework which will evaluate the performance of various parties involved in the construction and designing of National Highways. A rating will be provided to these companies based on developed framework. This rating will be then used for future tendering process to filter out the weaker performing companies. In order to maintain a good rating, the companies will eventually strive towards improved construction quality.

MoRTH with the help of Public Work Departments (PWD) and various state departments such as Road Construction Department of Jharkhand, Himachal Pradesh State Road Transport Corporation, West Bengal Highway Development Corporation Limited and others can develop similar frameworks to ensure quality construction in the state highways and local roads.

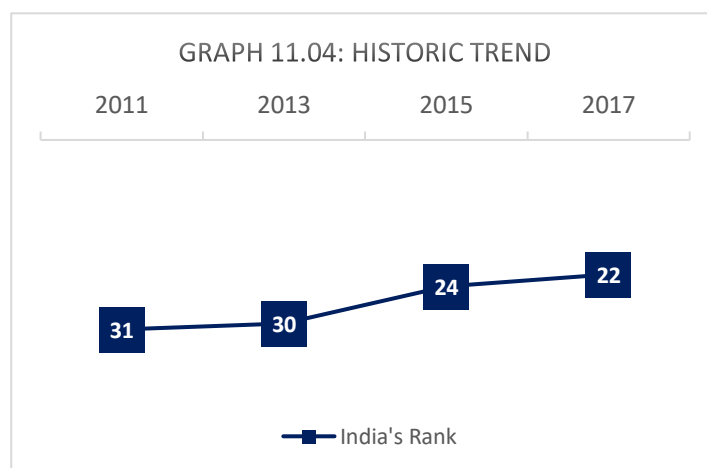
Note: Indicator 11.02 & 11.03 are being shown as a single indicator as both are interdependent and follow the same criteria.

Indicator 11.02: Road Density

Definition: Road density is the kilometres of road per 100 square kilometres of land. It is calculated as ratio of the length of the country’s total road network to the country’s land area. The road network includes all roads in the country: motorways, highways, main or national roads, secondary or regional roads and other urban and rural roads.

Source: IRF Geneva, World Road Statistics WRS.

$$\text{Value of country} = \frac{\text{Length of the country's total road (kms)} \times 100}{\text{Country's total land area}}$$



Graph 11.04 indicates the historic trend of India’s rank in Indicator 11.02. In 2017, India’s rank increased by 2 positions as compared to year 2015. This indicator contributes 0.52% to the country score.

TABLE 11.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Rank (2017)	Reason
Singapore	4	4	Asian Peer
Netherlands	6	6	Top Performer
Hongkong SAR	13	11	Asian Peer
India	24	22	
Australia	112	93	Best Practice

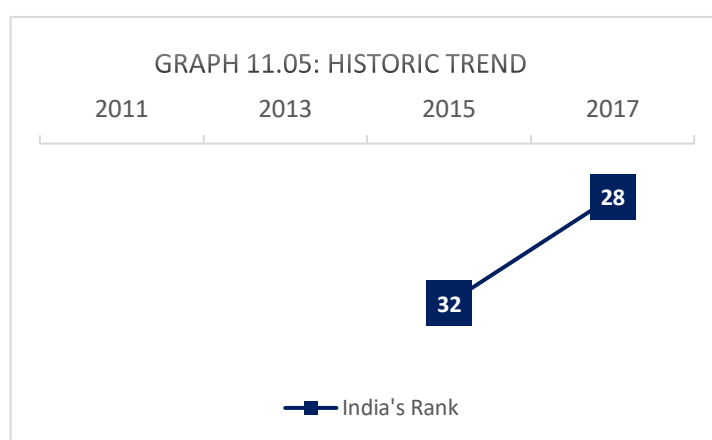
Value for these indicators is not available in the WEF report, hence is not included in the Performance Table.

Indicator 11.03: Paved Road Density

Definition: Paved Road density is the kilometres of paved road per 100 square kilometres of land. It is calculated as ratio of the length of the country's total paved road network to the country's land area. Paved roads are those surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete, or with cobblestones, as a percentage of all the country's roads, measured in length.

Source: IRF Geneva, World Road Statistics WRS.

$$\text{Value of country} = \frac{\text{Length of the country's total paved road (kms)} \times 100}{\text{Country's total land area}}$$



Graph 11.05 indicates the historic trend of India's rank in Indicator 11.03. This indicator was introduced in year 2015. India's rank increased by 4 positions as compared to year 2015. This indicator contributes 0.52% to the country score.

TABLE 11.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Rank (2017)	Reason
Singapore	2	2	Asian Peer
Netherlands	7	6	Top Performer
Hongkong SAR	10	9	Asian Peer
India	32	28	
Australia	112	96	Best Practice

Value for these indicators is not available in the WEF report, hence is not included in the Performance Table.

Proposed Action Plan

Ministry: Ministry of Road Transport and Highways (MoRTH)

Medium Term Plan

- **Improvement in Technology & Process**

- Australia's GRT (Global Road Technology) uses unique, specially-formulated polymer products which can withstand extreme weather conditions and are usable year-round with little maintenance. GRT is used to create instant infrastructure and construct roads using in-situ material which is 3 times faster and 37% cheaper than conventional methods.²³⁰
- The company is working on three sets on the busy National Highway No 2 which sees high volumes of traffic from Varanasi in Uttar Pradesh to Aurangabad in Bihar. GRT is present in India only on a sub-contract basis due to the long process of paperwork and legal formalities involved. To ease this process, **Ministry of Road Transport and Highways and National Highway Authority of India should collaborate with Ministry of Commerce and Industry to reduce the amount of legal work by forming a single window where all legal formalities can be concluded so that India can reap the benefits of GRT at a larger scale.**
- **In the longer run, Ministry of Road Transport and Highways can partner with apex technical institutes like IITs (Indian Institute of Technology) and NITs (National Institute of Technology) for research and development** of technologies like GRT which would lower India's dependency on foreign technology.

Long Term Plan

- **Effective and Efficient Implementation of PPP (Public Private Partnerships) Projects:**

- It has been recommended by the Ministry of Road Transport and Highways and Planning Commission that about 85% of the projects need to be developed on PPP mode. But factors like global financial melt-downs, delays in land approvals, achieving requisite clearances and usage of low quality of material are some of the constraints for successful implementation of PPP projects. Moreover, miscalculation of costs and bid mismanagement are other hurdles faced in PPPs. According to NHAI, Tata Reality and Infrastructure Ltd. (TRIL) withdrew its bids after winning building contracts for two projects for the Kishangarh-Udaipur-Ahmedabad section of National Highways 76 saying that it had miscalculated costs. This shows an example of how global companies are causing errors and delays in project.
- Ministry of Road Transport & Highways is already working with Quality Council of India (QCI) to develop a framework which will help in evaluating the performance of various parties on the completed highways projects. On the same lines, **Ministry of Road Transport and Highways can collaborate with National Highway Authority of India to develop similar kind**

²³⁰ <https://www.globalroadtechnology.com/global-road-technology-officially-opens-headquarters/>

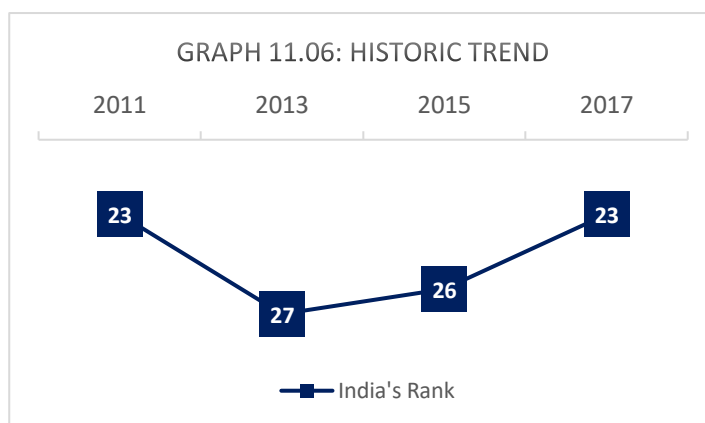
of framework for the on-going projects which will highlight loopholes in the implementation of the current PPP projects so that the various issues like low quality work, delay in implementation, approvals delays, etc can be identified during the course of the project.

Indicator 11.04: Quality of Railroad Infrastructure

Definition: “How would you assess the quality of railroad infrastructure in your country?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1 = extremely underdeveloped, among the worst in the world; 7 = extensive and efficient, among the best in the world)



Graph 11.06 indicates the historic trend of India's rank in this indicator. In 2017, India's rank increased by 3 positions as compared to 2015. This indicator contributes 0.52% to the country score.

TABLE 11.05: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Japan	1	6.69	1	6.66	Asian Peer
Switzerland	2	6.6	2	6.56	Top Performer
Hong Kong	3	6.33	3	6.36	Asian Peer
India	26	4.24	23	4.47	

Proposed Action Plan

Ministry: Ministry of Railways

Short Term Plan

- **Rapid Action Team**
 - Japanese Bullet Trains have been operating without any fatal accident for more than 50 years. They have a rapid action team which undergoes capacity building and training program so that they can be deployed at the time of accidents without any delay. On the other hand, in India, 70 train accidents were reported only between 2017-18. Therefore, **Ministry of Railways can collaborate Zonal Railway Departments to form a rapid action team, comprising of trained personnel, for each zone of the country which can look after the passengers during**

accidents. Timely help provided by the rapid action team will also reduce the number of casualties.²³¹

Medium Term Plan

- **Lack of basic infrastructure**

- According to CAG report in which 11 stations (Patna, Mughalsarai, New Delhi, Howrah, Bhopal, Itarsi, Ahmedabad, Vijayawada, Chennai, Nagpur) were examined, it was found that detention of trains at outer signals or adjacent stations just before the station leads to the track being occupied for a 'considerable' period. Since the routes have a single-track provision, most of the trains running on-time were made to wait for crossing at the intermediate stations. Also, trains which do not have a scheduled stoppage at adjacent stations are also detained due to want of path which leads to the delay of trains. However, these delays can be avoided by providing double track in various route.
- **Hence, Ministry of Railways with the help of Zonal Railway Departments should find ways to prevent detention of trains at outer signal/adjacent stations/enroute and look at other bottlenecks such as route relay interlocking, yard remodelling etc.**²³² Ministry of Railways should also expedite the process of doubling the track length so that time delays in train arrival, which greatly affects the quality of railroad infrastructure, can be avoided.

Long Term Plan

- **Modernisation & Development of infrastructure**

- Recently, Railway Ministry has decided to re-develop and transform 90 railway stations into world-class transit hubs. The move has been decided to enhance passenger amenities at railway stations, hence providing a world-class experience. The redevelopment plan will include many major railway stations, which will be provided with enhanced facilities including CCTV cameras, Wi-Fi, renovated station buildings, water ATMs, LED lights, escalators, stainless steel benches, etc. Apart from these facilities, waiting halls, waiting rooms, retiring rooms, wash rooms of the stations will also be improved by the end of year 2019.
- However, the CAG report stated that although the number of trains that originated/terminated per day increased by 13% (94 trains) in March 2017 compared to March 2012, the infrastructure needed to sustain them did not grow accordingly. The number of platforms, washing pit lines and stabling lines at these stations were not augmented in accordance with increased number of trains. Only two pit lines were added during this period taking the number of washing pit lines from 59 to 61, while the number of stabling lines remained same.

²³¹ <https://www.japanstation.com/shinkansen-high-speed-train-network-in-japan/>

²³² <https://cag.gov.in/content/report-no17-2018-performance-audit-augmentation-station-line-capacity-selected-stations>

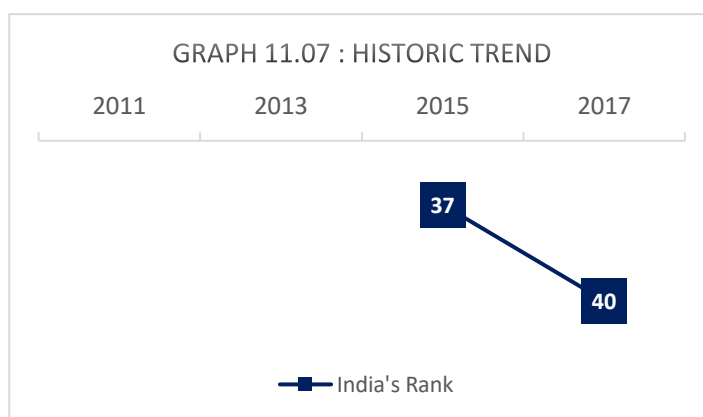
- **Therefore, Ministry of Railways with the help of Zonal Railway Departments can identify more railway stations which require urgent modifications so that they can be developed to world class standards. Furthermore, additional platforms and pit lines should be constructed wherever required. In case of space constraints, additional focus should be laid on development of alternative terminals and stations to decongest the existing stations.**

Indicator 11.05: Railroad Density

Definition: Railroad density is the kilometres of railroad per 100 square kilometres of land. It is calculated as ratio of the length of the country's total railroad network to the country's land area. Rail lines are the length of railway routes available for train service, irrespective of the number of parallel tracks.

Source: The World Bank, World Development Indicators

$$\text{Value of the country} = \frac{\text{Length of the country's total Railroad network (kms)} \times 100}{\text{Country's total land area}}$$



Graph 11.07 indicates the historic trend of India in this indicator. This indicator was introduced in year 2015. In 2017, India's rank decreased by 3 positions as compared to 2015. This indicator contributes 0.52% to the country score.

TABLE 11.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Czech Republic	1	12	1	11.98	Top Performer
Belgium	2	11.71	2	11.72	Top Performer
Luxembourg	3	10.61	3	10.61	Top Performer
United Kingdom	9	6.74	9	6.07	Best Practice
India	37	1.96	40	2	

Proposed Action Plan

Ministry: Ministry of Railways

Short Term Plan

- **Considering metro tracks under railroad density:**
 - Indian railways do not consider Urban Rail Transit while calculating their railroad density while other countries such as United Kingdom (UK) include their Underground Tube, Over Ground, TFL (Transport for London) Rail, DLR (Docklands Light Railway), National Rail and Tram under their railroad density. As of September 2018, India has 515 kilometres (320 miles) of operational metro lines and 381 stations. A further 500+ km of lines is under construction. **Thus, it is advised that Ministry of Railways should also add metro rail line length to total railroad density while reporting their data to World Development Indicators.**

TABLE 11.07: INCREASE IN VALUE OF RAILROAD DENSITY

Train Network	Coverage(Kms)	Railroad Density
Railway	65740	2
Metro	425	0.0129
Total (Railway + Metro)	66,165	2.0129

- Since metro rail is something most of the cities are adopting and work is under process in cities like Noida, Lucknow, Mumbai and Bangalore, this will further spread to different cities acting as a continuous process to enhance the railroad density which will be beneficial for India to increase its rank.

Long Term Plan

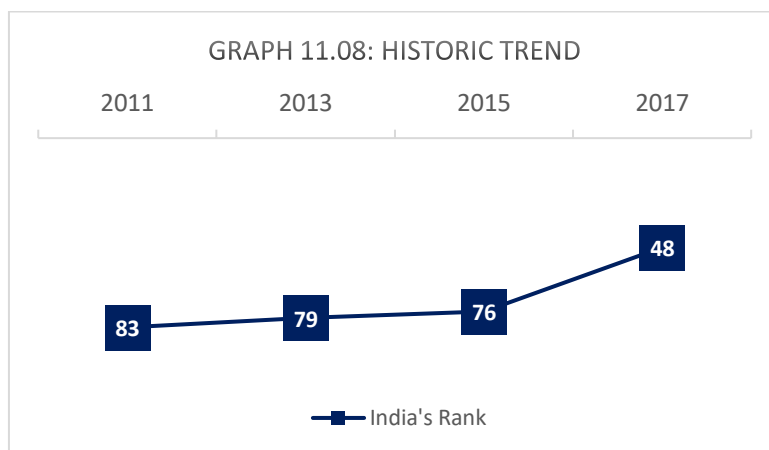
- **Implementing dedicated freight corridors**
 - For years, freight trains suffered second class treatment as express trains and other passenger trains got priority to use the tracks. As all trains use the same tracks, freight trains which carry goods never reached their destination in time. This led to a sharp decline in share of freight carried by railways from 86% in 1950-51 to 36% by 2011-12, even as total freight traffic grew exponentially. In comparison, in many countries, about 50 per cent of freight moves through the railway network.
 - In May 2018, Northeast Frontier Railway has started operating Parcel Cargo Express Train (PCET), connecting North-eastern part of the country to the West Coast.
 - **Similarly, a separate railway line needs to be laid for freight movement in other parts of country where ever possible. This will boost the existing line to provide hassle free service to the passenger's train and the new track can be used for the freight trains will enhance commercial profits drastically.**

Indicator 11.06: Quality of Port Infrastructure

Definition: “How would you assess the quality of seaport infrastructure in your country?”

Source: World Economic Forum, Executive Opinion Survey

Value: On 1 to 7 scale (1= extremely underdeveloped, among the worst in the world; 7= extensive and efficient, among the best in the world)



Graph 11.08 indicates the historic trend of India in this indicator. In 2017, India's rank increased by 28 positions as compared to 2015. This indicator contributes 2.08% to the country score.

TABLE 11.08: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reasons
Netherlands	1	6.8	1	6.8	Top Performer
Singapore	2	6.7	2	6.7	Asian Peer
United Arab Emirates	3	6.5	3	6.4	Top Performer
India	76	4	48	4.5	

Proposed Action Plan

Ministry: Ministry of Shipping

Short Term Plan

- **Reducing Turn-around time**

- Turn Around Time (TAT) is the total time spent by a vessel at the port from its arrival at reporting station till its departure from the reporting station. Average turnaround time is influenced by many factors such as type of cargo, parcel size & entrance channel. In the past few years, average TAT has improved to 2.04 days in FY16 from 4.01 days in FY15²³³. But India

²³³ <https://www.ibef.org/download/Ports-March-2017.pdf>

still lags behind various countries such as Singapore where TAT is less than a day²³⁴. **Thus, Ministry of Shipping should take proper measures to improve its inadequate port infrastructure so that the average TAT can be reduced.**

Medium Term Plan

- **Financial support to ports**

- The quality of port infrastructure highly depends on the revenue that the port is generating, which is directly affected by the type of goods being traded at that port. This creates a deficiency in the infrastructure development of some ports that do not trade in goods which earn huge profits. Therefore, it is necessary for Ministry of Shipping to intervene and develop a balance between both these kinds of ports so that ultimately, all ports can be made of world class infrastructure ensuring best service provision.

Long Term Plan

- **Improving connectivity**

- The port productivity and efficiency also depend upon the quality and reliability of road and rail connectivity, adequate storage and handling facilities. The lack of expressway connectivity between major ports as well as industrial clusters and high fuel cost make hinterland transportation inefficient and slow. **Ministry of Shipping can collaborate with Ministry of Road Transport and Highways and Ministry of Railways** to link all major ports and Industrial cluster places with expressways and railway lines respectively to ensure a streamline movement of goods between different entities.²³⁵

²³⁴ <https://www.india-briefing.com/news/ports-india-incentives-investment-14354.html/>

²³⁵ <http://blogs.worldbank.org/transport/what-are-some-critical-innovations-improving-port-hinterland-connectivity>

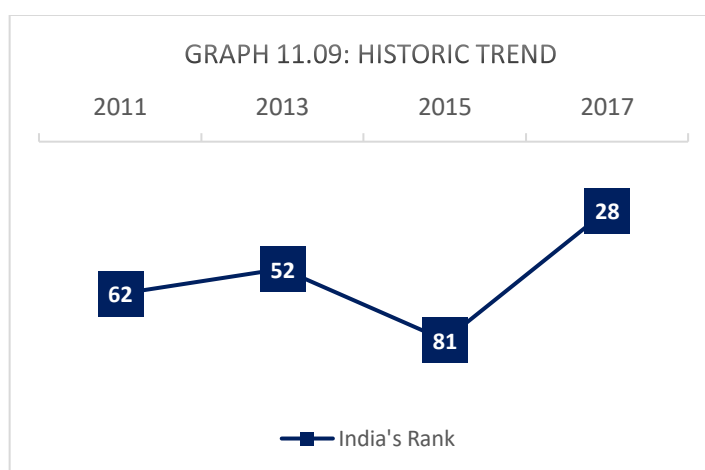
Indicator 11.07: Ground Transport Efficiency

Definition: “In your country, how efficient (i.e. frequency, punctuality, speed, price) are the following transport services?

- A. Ground transportation (buses, subways, taxis)
- B. Train services”

Both the parameters, ground transportation and train services, are scored through EOS on a 1 to 7 scale (1 = extremely inefficient, among the worst in the world; 7 = extremely efficient, among the best in the world)

Value: Average of scores of Ground transportation and Train services from the EOS



Graph 11.09 indicates the historic trend of India’s rank in indicator 11.07 . In 2017, India’s rank increased by 53 positions as compared to year2015. This indicator contributes 2.1% to the country score.

TABLE 11.09: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Japan	3	6.40	1	6.60	Asian Peer
Switzerland	1	6.48	2	6.38	Top Performer
Hong Kong SAR	2	6.43	3	6.14	Asian Peer
Singapore	8	6.0	4	5.94	Asian Peer
India	81	4.13	28	4.73	
Australia	39	4.95	32	4.46	Best Practice

Proposed Action Plan

Ministry: Ministry of Road Transport and Highways, Ministry of Railways

Short Term Plan

- **Improving the Efficiency of Public Transport**

India's transport sector lacks majorly in development because roads are of poor quality and congested with low lane capacity. Although the rural road network is extensive, some 33% of India's villages do not have access to all-weather roads and remain cut off during the monsoon season¹. India's transport sector is large and diverse; it caters to the needs of 1.3 billion people. Ministry of Road Transport and Highway with the help of relevant state departments can adopt following measures to fulfil the above-mentioned shortcomings: ²³⁶

- **Adopting optimal pricing strategies for transport services:** Pricing of transport is a key issue which should be addressed properly. Pricing policy could effectively be used to encourage the public transport.
 - Government should promote public transport by abolishing annual motor vehicle tax and passenger tax levied on public transport vehicles, government bus operators are liable for as many as 13 different taxes on their assets and operations. Motor vehicle tax, passenger tax and other taxes contribute close to 20% of operating cost²³⁷. There should be an attempt to remove this heavy taxation policy.
 - Differential pricing mechanism such as peak period, off-peak period, peak-direction, off-peak direction, etc. based pricing strategy has been adopted in metro and cabs but can also be adopted in buses and three wheelers.
- **Increase bus speed with dedicated bus lanes, and signal priority:** Dedicated bus lanes, which let buses skip traffic, exist in a variety of forms. American cities that put up bus lanes usually put them on the curb side of the street, right next to the parking lanes, making it easier for buses to pick up passengers from the usual bus stops. At intersections, buses can have signal priority. This means that the intersection is equipped with sensors that detect the presence of a bus, and change its light to green as it approaches. The effects on bus speeds are significant: in New York, buses that get signal priority got speed up by about 10%.

Medium Term Plan

- **Online Bus Ticketing System for Public Transport**

- According to government's latest data²³⁸, India has a huge network of public transport with approximately 140.5 thousand buses owned by the public sector which is 7.13% of the total vehicles on road but lacks in operating an intercity online system of bus service. As India is

²³⁶ http://web.worldbank.org/archive/website01291/WEB/0__CO-21.HTM

²³⁷ <https://www.hindustantimes.com/delhi-news/taxation-policy-killing-bus-systems-in-cities-across-india/story-gxe7wPIX8N2BUR0nZA3VfN.html>

²³⁸ <https://community.data.gov.in/buses-owned-by-the-public-sector-in-india-from-2001-to-2015/>

turning into a cashless economy a need of intercity online bus ticketing system for public transport (for e.g. DTC Buses) is necessary where ticket for buses can be generated online.

- Singapore has a website named 'mysingapore.sg' which gives all important information about rail, buses and taxi services in a city. Bus service in Singapore has a special online system which generates online ticket, apprise about arrival and departure time of buses, and provides brief route maps.²³⁹²⁴⁰
- A similar technology can be adopted by bus transportation sector in India by Ministry of Road, Transport and Highway.

Long Term Plan

- **Formation of Transportation Coordination Authority**

- There is a need to have transportation system which is seamlessly integrated across all modes. The various modes of public transport including intermediate public transport have to work in tandem. Presently, different agencies, independent of each other, are operating on different services in Indian cities. For example, in Delhi, metro rail is operated by Delhi Metro Rail Corporation Ltd, sub-urban rail service by Northern Railway, bus transport service by Delhi Transport Corporation, and taxi and auto-rickshaw by private operators. There is a lack of coordination among these agencies.
- To provide adequate and efficient transport system, there is a need to have a coordinating authority with the assigned role of coordinating the operations of various modes. A successful system in Germany, Austria and Switzerland have greatly improved the quality of the public transport by formation of public transport organization which coordinates fares and services for all routes, all types of public transport and all parts of the metropolitan region²⁴¹.
- This coordinating authority may be appointed by the central or state government and may have representatives from various stakeholders such as private taxi operators, bus operators, railways, state government, etc.³

- **Fare Integration in Public Transport**

- A single fare card usable on all public transport modes greatly facilitates integrated transport. The impacts of such a system are efficiency gain and operating cost reduction. With a single fare card, it is also easy to encourage using public transport by introducing rebates for intermodal transfer. There is no integration between any public transports in India. Hence, many travellers have to take tickets again and again for different mode of transport which is a time taking process. A similar fare integration card can be used by Ministry of Road Transport and Highway and Ministry of Railways, where a single transit link card connecting

²³⁹ <https://www.mytransport.sg/content/mytransport/home/commuting/busservices.html>

²⁴⁰ <https://community.data.gov.in/buses-owned-by-the-public-sector-in-india-from-2001-to-2015/#>

²⁴¹ <https://www.sciencedirect.com/science/article/abs/pii/S0967070X95000221>

public transport such as public buses, metro and cabs for day to day traveling with internal rebates can be used.

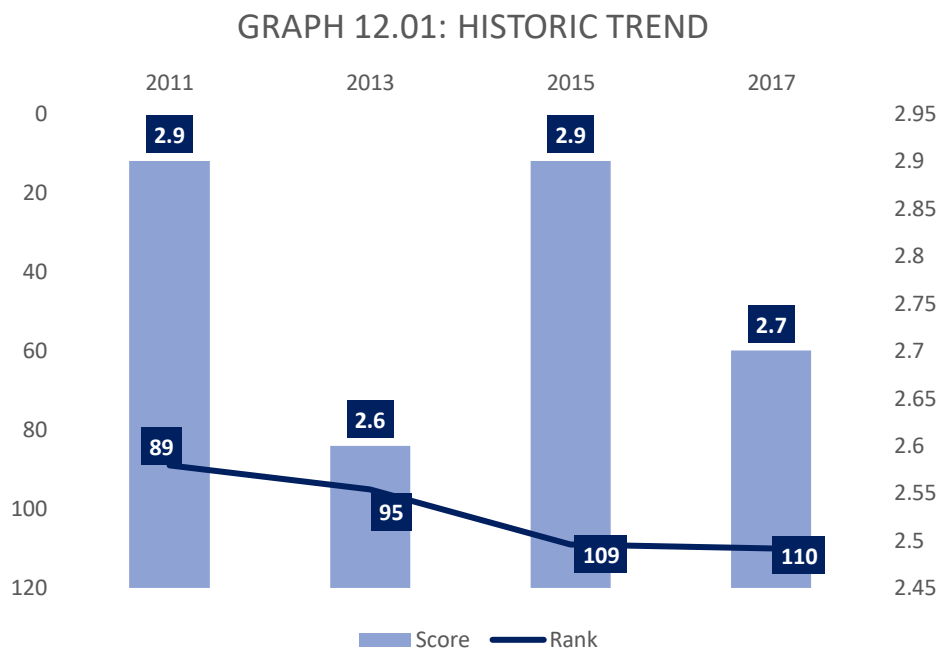
- Myki is a travel card in Australia which is used for trains, trams and buses in many parts of Australia (Melbourne, Sydney etc.). This card can be used in 800 shops including 7- Elevens (Departmental stores). A 10-20% rebate is also given to the users to as much as 35% in some cases during off-peak hours of traveling²⁴².
- A similar strategy can be adopted in India where a single transit card could be used in all the Public Transport of the metropolitan cities for e.g. a single card which could be used in any public transport (metro, bus, cabs) in Delhi/NCR, Mumbai, Kolkata, Bangalore and Chennai etc.

²⁴² <https://www.ptv.vic.gov.au/tickets/myki/manage-your-myki-online>

Pillar 12: Tourist Service Infrastructure

Definition: This pillar measures the availability and the quality of key tourism services such as quality accommodation and car rentals. **Pillar 12** has a total of **4 indicators** stated below –

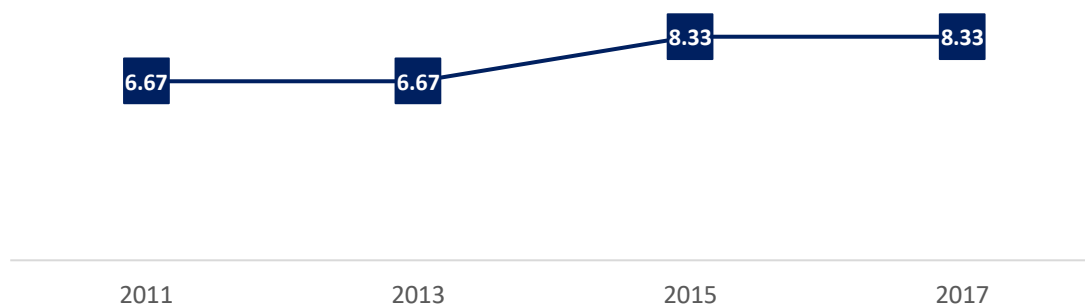
1. Hotel rooms
2. Quality of tourism infrastructure
3. Presence of major car rental companies
4. Automated teller machines per adult population



Graph 12.01 indicates the historic trend of India's rank and value in Pillar 12. India's rank has decreased from 89th position in 2011 to 110th position in 2017.

Weightage Shift:

GRAPH 12.02: WEIGHTAGE SHIFT



Graph 12.02 indicates the overall contribution of Pillar 12 i.e. Tourist service infrastructure in India's score. At present 8.33% weightage is given to this pillar. The weightage of this pillar has increased by 25% in the year 2015.

TABLE 12.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in weightage (%)
Hotel rooms	2.22	2.08	-6.31
Quality of tourism infrastructure	NA	2.08	NA
Presence of major car rental companies	2.22	2.08	-6.31
Automated teller machines number	2.22	2.08	-6.31

NA = Not Applicable, the indicator was not introduced in that year

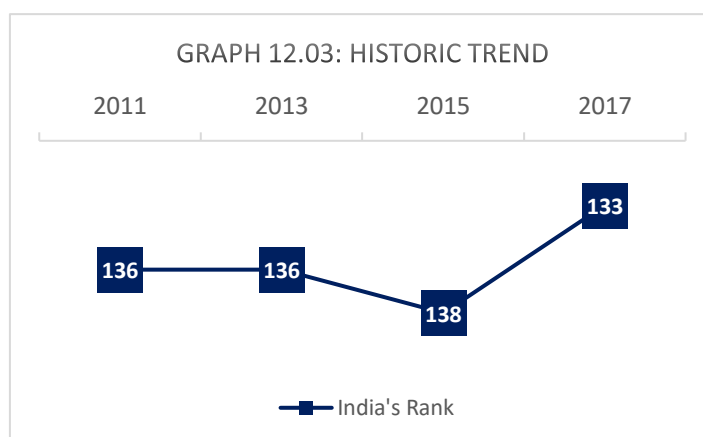
Table 12.01 shows the percentage of contribution that each indicator has on the overall score of India.

Indicator 12.01: Hotel Rooms

Definition: This indicator refers to the number of hotel rooms in a country per 100 population.

Source: World Tourism Organization (UNWTO)

$$\text{Value of country} = \frac{\text{Number of Hotel Rooms in the Country} \times 100}{\text{Total population of the Country}}$$



Graph 12.03 indicates the historic trend of India’s rank in indicator 12.01. In 2017, India’s rank increased by 5 positions as compared to year 2015. This indicator contributes 2.08% to the country score.

TABLE 12.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Malta	1	4.35	1	4.268	Top Performer
Iceland	5	3.53	2	4.077	Top Performer
Greece	2	3.63	3	3.752	Top Performer
Japan	27	1.12	27	1.118	Asian Peer
China	112	0.11	116	0.106	Asian Peer
India	138	0.006018	133	0.0061	

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- **Single Window Clearance for granting of new hotel projects**
 - There are numerous licenses and approvals such as building permit, fire safety permit, police license, health trade licence, business registration, bar license, FSSAI food business license, service tax license, VAT registration (can add up to more than a 100 in some states) that one needs to obtain to open a hotel in India which leads to a huge loss of time, effort and money.
 - Furthermore, the various bodies giving approvals/issuing licenses tend to work in independent silos, leaving the coordination up to the applicant. As done by Government of India in the allocation of mineral blocks where a single window clearance system has been put for obtaining environmental and other clearances, Ministry of Tourism on similar lines can adopt a single window clearance system for granting all license for Hotel Industries under a single platform.²⁴³

Medium Term Plan

- **Maintenance of Centralized Database in India:** India currently lacks a centralized pool of hotel data which could fetch out various information like total number of beds and hotel rooms in any state. Thus, the identity of the tourists who are visiting the hotels also remains unknown to the government which further lead to security issues. Because of this, a large amount of monetary data is left untraced to the government. Also, because of the lack of the data, projection of demand and supply for both the serviced (like hotels) and non-serviced (like rented) accommodation, for the future, cannot be made properly. Hence, following measures must be taken by Ministry of Tourism to collate data of hotels at one place:
 - **Third-party PAN India survey:** Ministry of Tourism by collaborating with the Federation of Hotel and Restaurant Association of India can perform a Third-party survey at Pan India level which could give out meaningful information about the unregistered hotels. This would result in the unregistered segment of the hotel rooms, to come under the jurisdiction of the ministry.
 - **Police department collaboration:** Every hotel in India registers themselves with local police in their respective city. Hence, collaborating with State Police departments can also help in collating data of hotels at one place.
 - Ministry of Tourism can make amendments in current rule so that all the websites of companies such as Make my trip, Goibibo, Trivago, Fabhotels, Treebo etc. can only get centrally registered hotel for booking and other facilities. This will further encourage hotels to get registered themselves under centralized database.

²⁴³ <http://www.iosrjournals.org/iosr-jbm/papers/Vol16-issue9/Version-1/J016916973.pdf>

Long Term Plan

- **Law on Renting Rooms in Private Homes to Tourists in Japan**

The Hotels and Inns Act in Japan requires the person who rents private homes to tourists to come under the Hotels and Inns act. These private homes are also required to obtain permits from the government and have to follow some mandatory requirements as well (Hotels and Inns Act, Act No. 138 of 1948, amended by Act No. 47 of 2016, art. 3, E-GOV (in Japanese))²⁴⁴. Also, the role of the governor under the act has been given special importance where home-sharing business operators must periodically report the number of days for which the guests stayed, reporting each property used as a home-sharing business. The governor can suspend the operation of the business for up to one year if any business violation occurs.

- **Law adoption in India:** A similar law can be adopted in India by Ministry of Tourism where unregistered private homes under Airbnb or any private homes being used for stay purpose of tourists, can be made mandatory to be registered under Indian Government as this will help in maintenance of a database for the number of hotels/hotel rooms. Also, a mutual relationship between government and house owners can be planned where basic facilities and infrastructure can be provided by government and in return, a fixed percentage of revenue generated can be shared with the government.

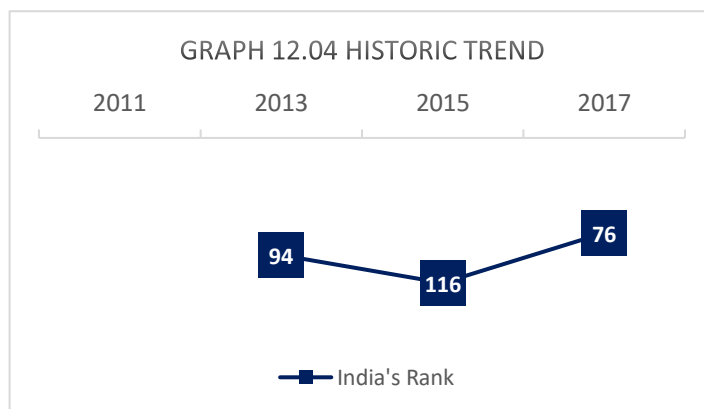
²⁴⁴ <http://www.loc.gov/law/foreign-news/article/japan-law-on-renting-rooms-in-private-homes-to-tourists/>

Indicator 12.02: Quality of tourism infrastructure

Definition: “In your country, how do you assess the quality of tourism infrastructure (e.g. hotels, resorts, entertainment facilities)”.

Source: World Economic Forum, Executive Opinion Survey

Value: On scale of 1 to 7 (1 = very poor, among the worst in the world, 7 = excellent, among the best in the world)



Graph 12.04 indicates the historic trend of India’s rank in indicator 12.02. This indicator was introduced in 2013. In 2017, India’s rank increased by 40 positions as compared to year 2015. This indicator contributes 2.08% to the country score.

TABLE 12.03: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
United Arab Emirates	2	6.391	1	6.691	Top Performer
Singapore	51	5.584	2	6.384	Asian Peer
Austria	6	6.311	3	6.187	Top Performer
China	110	4.639	72	4.553	Asian Peer
India	116	4.545	76	4.516	

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- **Building demand for tourism:** Lack of Infrastructure has been a major challenge for the Indian tourism sector in the past also. The poor quality of economic and social infrastructure are reflected in hotels, connectivity, human resource, hygiene, health facilities etc. Safety and security are also a major roadblock to tourism development²⁴⁵. Focussing on stimulation of value propositions,

²⁴⁵ <https://www.onlinejournal.in/IJIRV3I10/031.pdf>

fostering a tourist-friendly environment and branding the country as a “must discover” destination by Ministry of Tourism through promotion & mobilization becomes more important than ever. Hence, given below are certain measures for future improvement:

- **Promotion of Rural Tourism:** Ministry of Tourism can take advantage of the 600,000 villages in India that have their own cultures and heritage, and can use them to create unique experiences for travellers. **Hence, Ministry of Tourism can collaborate with state tourism departments to identify such villages and towns.**

Example: Sumda Chenmo is a remote village in the Ladakh region of India, which dates back 1,000 years based on the age of wooden Buddha statues ²⁴⁶found in the village. In 2016, the villagers earned more than \$2,000 by catering to more than 100 tourists.

- **Centralized System for Quality of Hotels:** A centralized system for quality checking of hotels can be made by the Ministry of Tourism with the help of Federation of Hotel and Restaurant Association of India. Quality checks can be done on the basis of room services, hospitality, and hotel amenities. Ministry of Tourism, after proper inspection of the hotels can provide them with quality approval certificates. This procedure can be done for all the hotels using a centralized database maintained by MoT as mentioned in indicator 12.01.
- **Generation of employment:** Taking advantage of skill industry in India through skill training programme run under various schemes namely Pradhan Mantri Kaushal Vikas Yojna, National Urban Livelihood Mission, Skill India etc., Ministry of Tourism can collaborate with various central ministries to provide training programmes such as hospitality management, foods, production & service, hotel operations, leisure travel and tourism, restaurant management etc. to enhance the quality of services provided in the country.

Medium Term Plan

- **Adoption of “Safe and Travel Initiative”:** A “Safe and Travel Initiative” can be adopted by the Ministry of Tourism by collaborating with UNDP India where safety and security programme with consensuses in four key areas can be reached by combining innovation and technology.²⁴⁷. In China, Ctrip (Chinese travelling provider), the United Nations Development Programme (UNDP), China International Center for Economic and Technical Exchanges (CICETE) and China Tourism Academy (CTA) have jointly launched the "Safe and Responsible Travel Initiative" which not only educates travellers about the importance of responsible and safe travel but also provides humanitarian assistance, if needed, during their overseas journey.

²⁴⁶ http://www3.weforum.org/docs/White_Paper_Incredible_India_2_0_final_.pdf

²⁴⁷ <https://globo.newswire.com/news-release/2018/09/10/1568437/0/en/CTRIP-UNDP-CICETE-and-CTA-Launches-Safe-and-Responsible-Travel-Initiative.html>

Long Term Plan

- **Joint Loyalty Program between Countries: A Joint scheme initiative can be initiated in India by collaborating with our Asian peer which can act as a source market for India²⁴⁸.** For example, “I Go China - I Go Kenya” is the Joint Loyalty Program initiated by both China and Kenya. After this, Stanbic Bank Kenya and Industrial Commercial Bank of China (ICBC) have also taken an initiative to promote tourism by offering incentives for travel shopping and leisure to tourists visiting the two countries.

²⁴⁸ <http://africa.chinadaily.com.cn/a/201805/15/WS5afaea40a3103f6866ee8884.html>

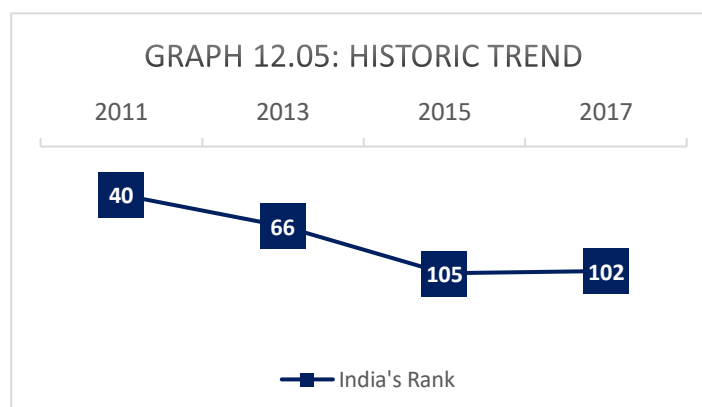
Indicator 12.03: Presence of major car rental companies

Definition: This indicator refers to the number of major car rental companies operational in the country out of a list of following 7 major car rental companies:

1. Avis
2. Budget
3. Europcar
4. Hertz
5. National Car Rental
6. Sixt
7. Thrifty

Source: Author's calculation based on the individual rental car websites

Value of country: Number of major car rental companies operational in the country.



Graph 12.05 indicates the historic trend of India's rank in indicator 12.03. In 2017, India's rank increased by 3 positions as compared to year 2015. This indicator contributes 2.08% to the country score.

TABLE 12.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Sri Lanka	81	4	85	4	Asian Peer
Pakistan	95	3	102	3	Asian Peer
China	105	2	102	3	Asian Peer
India	105	2	102	3	

Background of Indicator: This indicator measures the number of car rental companies operational in a country. (i.e. out of 7 car rental companies mentioned above). For example - India has 3 car rental companies i.e. Avis, Hertz and National Car Rental in operation at present out of the list of 7 major car rental companies, so value of India is 3. Also, there are 50 countries that fall at rank 1, the category having 7 operating car rental companies. There are 11 countries which have ranked same as India (102) and have 3 car rental companies for e.g. China and Pakistan as given below:

TABLE 12.05: RANK ASSIGNMENT BASED ON NUMBER OF CAR RENTAL COMPANIES PRESENT IN A COUNTRY

Value/No. of Car Rental Companies	Rank assigned to a country	No. of Countries
7	1	50
6	51	21
5	72	13
4	85	17
3	102	11
2	113	16
1	129	8

Proposed Action Plan

Ministry: Ministry of Road Transport and Highway

Short Term Plan

- Europcar, one of the car rental companies, has established a subsidiary car rental company in India by the name of CarFlexi²⁴⁹ but currently, it is not listed under this indicator. Hence, Ministry of Tourism can approach the company to list India on their website so that when WEF takes data for next report, they count Europcar in the value of the country.
- Budget and Sixt are currently operating in our neighbouring countries, Sri Lanka and Pakistan, respectively. Hence, focus should be laid on encouraging these companies to also set up businesses in India. **Hence, Ministry of Road Transport and Highway must contact these companies and provide them the opportunity to operate in India.**

Long Term Plan

- Thrifty has a limited presence in the Asia-Pacific region. Thus, Ministry of Road Transport and Highway should attract this company to start their operations in India which would further improve India's ranking.

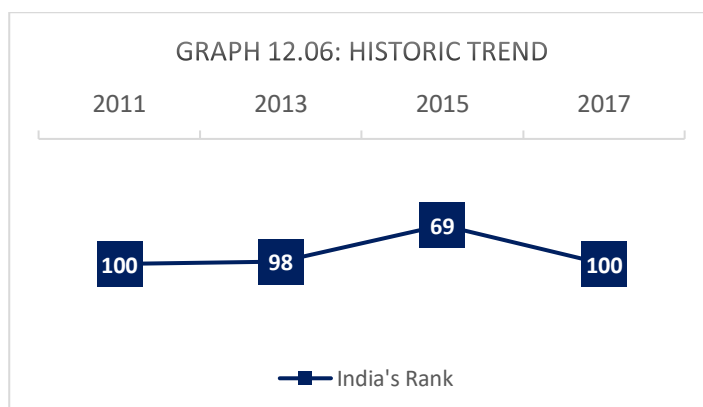
²⁴⁹ <https://www.carflexi.com/en-us/bgl83q7fgwq0yp1g/budget-car-rental-in-india>

Indicator 12.04: ATMs per adult population

Definition: This indicator refers to the number of Automated Teller Machines (ATMs) per 100,000 adult population

Source: The World Bank, World Development Indicators/ IMF Financial Access Survey

$$\text{Value of country} = \frac{\text{Number of ATMs} \times 100000}{\text{Adult Population}}$$



Graph 12.06 indicates the historic trend of India's rank in indicator 12.04. In 2017, India's rank decreased by 31 positions as compared to year 2015. This indicator contributes 2.08% to the country score.

TABLE 12.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Korea, Rep.	36	777.892	1	290.660	Asian Peer
Canada	14	1163.762	2	222.274	Top Performer
Russian Federation	11	1372.97	3	184.697	Top Performer
China	68	436.345	54	55.030	Asian Peer
India	69	418.634	100	18.075	

History of Indicator: Previously instead of "ATMs per 100000 adult population" indicator, "ATMs accepting visa card per 1000000 population" was used for ranking the countries

Proposed Action Plan

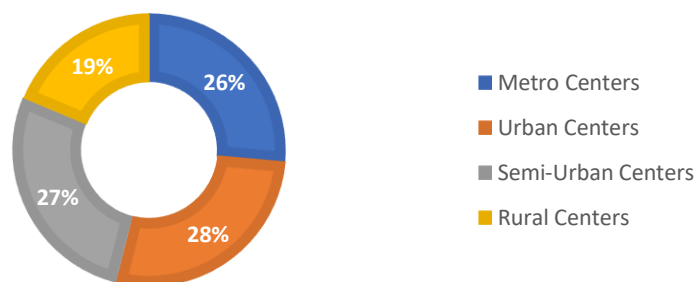
Ministry: Ministry of Finance, Reserve Bank of India

Medium Term Plan

- **Installation of ATMs in Rural Areas**

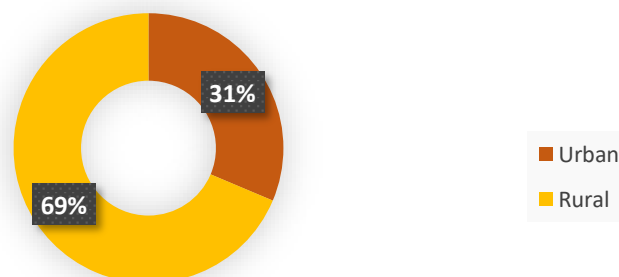
India's 68.84% population lives in rural areas but as per the data of Reserve Bank of India, only 19% of ATMs are present rural areas. Thus, there is a need to install more ATMs in rural areas. Also, central government schemes such as **Pradhan Mantri Jan Dhan Yojana (PMJDY)** made a huge impact as the number of people having bank accounts grew from 35% in 2011 to 80% in 2017. Thus, increasing number of accounts created more demand of banking services and this demand will have to be met by banks by increasing number of ATMs in the rural and semi-urban areas.

AREA-WISE DISTRIBUTION OF ATM'S (INDIA)



Source: Reserve Bank of India (June 2018)

POPULATION DISTRIBUTION (INDIA)



Source: Census India (2011)

Long Term Plan

- **Replacing ATMs with Virtual Teller Machine (VTMs)**

Since rural population are mostly illiterate (approximately 36%), the ATMs installed can be converted into **Virtual Teller Machine (VTMs)** equipment which can deliver all-round financial services by increasing ATM **functionality** (referred to as **Value Added Services (VAS)**)²⁵⁰. Therefore, Ministry of Finance can collaborate with Reserve Bank of India (RBI) to install more VTMs in rural and semi-urban areas which have following **Value Added Services (VAS)**:-

TABLE 12.07: LIST OF VALUE ADDED SERVICE (VAS)

Value Added Services (VAS) that can be rolled out at ATMs	
Balance enquiries	Licenses renewals
Printed receipts	E-Wallet top up
PIN services	Stamps sales
Mini statements	Entertainment event tickets
Bill payments	Third party loyalty rewards
Charity donations	Lottery tickets
Cardless withdrawal	Sports event tickets
Mobile top-ups	Account transfers (cardholder owned accounts)
Person to person domestic remittances (initiated)	Travel tickets (urban e.g. bus)
Person to person domestic remittances (collected)	Travel tickets (extra-urban e.g. train)
Couponing	Travel tickets (extra-urban e.g. flight)
Pass book printing	Road tolls payment / prepayment
Payment of taxes / fines	Person to person cross-border remittances (collected)
Person to person cross-border remittances (initiated)	

²⁵⁰ World Bank 2017 Dataset (as 2017 is the latest dataset)

SUB-INDEX D

NATURAL AND CULTURAL RESOURCES

Natural and Cultural Resources sub-index, which captures the principal “reasons to travel”. Aside from business and personal reasons, cultural and natural heritage arguably constitute the main reasons to visit a country. Some countries have a richer endowment than others, but some are also better than others at promoting and protecting them, a factor which deserves to be elevated to specific policy focus.

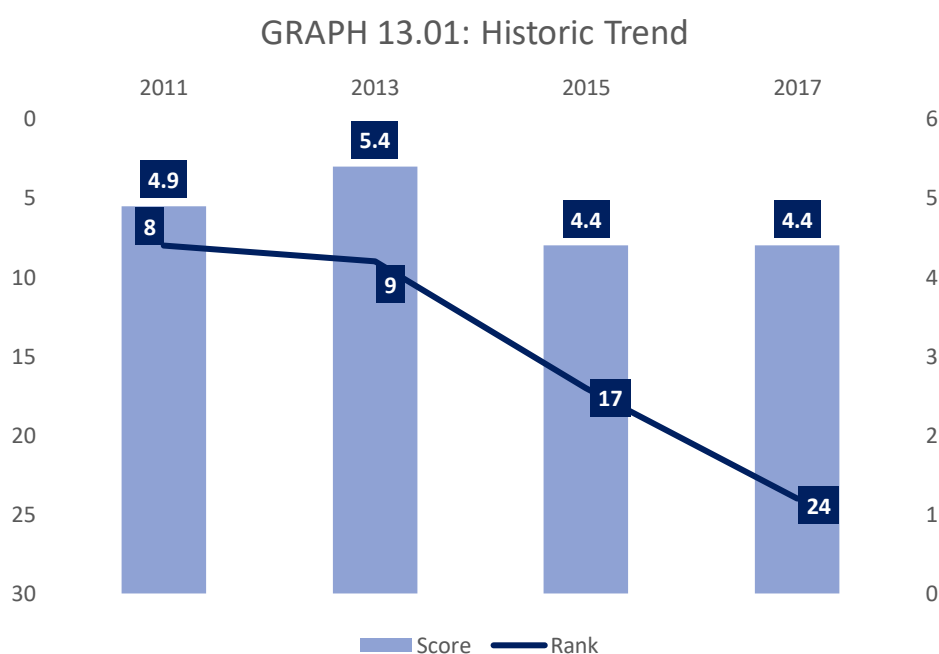
This Sub-index comprises 2 pillars:

- 1. Natural Resources (5 indicators)**
- 2. Cultural Resources and Business Travel (5 indicators)**

Pillar 13: Natural Resources

Definition: This pillar measures the available natural capital as well as the development of outdoor tourism activities. Natural capital is defined in terms of landscape, natural parks and richness of the fauna. **Pillar 13** has a total of **5 indicators** stated below –

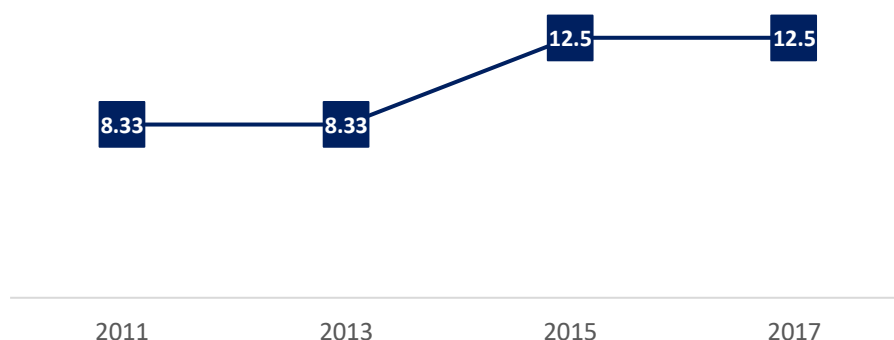
1. Number of World Heritage natural sites
2. Total known species
3. Total protected areas
4. Natural tourism digital demand
5. Attractiveness of natural assets



Graph 13.01 indicates the historic trend of India's rank and value in Pillar 13. India's rank has decreased from 8th position in 2011 to 24th position in 2017.

Weightage Shift:

GRAPH 13.02: WEIGHTAGE SHIFT



Graph 13.02 indicates the overall contribution of Pillar 13 i.e. Natural Resources in India's score. At present, 12.5% weightage is given to this pillar. The weightage of this pillar has increased by 50% in the year 2015.

TABLE 13.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011 (%)	2013 (%)	2015 (%)	2017 (%)	Change in Weightage (%)
Number of World Heritage natural sites	2.08	2.08	2.5	2.5	20.19
Total known species number of species	2.08	2.08	2.5	2.5	20.19
Total protected areas	NA	NA	2.5	2.5	NA
Natural tourism digital demand	NA	NA	2.5	2.5	NA
Attractiveness of natural assets	NA	NA	NA	2.5	NA

NA = Not Applicable, the indicator was not introduced in that year

*Attractiveness of natural assets was introduced in 2017 whereas Natural Tourism Digital Demand and Total protected areas were introduced in 2015

Table 13.01 shows the percentage of contribution that each indicator has on the overall score of India.

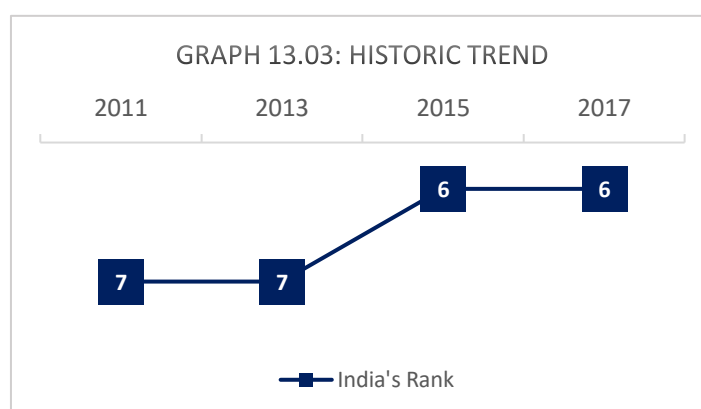
Indicator 13.01: Number of World Heritage natural sites

Definition: This indicator refers to the number of World Heritage natural sites in the country. World Heritage natural sites are those properties that the World Heritage Committee considers as having outstanding universal value.

Source: UNESCO, World Heritage List (WHL)

Value of country = 1*Number of Natural Sites in a country + 0.5*Number of Mixed sites in a country

Where mixed sites represent both cultural and natural properties



Graph 13.03 indicates the historic trend of India's rank in indicator 13.01. In 2017, India's rank remained consistent as compared to year 2015. This indicator contributes 2.5% to the country score.

TABLE 13.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value(2015)	Rank (2017)	Value(2017)	Reason
Russian Federation	4	10	4	10	Major Competitor
Canada	5	9	4	10	Major Competitor
India	6	7	6	7.5	
Brazil	6	7	7	7	Major Competitor
Mexico	8	5.5	8	6.5	Major Competitor

Process of enlisting in the World Heritage List²⁵¹

- **Step 1: Tentative List**

- All countries are supposed to make an 'inventory' of its important natural heritage sites located within its boundaries. This 'inventory' is known as the Tentative List, and provides a forecast of the properties that a State Party may decide to submit for inscription in the next five to ten years and which may be updated at any time.

- **Step 2: The Nomination File**

- The State Party nominates a file which is already included in its tentative list of sites along with assistance from the World Heritage Centre because the World Heritage Committee cannot consider a nomination for inscription on the World Heritage List unless the property has already been included on the State Party's Tentative List.

- **Step 3: The Advisory Bodies**

- A nominated property is independently evaluated by two Advisory Bodies mandated by the World Heritage Convention which provide the World Heritage Committee with evaluations of the sites nominated. A third advisory body provides the Committee with expert advice on conservation of natural sites, as well as on training activities.

- **Step 4: The World Heritage Committee**

- Once every year, The World Heritage Committee meets to decide which nominated sites will be inscribed on the World Heritage List.

- **The Criteria for Selection**

To be included on the World Heritage Natural List, sites must be of outstanding universal value and must meet at least one out of four below mentioned selection criteria:

1. **Natural phenomena or beauty: This contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance.**
2. **Major stages of Earth's history:** These are outstanding examples representing major stages of Earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features.
3. **Significant ecological and biological processes:** These are outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.
4. **Significant natural habitat for biodiversity:** This contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

²⁵¹ UNESCO: World Heritage Centre

Proposed Action Plan

Ministry: Ministry of Culture

TABLE 13.03: PERFORMANCE OF COUNTRIES

Country	Rank (2017)	Value (2017)	Sites added in WHL (in 2017-18)		Sites in WHL		Sites in Tentative List	New Value (2019)
			Natural Sites	Mixed Sites	Natural Site	Mixed Sites		
Russian Federation	4	10	0	0	9	0	10	10
Canada	4	10	0	1	10	1	6	10.5
India	6	7.5	0	0	7	1	9	7.5
Brazil	7	7	0	0	7	0	12	7
Mexico	8	6.5	0	1	6	2	10	7

Current Trend

- Major competition for India is Brazil and Mexico which are just below the India and have many sites in the tentative list.
 - Russia (Rank 4th): 10
 - Canada (Rank 4th): 10
 - India (Rank 6th): 7.5
 - Brazil (Rank 7th): 7
 - Mexico (Rank 8th): 6.5
- **Russia and Canada are ahead of India by 2.5 points:** Both the countries have a total score of 10 and both have 10 and 6 sites respectively in their tentative list.
- **The short-term focus for India should be at retaining its rank for this parameter –**
 - **Russia:** 10 sites
 - **Canada:** 6 sites
 - **India:** 9 sites
 - **Brazil:** 12 sites
 - **Mexico:** 10 sites

Long Term Plan

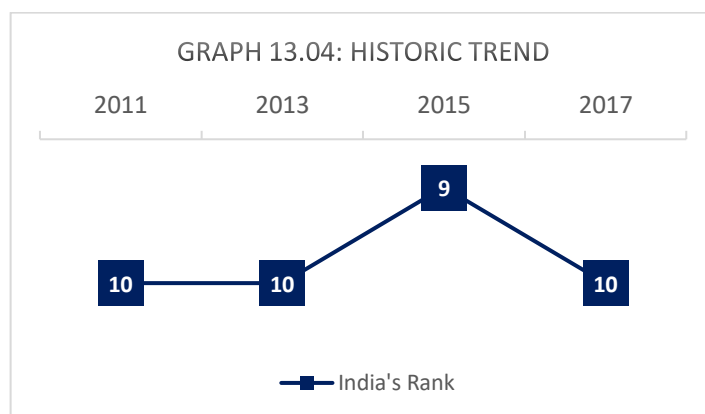
- Since Brazil's tentative list has 12 sites and Mexico's list has 10 sites, which is more than India's tentative sites, **over the time it is certain that India will have to struggle to maintain its rank.**
- India's tentative list contains more Natural sites as compared to Mixed sites, and natural sites carry more points as compared to Mixed sites. **Therefore, Ministry of Culture's long term focus should be on improving the quality of write up that is submitted while enlisting a natural site for the tentative list as well as a thorough verification of documents needs to be conducted before sending them for the Nomination List so that more of these natural sites can be nominated which then can be inscribed in the World Heritage List.**

Indicator 13.02: Total Known Species

Definition: This indicator refers to the total known species of mammals, birds and amphibians in a country.

Source: The International Union for Conservation of Nature and Natural Resources (IUCN) Red List

Value of country = Total known species of Mammals + Total known species of Amphibians + Total known species of Birds



Graph 13.04 indicates the historic trend of India's rank in indicator 13.02. In 2017, India's rank decreased by 1 position as compared to year 2015. This indicator contributes 2.5% to the country score.

TABLE 13.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reasons
Brazil	1	3237	1	3287	Top Performer
Colombia	2	2993	2	3037	Top Performer
Mexico	8	1977	9	1988	Major Competitor
India	9	1859	10	1889	
Congo, Democratic Rep.	N/A	N/A	11	1758	Major Competitor

IUCN Red List: It is a list of world's most comprehensive inventory of the global conservation status of biological species. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies .

Proposed Action Plan

Ministry: Ministry of Environment, Forest and Climate Change

Short Term Plan

- Upon a comparison of the list of known species of birds and mammals in India available at Zoological Survey of India's site and the IUCN red list, it was found that there are 99 species of birds and 82 species of mammals that are not included in the red list. These species are specified below:

Bird Species present in India but not included in the IUCN red list		
Andaman Flowerpecker	Desert Whitethroat	Oriental Plover
Arctic Tern	Eastern Orphean Warbler	Ortolan Bunting
Arctic Warbler	Eurasian Crag-martin	Pectoral Sandpiper
Asian Desert Warbler	Eurasian Jackdaw	Pink-rumped Rosefinch
Azure Tit	Eurasian Jay	Red Crossbill
Baikal Teal	Eurasian Scops-owl	Red Kite
Barred Warbler	Eurasian Siskin	Red-billed Tropicbird
Black Noddy	European Goldfinch	Red-breasted Goose
Black-bellied Storm-petrel	European Turtle-dove	Red-breasted Merganser
Black-headed Bunting	Goldcrest	Red-throated Thrush
Black-headed Greenfinch	Great Snipe	Rock Sparrow
Black-headed Mountain-finch	Greater Racket-tailed Drongo	Rook
Black-legged Kittiwake	Greater Short-toed Lark	Rufous-tailed Rock-thrush
Black-throated Thrush	Hawfinch	Sharp-tailed Sandpiper
Blue-and-white Flycatcher	Hill Prinia	Siberian Stonechat
Blue-breasted Quail	Hill Swallow	Silver-breasted Broadbill
Blue-winged Leafbird	Hooded Crow	Singing Bushlark
Bohemian Waxwing	Horned Grebe	Song Thrush
Boreal Owl	Indian Grassbird	Sooty Gull
Brown Skua	Indian Yellow Tit	South Polar Skua
Buff-breasted Sandpiper	Kashmir Nutcracker	Spotted Flycatcher
Cape Petrel	Lesser Noddy	Streaked Shearwater
Carrion Crow	Lesser Racket-tailed Drongo	Striated Swallow
Caspian Plover	Lesser White-fronted Goose	Tawny Owl
Chestnut-cheeked Starling	Little Gull	Twite
Chinese White-browed Rosefinch	Long-billed Dowitcher	Vivid Niltava
Cinereous Tit	Long-tailed Jaeger	White-bellied Blue Flycatcher

Clicking Shrike-babbler	Mandarin Duck	White-browed Shortwing
Common Chaffinch	Mew Gull	White-eyed Gull
Common Raven	Mistle Thrush	White-faced Storm-petrel
Common Redstart	Nicobar Imperial-pigeon	Wire-tailed Swallow
Corn Crane	Nilgiri Thrush	Woodchat Shrike
Crested Tit-warbler	Northern Wheatear	Yellow-rumped Flycatcher

Mammals species present in India but not included in IUCN red list

Canis lupus chanco	Cynopterus sphinx	Gazella bennetti
Latidens salimalii	Megaerops niphana	Neophelis nebulosi
Semnopithecus schistaceus	Pteropus faunulus	Felis silvestris
Semnopithecus anchises	Pteropus vampyrus	Vulpes vulpes pusilla
Semnopithecus thersites	Eonycteris spelaea	Prionailurus viverrinus
Semnopithecus achates	Bandicota bengalensis	Catopuma temminckii
Cuon alpinus alpinus	Rattus norwegicus	Capra sibirica
Cuon alpinus laniger	Niviventer niviventer	Arctonyx collaris
Paradoxurus jerdoni	Golunda ellioti	Panthera leo persica
Paguma larvata	Gerbillus gleadowi	Equus onager
Petaurista phillippensis	<i>Vandeluria oleracea</i>	Canis lupus pallipes
Eupetaurus cinereus	<i>Bandicota bengalensis</i>	Cervus elaphus hanglu
Hylopetes baberi	<i>Rattus norwegicus</i>	Loris lydekkerianus
Hylopetes fimbriatus	<i>Meriones hurrianae</i>	Helaractos malayanus
Mustela putorius	<i>Golunda ellioti</i>	Moschiola meminna
Vulpes vulpes griffithi	Sus scrofa andamanensis	Moschus berzovskii
Mustela sibirica	Pseudois nayaur	Ovis ammon hodgsoni
Herpestes smithii	Balaenoptera edeni	Sus salvanius
Herpestes javanicus	Kogia simus	Nemorhaedus sumatraensis
Herpestes vitticollis	Pseudorca crassidens	Amblonyx cinereus
Muntiacus muntjac	Balaenoptera physalus	Melursus ursinus
Axis axis	Platanista gangetica	Uncia uncia
Nemorhaedus goral	Balaenoptera acutorostrata	Prionodon pardicolor
Nemorhaedus baileyi	Balaenoptera borealis	Rucervus duvaucelii
Axis porcinus	Globicephala macrorhynchus	Vulpes ferrilatus
Lepus nigricollis	Physeter catodon	Procapra picticaudata
Canis lupus chanco	Bos grunniens	Ovis vignei

- Therefore, Ministry of Environment, Forest and Climate Change should reach out to IUCN Council to get these species mentioned in the above tables, enlisted in their red list as it would increase the number of listed species and will help India to secure a better position in the rank tally.

Long Term Plan

- Among the birds included in the IUCN Red List, 21 species are in endangered category and 16 are in Critically Endangered category in India. Hence, Ministry of Environment, Forest and Climate Change long-term's plan should be the conservation of these species rank will decrease if they face extinction.
- This can be done by involving the local community of that area as done in districts of Odisha which led to an increase in the influx of migratory bird species in the region and also effectively promoted ecotourism. Practice that helped out Odisha to increase the influx of migratory birds can be recognised from the below table.

Best Practice to promote Ecotourism

Chilika Lake: Community's efforts to promote ecotourism

Chilika Lake is largest coastal lagoon in India and Asia and second largest lagoon in the world located in **Odisha**. It is the largest wintering ground for **migratory waterfowl**, found anywhere on the Indian sub-continent and is one of the hotspots of biodiversity in the country.



Mangalajodi Ecotourism Trust is community owned and managed venture. The villagers of Mangalajodi were once associated with poaching of birds near Chilika Lake but now they stand as true defenders of wildlife in the region. The change was mainly due to a coordinated effort in implementing an awareness campaign on importance of preserving natural species and benefits associated with wildlife tourism.

The change has soared numbers of birds from 2000 (during peak unsustainable hunting) to over three lakhs in the region. Moreover, other visible impacts this change has resulted in increasing revenue through ecotourism, sharp fall in poaching incidents and increasing support of villagers.

Mangalajodi Ecotourism Trust in Odisha has won prestigious United Nations World Tourism Organisation (UNWTO) Award in 2018 for Innovation in Tourism Enterprise for having an economically viable and environmentally sustainable business model based on the principles of community ownership and Eco tourism.

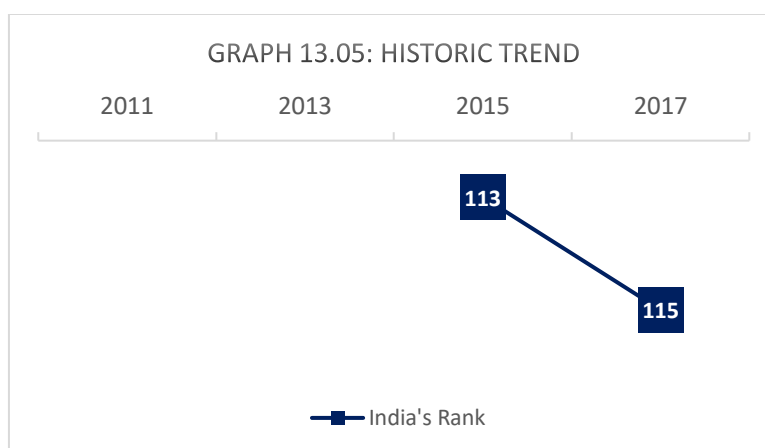
- Other examples of such communities in the country include **Singchun Bagun Community Village Reserve** in Arunachal Pradesh and **Bishnoi Community** in Rajasthan.
- **Conservation awareness programmes** should be initiated and encouraged in areas with population of endangered species, **especially in the North Eastern areas and the Western Ghats.**
- **Ministry of Environment, Forest and Climate change with the help of state authorities and NGO's can conduct various awareness programmes aimed at safeguarding wildlife population present in those area by making communities living near biodiversity hotspots aware of conserving wildlife. To address the social and ecological limitations of people to protect endangered species, incentives should be incorporated into conservation programs.**

Indicator 13.03: Total Protected Areas

Definition: This indicator refers to the total hectares of terrestrial and marine areas under protection as a share of country's total territorial area. A terrestrial area includes total land area and inland waters. Protected areas (marine, terrestrial or freshwater), as defined by the international union for conservation of nature (IUCN), are clearly defined geographical spaces, recognized, dedicated and managed, through legal or other effective means to achieve the long-term conservation of nature with associated ecosystem services and cultural values. Only protected areas that are nationally designated are included in this indicator.

Source: United Nations statistics division

$$\text{Value of country} = \frac{\text{Total hectares of terrestrial \& marine areas under protection}}{\text{Country's total territorial area}}$$



Graph 13.05 indicates the historic trend of India's rank in indicator 13.03. This indicator was introduced in year 2015. In 2017, India's rank decreased by 2 positions as compared to year 2015.

This indicator contributes 2.5% to the country score.

TABLE 13.05: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Venezuela	2	49.54	1	53.86	Top Performer
Slovenia	1	54.86	2	53.59	Top Performer
Bhutan	18	28.35	3	47.3	Asian Peer
Tunisia	116	4.82	114	5.44	Major Competitor
India	113	5	115	5.35	
Madagascar	118	4.72	116	4.97	Major Competitor

Government initiative

- At the UN Framework Convention on Climate Change (UNFCCC) Conference of Parties (CoP) 2015 in Paris, The Government of India made a Bonn Challenge pledge to bring 13 million hectares of degraded land into restoration by 2020 and an additional 8 million hectares by 2030. India has already brought an area of 9.8 million hectares under restoration, meaning that work to restore these landscapes is already underway, and if implemented successfully, this challenge would help India to improve its rank from 115th position in the long run²⁵².

Proposed Action Plan

Ministry: Ministry of Environment, Forest and Climate Change

Short Term Plan

- United Nations statistics division compiles data for the total protected area of each country from IUCN database. IUCN database for India, includes 672 protected area whereas as per the government data, there is a network of 771 Protected Areas (104 National Parks, 544 Wildlife Sanctuaries, 77 Conservation Reserves and 46 Community Reserves) in India. **Therefore, Ministry of Environment, Forest and Climate Change should write to IUCN and can ask them to update their list of available protected areas²⁵³.**

Long Term Plan

- For past ten years, the Philippine Department of Environment and Natural Resources (DENR) worked together in order to identify key areas for biodiversity conservation that ended successfully in year 2017. It supported the management of 110 protected areas in the country. PAME Project, sets out to improve the management skills and technical expertise of DENR employees at all levels.
- This includes reorganising responsibilities to meet requirements. Moreover, it supports studies into management effectiveness in existing protected areas with a view to develop proposals for improvements and new management models. In this context, training is conducted for DENR employees.
- Particular emphasis is also placed on supporting the establishment of new protected areas with innovative management systems, to be administered by local authorities. The project promotes the introduction of enhanced knowledge management by DENR (Department of Environment and Natural Resources) and raises public awareness of the value of biodiversity. Similarly, **Ministry of Environment, Forest and Climate Change with the help of various state forest departments, can empower the local communities and field staff, by conducting training and capacity-building programmes as it would increase the awareness amongst people which would help in conservation and establishment of the protected areas.**

²⁵² <https://www.iucn.org/news/india/201808/india-first-all-bonn-challenge-countries-develop-progress-report>

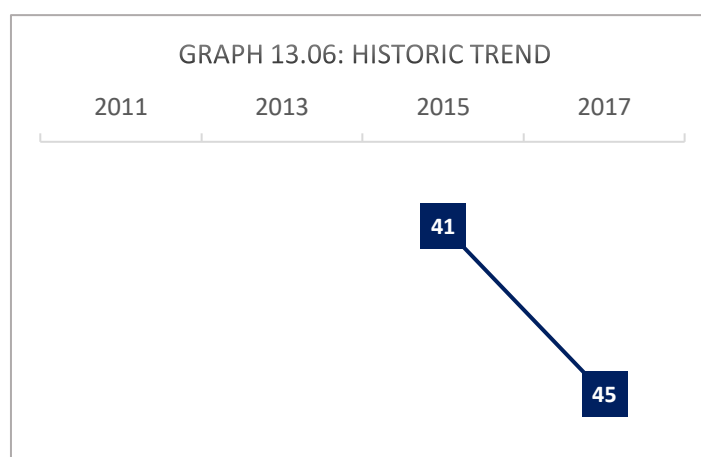
²⁵³ <https://protectedplanet.net/country/IN>

Indicator 13.04: Natural Tourism Digital Demand

Definition: This indicator refers to number of online searches index. It measures the total online search volume related to the following nature-related brand tags: Beaches, Adventure and Extreme, Diving, Fishing, Hiking, Surfing, Water Sports, Winter Sports, Animal Watching, Protected Areas and Sustainable and Rural Tourism.

Source: Bloom Consulting based on Country Brand Ranking, Tourism Edition

Value of country: Measured on a scale of 0-100 based on analysis of words belonging to the above-mentioned cultural brand tags across 9 languages



Graph 13.06 indicates the historic trend of India's rank in indicator 13.04. This indicator was introduced in year 2015. In 2017, India's rank decreased by 4 positions as compared to year 2015.

This indicator contributes 2.5% to the country score.

TABLE 13.06: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
Thailand	3	93.76	1	97.24	Top Performer
Costa Rica	6	88.41	2	93.17	Top Performer
Austria	1	100	3	88.23	Top Performer
Argentina	39	30.76	44	23.16	Major Competitor
India	41	26.93	45	22.51	

What is D2© Tool?

- D2© is a Big Data company that provides analytic insights and intelligence about Countries, Regions and Cities. Their proprietary software gathers all searches performed on a global level towards various locations and reveals its appeal. Every year, the Digital Country and Digital City Indexes are measured that are based on the interest and performance of countries and cities in the areas of Tourism, Investment, Export, Talent and National Prominence.

- This calculation is based on the proprietary D2 tool which assesses the attractiveness of each country by analysing online tourism-related search data across the relevant brand tags, each comprising destination-specific keywords correlated to tourist activities and attractions.

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- **Advertising and Marketing of brand tags**
 - In order to increase online search volume for India, promotion of Indian tourism on digital platforms needs to be focussed on. An advertising strategy consisting of a mix of digital, social and traditional methods of promotion; based on the geography of regions, should be adopted.
 - For effective advertising of tourism related brand tags, Search Engine Optimization (SEO) should be implemented. Focus should be shifted from traditional advertisement to social media i.e. Facebook, twitter etc.
 - Ministry of Tourism has only 14 overseas offices. Therefore, embassies of India across all nations should be used to promote Indian tourism in their respective countries.
 - Content of online campaigns including Incredible India should be made available in languages other than English. This will help to attract more online searches from non-English speaking states and countries.
 - In order to promote tourism with the help of the other countries, a country oriented marketing plan should be prepared and implemented every 6 months, with more focus on countries like Russia (covering Russia, Kazakhstan and Ukraine), Brazil, South Korea, Spain (covering Spain and Portugal), Thailand (covering Thailand, Laos, Cambodia and Myanmar), Argentina (covering Peru, Chile, other neighbouring Spanish speaking countries) as these countries are new source markets for tourists.
 - **Ministry of Tourism can also employ a public relations strategy team or a dedicated special cell for advertising and marketing of brand tags.**

Medium Term Plan

- **Subscribing to D2 © tool**
 - D2-tool for tourism analytics has been subscribed by tourism organizations of Sweden, Portugal, Germany, Finland, Costa Rica, Norway, European Travel Commission etc.
 - **Ministry of Tourism can also subscribe to this tool to gain access to insights drawn from the analysis and can also overview various target markets.**

Indicator 13.05: Attractiveness of natural assets

Definition: “To what extent do international tourists visit your country mainly for its natural assets (i.e. parks, beaches, mountains, wildlife, etc.)?”

Source: World Economic Forum, Executive Opinion Survey

Value: On a scale of 1 to 7 (1= not at all; 7 = to a great extent)

TABLE 13.07: PERFORMANCE OF COUNTRIES

Country	Rank (2017)	Value (2017)	Reasons
New Zealand	1	6.77	Top Performer
Costa Rica	2	6.63	Top Performer
Norway	3	6.54	Top Performer
Nicaragua	112	3.97	Major Competitor
India	113	3.96	
Bosnia and Herzegovina	114	3.95	Major Competitor

Proposed Action Plan

Ministry: Ministry of Tourism

Short Term Plan

- **Feedback Mechanism**

- For the past few years Ministry of Tourism is not able to provide data for the number of tourists that visited in the country for exploring natural sites or what was the purpose of their visit, Therefore, to capture the above data, **Ministry of Tourism in alliance with Ministry of External Affairs can develop a feedback mechanism linked with visa policies for the foreign tourists that are visiting our country as it would help in maintaining a database about the purpose of their visit.**

Long Term Plan

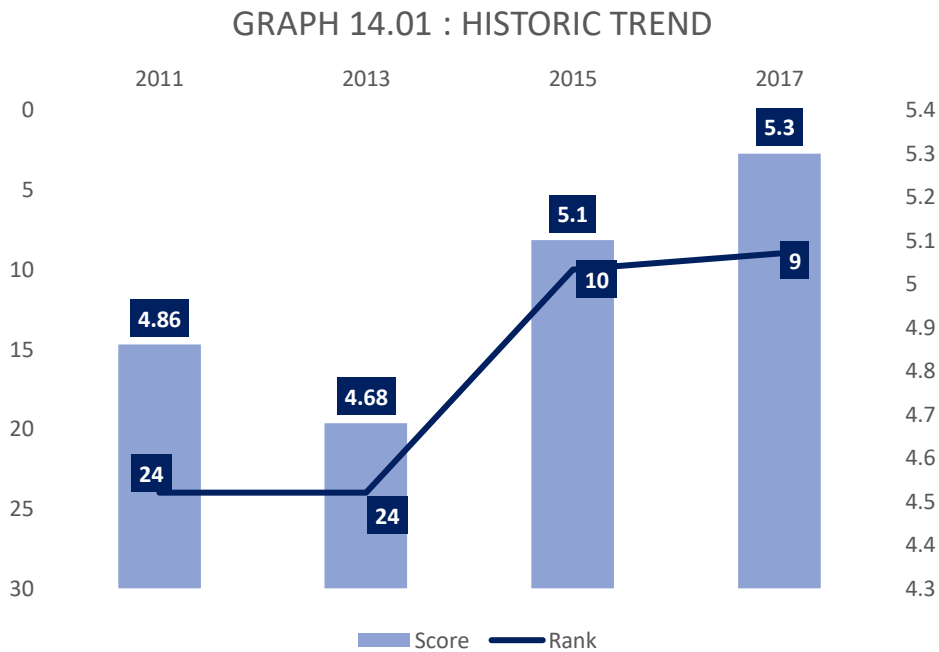
- **Public Relations Strategy**

- A work plan needs to be developed according to the geography, key competing destinations/countries and their offerings, statistics, trends & outlook, demographics, visitor profiles/consumer behaviours and product preference of the market.
- Therefore, **Ministry of Tourism (MoT)** can focus on improving its PR strategy by appointing credible Tourism Marketing Representatives/ Destination Marketing Representatives/PR Companies for Key Source Markets to monitor and measure the impact of marketing and PR Strategy based on key Market intelligence for key Source markets to promote natural assets of the country. MoT should also continuously measure effectiveness of campaign and should rework & revisit their strategies according to the insights generated.

Pillar 14: Cultural Resources and Business Travel

Definition: This pillar measures the availability of cultural resources such as archaeological sites, entertainment facilities and conferences. This pillar largely focuses on promotion of cultural resources rather than the already existing cultural heritage of a country. **Pillar 14** has a total of **5 indicators** stated below –

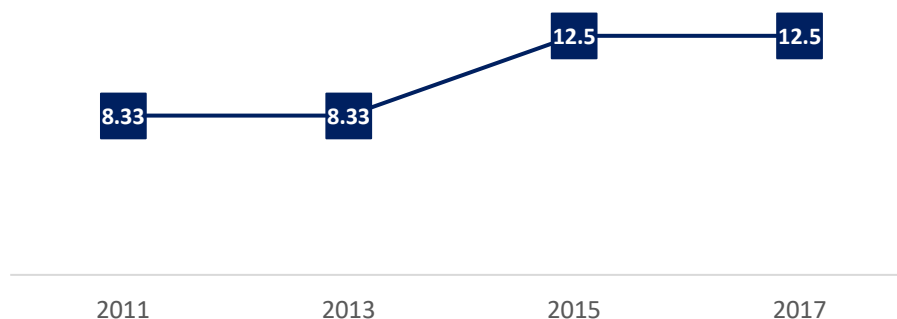
1. Number of World Heritage cultural sites
2. Number of oral and intangible cultural expressions
3. Number of large sports stadiums
4. Number of international associations meetings
5. Cultural and entertainment tourism digital demand



Graph 14.01 indicates the historic trend of India's rank and value in Pillar 14. India's rank has increased from 24th position in 2011 to 9th position in 2017.

Weightage Shift:

GRAPH 14.02 : WEIGHTAGE SHIFT



Graph 14.02 indicates the overall contribution of Pillar 14 i.e. Cultural Resources and Business Travel in India's score. At present, 12.5% weightage is given to this pillar. The weightage of this pillar has increased by 50% in the year 2015.

TABLE 14.01: INDICATOR WISE WEIGHTAGE SHIFT

Indicator	2011-2013 (%)	2015-2017 (%)	Change in Weightage (%)
No. of World Heritage cultural sites	2.1	1.6	-23.81
No. of oral and intangible cultural expressions	NA	1.6	NA
No. of large sports stadiums	2.1	3.1	47.62
No. of international association meetings	2.1	3.1	47.62
Cultural/entertainment tourism digital demand	NA	3.1	NA

NA = Not Applicable, the indicator was not introduced in that year

Number of oral and intangible cultural expression and Cultural/Entertainment tourism digital demand, these two indicators were introduced from 2015.

Table 14.01 shows the percentage of contribution that each indicator has on the overall score of India.

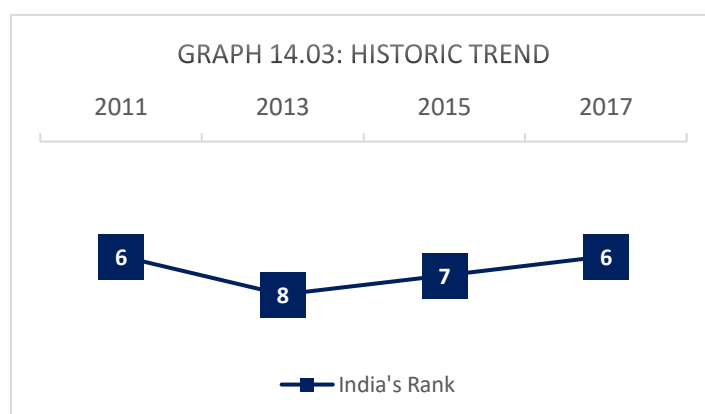
Indicator 14.01: Number of World Heritage cultural sites

Definition: This indicator refers to the number of World Heritage cultural sites in the country. World Heritage cultural sites are those properties that the World Heritage Committee considers as having outstanding universal value.

Source: UNESCO, World Heritage List (WHL)

Value of country = 1*Number of Cultural Sites in a country + 0.5*Number of Mixed sites in a country

Where mixed sites represent both cultural and natural properties



Graph 14.03 indicates the historic trend of India's rank in indicator 14.01. In 2017, India's rank increased by 1 position as compared to year 2015. This indicator contributes 1.6% to the country score.

TABLE 14.02: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value(2015)	Rank (2017)	Value (2017)	Reason
Italy	1	46	1	47	Top Performer
Spain	2	40	2	41	Top Performer
France	4	35.5	3	38.5	Top Performer
Germany	3	36	4	38	Major Competitor
China	5	35	5	37	Asian Peer
India	7	25	6	27.5	
Mexico	6	26.5	6	27.5	Major Competitor
United Kingdom	8	23.5	8	25.5	Major Competitor

Process of enlisting in the World Heritage List²⁵⁴

- **Step 1: Tentative List**

- All countries are supposed to make an 'inventory' of its important cultural heritage sites located within its boundaries. This 'inventory' is known as the Tentative List, and provides a forecast of the properties that a State Party may decide to submit for inscription in the next five to ten years and which may be updated at any time.

- **Step 2: The Nomination File**

- The State Party plans when to present a nomination file of sites along with assistance from the World Heritage Centre. The World Heritage Committee cannot consider a nomination for inscription on the World Heritage List unless the property has already been included on the State Party's Tentative List.

- **Step 3: The Advisory Bodies**

- A nominated property is independently evaluated by two Advisory Bodies mandated by the World Heritage Convention, which provide the World Heritage Committee with evaluations of the sites nominated. A third advisory body provides the Committee with expert advice on conservation of cultural sites, as well as on training activities.

- **Step 4: The World Heritage Committee**

- Once every year, The World Heritage Committee meets to decide which nominated sites will be inscribed on the World Heritage List.

- **The Criteria for Selection**

- To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of the ten below mentioned selection criteria where first 6 criteria comes under cultural sites and last 4 comes under natural sites:
 - **Human creative genius:** This represent a masterpiece of human creative genius.
 - **Interchange of values:** This exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.
 - **Testimony to cultural tradition:** This bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living, or which has disappeared.
 - **Significance in human history:** This refers to an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates significant stage(s) in human history.
 - **Traditional human settlement:** This is outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change.
 - **Heritage associated with events of universal significance:** These are directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and

²⁵⁴ UNESCO: World Heritage Centre

literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria).

Proposed Action Plan

Ministry: Ministry of Culture

TABLE 14.03: PERFORMANCE OF COUNTRIES

Country	Rank (2017)	Value (2017)	Sites added in WHL (in 2017-18)		Sites in WHL			Sites in Tentative List	New Value (2019)
			Cultural Sites	Mixed Sites	Cultural	Mixed	Total		
Germany	4	38	3	0	41	0	41	15	41
China	5	37	1	0	36	4	40	43	38
India	6	27.5	2	0	29	1	30	33	29.5
Mexico	6	27.5	0	1	27	2	29	17	28
United Kingdom	8	25.5	1	0	26	1	27	8	26.5

Current Trend

- Major competition for India is from Mexico which have same value as India. United Kingdom might be a problem in the long run. Rank and value of various countries are given below:
 - China (Rank 5th): 37
 - India (Rank 6th): 27.5
 - Mexico (Rank 6th): 27.5
 - United Kingdom (Rank 8th): 25.5
- China is ahead of India by 9.5 points:** China has a total score of 37. China also has 43 sites in its tentative list, which is more than that of India. **Short-term focus for India should be at retaining its rank for this indicator** Tentative list status is provided below:
 - China: 43 sites
 - India: 33 sites
 - Mexico: 17 sites
 - United Kingdom: 8 sites

Long Term Plan

- Since China's tentative list has 43 sites and Germany (Rank 4) only has 15 sites, **overtime it is likely that China will overtake Germany in the long run.**
- Assuming China will overtake Germany in the long run, **India should aim at overtaking Germany in this indicator.**

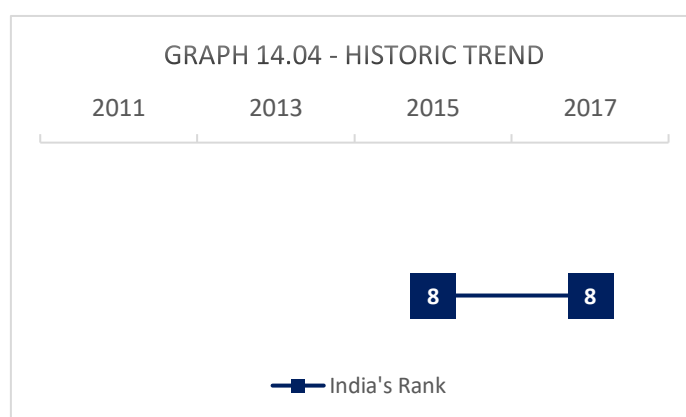
- **Ministry of Culture’s long term focus should be on improving the quality of write up that is submitted when enlisting a site for the tentative list as well as a thorough verification of documents needs to be conducted before sending them for the Nomination List so that more of these cultural sites can be nominated which then can be inscribed in the World Heritage List.**

Indicator 14.02: Oral and Intangible cultural heritage

Definition: This indicator refers to number of oral and intangible heritage practices and expressions. An intangible cultural heritage is a practice, representation, expression, knowledge, or a skill, as well as the instruments, objects, artefacts, and cultural spaces that are considered by UNESCO to be a part of place's cultural heritage.

Source: UNESCO Intangible Culture Heritage (ICH) List

Value of country = Number of unique elements in form of oral and intangible culture in a country (e.g. Yoga, Kumbh Mela, Nowrouz etc. in India)



Graph 14.04 indicates the historic trend of India's rank in indicator 14.02. This indicator was introduced in the year 2015. In 2017, India's rank remained consistent at 8th position as compared to year 2015. This indicator contributes 1.6% to the country score.

TABLE 14.04: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
China	1	37	1	39	Asian Peer
Japan	2	22	2	21	Asian Peer
Spain	8	11	4	16	Top Performer
Croatia	4	14	5	15	Major Competitor
France	5	13	5	15	Major Competitor
Turkey	6	12	5	15	Major Competitor
Belgium	10	10	8	13	Major Competitor
Mongolia	6	12	8	13	Major Competitor
Oman	25	4	8	13	Major Competitor
India	8	11	8	13	

The UNESCO's Committee, which is responsible for selection of sites out of the tentative list, gives priority to countries with no sites listed and sites that belong to the Urgent Safeguarding List. Backlog contains those sites, which are not reviewed by the committee due to limited capacity of the committee. All the sites that are in the backlog of India belong to the Representative list²⁵⁵.

There are three types of lists under which the elements are registered:

- **Urgent Safeguarding List**
 - This list is composed of those intangible heritage elements in a country, which require **urgent measures to keep them alive**.
 - Elements inscribed on **Urgent Safeguarding List** e.g. **Al Azi** an art of performing praise, pride and fortitude poetry (of United Arab Emirates), Taskiwin, martial dance of the western High Atlas (of Morocco) etc.
- **Representative List**
 - This list is made up of those intangible heritage elements that helps to demonstrate the diversity of this heritage and raise awareness about its importance.
 - Elements inscribed on **Representative List** E.g. **Yoga** (of India), **Kumbh Mela** (of India), **Basel Carnival** (of Switzerland) etc.
- **Register of Good Safeguarding Practices**
 - This list contains programs, projects and activities that educate/train population on how to safeguard an intangible heritage element.
 - Elements inscribed on Good Safeguarding Practices e.g. Community project of safeguarding the living culture of Rovinj/Rovigno: the Batana Ecomuseum (of Croatia)

TABLE 14.05: LIST OF SITES IN BACKLOG

S.No.	Oral and Intangible Heritage	Backlog since
1	Dashavatar: traditional folk theatre form, Maharashtra and Goa, India (00338)	2010
2	Hingan: votive terracotta painted plaque of Molela, Rajasthan, India (00346)	2010
3	Lama dances of Sikkim: Buddhist monastic dances, Sikkim, India (00352)	2010
4	Nacha: folk theatre, Chhattisgarh, India (00344)	2010
5	Patola: double ikat silk textiles of Patan, Gujarat, India (00343)	2010
6	Phad: scroll paintings and their narration, Rajasthan, India (00342)	2010
7	Rathwa ni Gher: tribal dance of Rathwas, Gujarat, India (00348)	2010
8	Sankheda nu lakh kam: lacquered turned wood furniture of Sankheda, Gujarat, India (00347)	2010
9	Sattriya music, dance and theatre (00350)	2010

²⁵⁵ <https://ich.unesco.org/en/lists>

10	Shadow puppet theatre traditions (00351)	2010
11	The festival of Salhesh, Bihar, India (00339)	2010
12	Chaar Bayt, a Muslim tradition in lyrical oral poetry, Uttar Pradesh, Madhya Pradesh and Rajasthan, India (00841)	2012
13	Chettikulangara Kumbha Bharani Kettukazhcha (00708)	2012
14	Durga Puja In West Bengal (00703)	2012
15	Gaddi Jatar (00705)	2012
16	Jangam Gāyan (00702)	2012
17	Kalamkari Paintings (00709)	2012
18	Kolam, ritualistic threshold drawings and designs of Tamil Nadu, India (00842)	2012
19	Music and knowledge of the Veena stringed instrument (00844)	2012
20	Nautanki (00699)	2012
21	Practice of turban tying in Rajasthan (00701)	2012
22	Qawwali (00698)	2012
23	Ranmāle (00706)	2012

Process of enlisting in the convention list:

The UNESCO's Committee determines two years beforehand, in accordance with the available resources and its capacity, the number of files that can be treated in the course of the two following cycles.

Phase 1: Preparation and submission	
31 March Year 0	Deadline for preparatory assistance requests for the elaboration of nominations.
31 March Year 1	Deadline by which nominations must be received by the Secretariat. Files received after this date will be examined in the next cycle.
30 June Year 1	Deadline by which the Secretariat will have processed the files, including registration and acknowledgement of receipt. If a file is found incomplete, the State Party is invited to complete the file.
30 September Year 1	Deadline by which missing information required to complete the files, if any, shall be submitted by the State Party to the Secretariat. Files that remain incomplete are returned to the States Parties that may complete those for a subsequent cycle.
Phase 2: Evaluation	
December Year 1 - May Year 2	Evaluation of the files by the Evaluation Body
April – June Year 2	Meeting for final evaluation by the Evaluation Body.
For weeks prior to the session of the Committee	The files and evaluation reports are available on-line for consultation by States Parties.
Phase 3: Examination	
November/December Year 2	The Committee examines the nominations and makes its decisions.

Ministry of Culture – Actions and Interventions

- **Ministry of Culture** has outlined the following system to safeguard the intangible cultural heritage of India:
 - **At National level:** Academies (Sangeet Natak Akademi, Sahitya Akademi & Lalit Kala Akademi), autonomous bodies (Like I.C.C.R.), Subordinate Bodies (Like Anthropological Survey of India) and various autonomous institutions, missions and surveys are constituted
 - **At State level:** Various Zonal Cultural Centres, covering the states of India zone wise, are ordained- East Zone, North Zone, North Central Zone, South Central Zone, South Zone and the West Zone
- **Sangeet Natak Akademi** was appointed as the nodal agency for purposes of UNESCO Convention on the Safeguarding of intangible Cultural Heritage (ICH) in 2011 and is responsible for

coordinating India's nominations for various Lists and other actions under the UNESCO convention on ICH as well as for **developing and maintaining the National Inventory of ICH.**

- **A Pan-India (work in progress) inventory of 165 elements** is present on the website of Sangeet Natak Akademi.
- **Role of these academies:** Creates among communities a sense of belonging and continuity by fostering community participation at regional, district and grassroots level.
- **Ministry of Culture has formulated a scheme titled “Scheme for Safeguarding the Intangible Heritage and Diverse Cultural Traditions of India”,** with the objective of reinvigorating and revitalizing various institutions, groups, individuals, identified non-MOC institutions, non-government organisations, researchers and scholars so that they may engage in activities/projects for strengthening, protecting, preserving and promoting the rich intangible cultural heritage of India.
- Assistance under the scheme will be provided in the form of **non-recurring grants, honoraria, infrastructure grants,** etc. with a view to address areas critical for the survival and propagation of all forms of ICH by strengthening organisations/ individuals etc. involved in keeping these cultural traditions/ expressions alive

Proposed Action Plan

Ministry: Ministry of Culture

TABLE 14.06: PERFORMANCE OF COUNTRIES

Country	Rank (2017)	Value (2017)	Elements (Accepted in Nov/Dec 2017)	Files under process			Backlog
				Nominated for Nov/Dec 2018	Nominated for Nov/Dec 2019	Total	
China	1	39	1	1	0	2	13
Japan	2	21	0	1	0	1	5
Korea, Rep.	2	21	0	2	0	2	1
Spain	4	16	0	2	1	3	1
Croatia	5	15	0	2	0	2	0
France	5	15	0	2	1	3	1
Turkey	5	15	1	1	1	2	4
Belgium	8	13	0	0	1	1	1
India	8	13	0	0	1	1	23
Mongolia	8	13	1	1	0	1	0
Oman	8	13	0	1	1	2	0

Long Term Plan

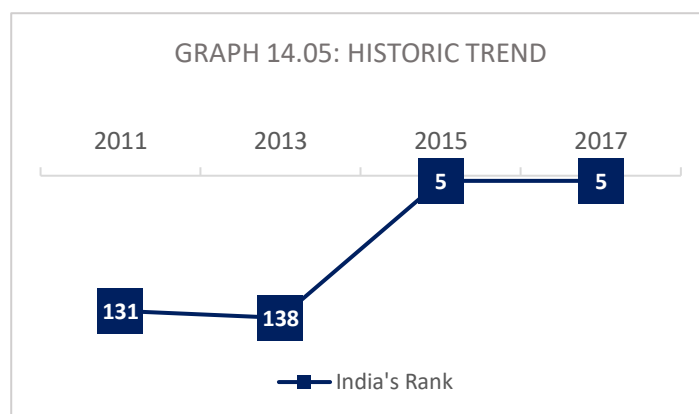
- Performance of India is satisfactory in this indicator. India has the highest number of elements in its backlog than other countries, which will help it to overtake other countries in the long run.
- The UNESCO's Committee gives priority to the files:
 - **Countries having no elements inscribed,**
 - **Best safeguarding practices**
 - **International Assistance** greater than US\$100,000
 - **Urgent Safeguarding List** (Intangible heritage elements in a country which require **urgent measures to keep them alive**)
 - **Multi-national** (elements which are registered in more than one country for e.g. **Nowrouz** which is registered for **Afghanistan – Azerbaijan – India – Iran – Iraq – Kazakhstan – Kyrgyzstan – Uzbekistan – Pakistan – Tajikistan – Turkmenistan – Turkey**)
- Hence, during Nomination process, Ministry of Culture should give importance to files of elements that are multi-national and elements that require urgent safeguarding, as such types of elements are given higher priority by UNESCO's ICH committee.

Indicator 14.03: Number of large sports stadiums

Definition: This indicator refers to total number of sports stadiums with a capacity larger than 20,000 seats.

Source: Reports calculation based on WorldStadium.com

Value of country: Number of events + number of sport teams (registered with Sports Stadium having capacity greater than 20,000)



Graph 14.05 indicates the historic trend of India’s rank in indicator 14.03. In 2017, India’s rank remained consistent at 5th position as compared to year 2015. This indicator contributes 3.1% to the country score.

History of Indicator: In year 2015-2017, this indicator’s calculation has been changed from sports seats per million population to number of sports stadiums

TABLE 14.07: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Number of events/sports teams (in 2017-2018)	New Value (2019)	Reasons
China	2	124	2	141	4	145	Asian Peer
Brazil	3	95	3	95	-	-	Top Performer
Japan	4	89	4	90	0	90	Asian Peer
India	5	86	5	87	6	93	
Australia	6	81	6	81	0	81	Major Competitor
UK	6	81	6	81	9	90	Major Competitor

Proposed Action Plan

Ministry: Ministry of Youth Affairs and Sports, Department of Sports

Short Term Plan

- The value of a country is calculated based on:
 - Number of events; and
 - Number of sports teams registered with the sports stadiums.

- Therefore, to increase the value of country following methods can be adopted:
 - Increase the number of events held and the number of sport teams registered with stadiums with capacity greater than 20,000 seats.
 - States should identify clubs that are unregistered or are registered in stadiums with capacity less than 20,000
 - Once identified, the clubs can be registered with stadiums having a capacity greater than 20,000 seats.

- Following are suggested sports which can be taken into consideration to increase the value of this category for India after drawing a comparison from sports registered in China, Japan, UK:
 - Race use
 - Tennis
 - Swimming
 - Polo matches/Horse racing
 - Indoor games
 - Kabaddi
 - Table tennis
 - Badminton

- There are 32 stadiums (mentioned in below table) in India that are not included in the data source of WEF while having capacity greater than 20000. For list of these stadium refer the table given below –

S.No.	Stadiums	Capacity	Sports/Events	City
1	Dr. Y.S. Rajasekhara Reddy ACA-VDCA Cricket Stadium	26736	Cricket	Visakhapatnam
2	Dr. Bhupen Hazarika Cricket Stadium	40000	Cricket	Guwahati
3	Indira Gandhi Athletic Stadium	30737	Athletics, football (soccer)	Guwahati
4	Moin-ul-Haq Stadium	25000	Cricket	Patna
5	Shaheed Veer Narayan Singh International Cricket Stadium	50000	Cricket	Raipur
6	International Hockey Stadium	30000	Hockey	Rajnandgaon
7	Sardar Vallabhbhai Patel Stadium	50000	Cricket	Ahmedabad
8	Saurashtra Cricket Association Stadium	33000	Cricket	Rajkot
9	CB Patel International Cricket Stadium	35000	Cricket	Surat
10	Mahabir Stadium	25000	Sports complex	Hisar
11	HPCA Cricket Stadium	25000	Cricket	Dharamshala
12	JSCA International Cricket Stadium	39133	Cricket	Ranchi
13	Birsa Munda Athletics Stadium	35000	Athletics	Ranchi
14	The Sports Hub	50000	Sports complex	Thiruvananthapuram
15	Maharashtra Cricket Association Stadium	37406	Cricket	Gahunje, Pune district
16	Vidarbha Cricket Association Stadium	45000	Cricket	Nagpur
17	Khuman Lampak Main Stadium	30000	Football (soccer)	Imphal
18	KIIT Stadium	40000	Cricket	Bhubaneswar
19	International Hockey Stadium	30000	Hockey	Rajnandgaon
20	Punjab Cricket Association IS Bindra Stadium	26000	Cricket	Mohali
21	War Heroes Stadium	30000	Hockey	Sangrur
22	Baichung Stadium	30000	Football (soccer)	Namchi
23	Chennai Jawaharlal Nehru Stadium	40000	Athletics, Football (soccer)	Chennai
24	M. A. Chidambaram Stadium	50000	Cricket	Chennai
25	Rajiv Gandhi International Stadium	60000	Cricket	Hyderabad

26	G. M. C. Balayogi Athletic Stadium	30000	Athletics, Cricket	Hyderabad
27	Maharaja Bir Bikram College Stadium	30000	Cricket	Agartala
28	Ekana International Cricket Stadium	50000	Cricket	Lucknow
29	K. D. Singh Babu Stadium	25000	Cricket	Lucknow
30	Saifai International Cricket Stadium	43000	Cricket	Saifai
31	Rajiv Gandhi International Cricket Stadium	25000	Cricket	Dehradun
32	Salt Lake Stadium	85000	Athletics, Football (soccer)	Kolkata

- Hence, Ministry of Tourism can write to WEF or worldstadium.com and can ask explanation regarding the exclusion of these stadiums from the list.

Long Term Plan

- This step involves identification of stadiums having seats just less than 20,000 or equal to 20,000. WEF does not count stadiums whose capacity is equal to 20,000, whereas stadiums whose capacity is 20,005 like in case of Japan is counted.
- India has 42 stadiums with capacity equal to 20,000, so adding few more seats to these stadiums would increase India's count immediately by 42.
- **Ministry of Tourism can recommend Ministry of Youth Affairs and Sports, Department of Sports to increase the sitting capacity of these sports stadium so that they can also be counted as large sports stadium. By increasing, the sitting capacity of the 45 mentioned stadium India's ranking under this indicator can be improved further.**
- List of 45 stadiums whose capacity can be increased by adding only few seats²⁵⁶ are mentioned in the below table:

S.No.	City	Stadium	Existing Capacity	Minimum target to increase
1	Kankarbagh	Patliputra Sports Complex	20 000	10
2	Mumbai	Brabourne Stadium	20 000	10
3	Trivandrum	University Stadium	20 000	10
4	Aizawl	Rajiv Gandhi Stadium	20 000	10
5	Mangalore	Mangala Stadium	20 000	10
6	Mysore	Chamundi Vihar Stadium	20 000	10
7	Puttaparthi	Hill View Stadium	20 000	10

²⁵⁶ worldstadiums.com

8	Jalalabad	Jalalabad Sports Stadium	20 000	10
9	Lucknow	Dr. Akhilesh Das Stadium	20 000	10
10	Ahmedabad	The Arena by TransStadia	20 000	10
11	Kolhapur	Rajarshi Shahu Stadium	20 000	10
12	Ichalkaranji	Rajaram Stadium	20 000	10
13	Ranchi	Silli Stadium	20 000	10
14	Bhilai	Jayanti Stadium	20 000	10
15	Vijayawada	Indira Gandhi Stadium	20 000	10
16	Visakhapatnam	Indira Priyadarshini Stadium	20 000	10
17	Srikakulam	Kodi Ramamurthy Stadium	20 000	10
18	Durg	Ravishankar Shukla Stadium	20 000	10
19	Davanagere	Corporation Stadium	20 000	10
20	Dharwad	RN Shetty Stadium	20 000	10
21	Gulbarga	Chandrasekhar Patil Stadium	20 000	10
22	Mandya	PET Cricket Stadium	20 000	10
23	Tumkur	Tumkur Nehru Stadium	20 000	10
24	Kottayam	Kottayam Nehru Stadium	20 000	10
25	Karad	Chatrapati Shivaji Stadium	20 000	10
26	Satara	Shahu Stadium	20 000	10
27	Sakhipara	VSS Stadium	20 000	10
28	Bikaner	Dr. Karni Singh Stadium	20 000	10
29	Tiruchirappalli	Anna Stadium	20 000	10
30	Bhopal	Tatya Tope Nagar Stadium	20 000	10
31	Ernakulam	Maharaja College Stadium	20 000	10
32	Kolhapur	Shree Chhatrapati Shivaji	20 000	10
33	Meerut	Kailash Prakash Stadium	20 000	10
34	Powerpet	ASR Stadium	20 000	10
35	Kohima	Indira Gandhi Stadium	20 000	10
36	Gondia	Indira Gandhi Stadium	20 000	10
37	Purnia	Indira Gandhi Stadium	20 000	10
38	Brahmapur	Brahmapur Stadium	20 000	10
39	Karad	Chhatrapati Shivaji Stadium	20 000	10
40	Hoshiarpur	Lajwanti Stadium	20 000	10
41	Mandya	Visvesvaraya Stadium	20 000	10
42	Waidhan	Rajmata Chunkumari Stadium	20 000	10
43	Dharamsala	HPCA Stadium	19 979	39
44	Margao	Fatorda Stadium	19 800	210
45	Jamshedpur	Keenan Stadium	19 000	1010

Indicator 14.04: Number of International association meetings

Definition: This indicator refers to number of international association meeting held in the country annually. It measures the average number of international associations meetings held annually in a country between three years (between 2013 and 2015 for TTCI 2017 report). These figures are based on the International Congress and Convention Association (ICCA) Database, which includes meetings organized by international associations, matching the following criteria:

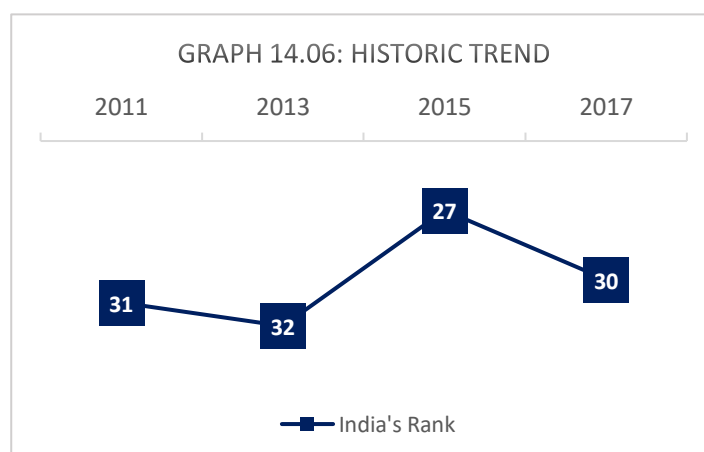
- Take place on a regular basis
- Rotate between a minimum of three countries
- Have at least 50 participants

The meetings included are organised by both members and non-members of ICCA

Source: The International Congress and Convention Association (ICCA)

Value of country = Average number of meetings held in a country between 3 years prior to reporting (e.g. between 2013 and 2015 for 2017 report)

In order to access database for number of meetings held in a country (organised by both members and non-members of ICCA), one has to be a member of ICCA.



Graph 14.06 indicates the historic trend of India's rank in indicator 14.04. In 2017, India's rank decreased by 3 positions as compared to year 2015. This indicator contributes 3.1% to the country score.

TABLE 14.08: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reasons
United States	1	900	1	926	Top Performer
Germany	2	702	2	714	Top Performer
United Kingdom	4	524	3	599	Top Performer
China	7	361.3	7	387	Asian Peer
Australia	16	236	15	256	Major Competitor
Greece	35	125.3	28	149	Major Competitor
India	27	149.3	30	140	

History of Indicator: In year 2015-2017, this indicator's calculation was changed to number of international association meetings from number of international fairs and exhibitions.

Proposed Action Plan

Ministry: Ministry of Tourism

Long Term Plan

TABLE 14.09: PERFORMANCE OF COUNTRIES

Sector-wise ICCA Members									
Country	Rank (2015)	Rank (2017)	Destination Marketing	Meeting Management	Meeting Support	Venues	Transport	Honorary Member	Total Members
China	7	7	20	17	6	14	1	0	58
Australia	16	15	10	2	8	11	0	2	33
Greece	35	28	3	9	0	4	0	0	16
India	27	30	1	11	0	8	0	0	20

*Members of ICCA are classified into 5 sectors, viz, Destination Marketing, Meetings Management, Meetings Support, Venues, Transport and Honorary Member type. This table shows the number of members for each country in ICCA according to the various sectors.

• **Increasing Destination Marketing Organisations (DMOs) in ICCA²⁵⁷**

- India's rank in 2015 was 27 which dipped to 30 in 2017. Also, India was overtaken by Thailand and Greece in 2017.
- China and Australia lie in the same region as India, and are performing far better in this indicator. One of the reasons can be that India has a fewer number of destination marketing sector members registered with ICCA than other countries mentioned in the table (except Thailand).
- Destination marketing organisations (DMOs) are important for MICE (Meeting, Initiative, Convocation and Events) tourism since they are responsible for promoting the country nationally and internationally as a Business Events destination and in securing Business Events for the country.
- DMOs overlook the entire process of strategic planning and present compelling bid documents to win Business Events for the country.
- Organisations that can become a member of ICCA in the Destination Marketing sector include National ministry of tourism or economic development, national tourist office, national convention bureau, regional tourist office, regional convention bureau, city tourist office, city convention bureau, or international destination representation company.

²⁵⁷ <https://www.iccaworld.org/abouticca/>

- **For India, Ministry of Tourism and India Convention Promotion Bureau (ICPB) are eligible to become Destination Marketing organisations under ICCA. Either, Ministry of Tourism should become a member of ICCA or assist ICPB to become a Destination Marketing Organisation (DMO) or both could be registered as DMO under ICCA membership.**

- **Establishing and Registering Regional level bureaus**
 - The key role of a regional level bureau is to promote the region as an appropriate destination for national and international MICE industry. Australia has a regional level bureau for each of its metropolitan city such as Brisbane Convention Bureau, Melbourne Convention Bureau etc. whereas in India there is only 1 regional bureau i.e. Hyderabad Convention Visitors Bureau.
 - According to ICCA Statistics report for the years 2015-17, 31% of all meetings conducted in these years in India were organised in New Delhi. A regional bureau for Delhi should be set up and should be registered with ICCA in order to increase outreach of MICE industry, thus, improving India's overall score for this indicator.
 - Also, any regional level bureau that is set up in the future can also be registered* as a Destination Marketing Organisation with ICCA.

* The process of registering as a member of ICCA is as follows:

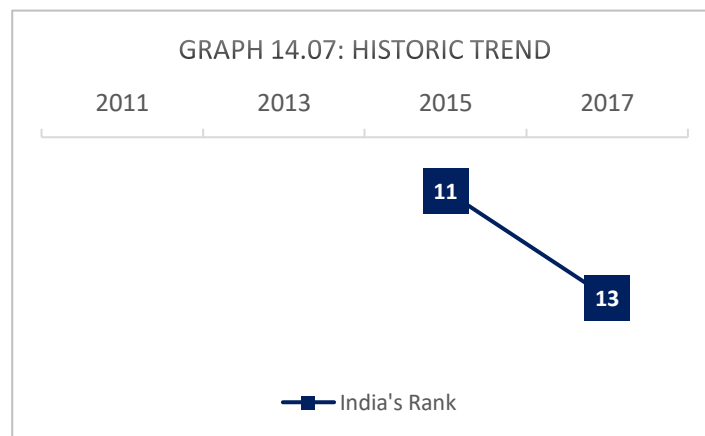
- **Step 1:** Complete the application form which can be requested from the ICCA head office.
- **Step 2:** Once the application form is signed, it should be returned and a confirmation will be sent to the applicant with invoice for entrance fee and first year membership fee.
- **Step 3:** The application would be sent to the ICCA Board of Directors once, upon the approval from the ICCA Board of Directors and payment of the entrance fee and first year membership fee. Then applicant can become the official member of ICCA.

Indicator 14.05: Cultural and Entertainment Tourism Digital Demand

Definition: This indicator refers to number of online searches index. It measures the total online search volume related to the following cultural brand tags: Historical Sites, Local People, Local Traditions, Museums, Performing Arts, UNESCO, City Tourism, Religious Tourism, Local Gastronomy, Entertainment Parks, Leisure Activities, Nightlife and Special Events.

Source: Bloom Consulting based on Country Brand Ranking, Tourism Edition

Value of country: Measured on a scale of 0-100 based on analysis of words belonging to the above-mentioned cultural brand tags across 9 languages



Graph 14.07 indicates the historic trend of India's rank in indicator 14.05. This indicator was introduced in year 2015. In 2017, India's rank decreased by 2 positions as compared to year 2015.

This indicator contributes 3.1% to the country score.

TABLE 14.10: PERFORMANCE OF COUNTRIES

Country	Rank (2015)	Value (2015)	Rank (2017)	Value (2017)	Reason
France	2	85.3	1	91.9	Top Performer
Spain	4	80.5	2	83.3	Top Performer
China	8	55	3	81.7	Asian Peer
Argentina	12	41.6	12	50.9	Major Competitor
India	11	46.6	13	50.7	

What is D2© Tool?

- D2© is a Big Data company that provides analytic insights and intelligence about Countries, Regions and Cities. Their proprietary software gathers all searches performed on a global level towards various locations and reveals its appeal. Every year, the Digital Country and Digital City Indexes are measured that are based on the interest and performance of countries and cities in the areas of Tourism, Investment, Export, Talent and National Prominence.

- This calculation is based on the proprietary D2 tool which assesses the attractiveness of each country by analysing online tourism-related search data across the relevant brand tags, each comprising destination-specific keywords correlated to tourist activities and attractions.

Proposed Action Plan

Ministry: Ministry of Tourism

In order to increase online search volume for India, promotion of Indian tourism on digital platforms needs to be focussed on. An advertising strategy consisting of a mix of digital, social and traditional methods of promotion; based on the geography of regions, can also be adopted.

Short Term Plan

- **Subscribing to D2 @ tool**
 - D2-tool for tourism analytics has been subscribed by tourism organizations of Sweden, Portugal, Germany, Finland, Costa Rica, Norway, European Travel Commission etc.
 - **Ministry of Tourism can also subscribe to this tool to gain access to insights drawn from the analysis and can also overview various target markets.**

Long Term Plan

- **Advertising and Marketing of brand tags**
 - In order to increase online search volume for India, promotion of Indian tourism on digital platforms needs to be focussed on. An advertising strategy consisting of a mix of digital, social and traditional methods of promotion; based on the geography of regions, should be adopted.
 - For effective advertising of tourism related brand tags, Search Engine Optimization (SEO) should be implemented. Focus should be shifted from traditional advertisement to social media i.e. Facebook, twitter etc.
 - Ministry of Tourism has only 14 overseas offices. Therefore, embassies of India across all nations should be used to promote Indian tourism in their respective countries.
 - Content of online campaigns including Incredible India should be made available in languages other than English. This will help to attract more online searches from non-English speaking states and countries.
 - In order to promote tourism with the help of the other countries, a country oriented marketing plan should be prepared and implemented every 6 months, with more focus on countries like Russia (covering Russia, Kazakhstan and Ukraine), Brazil, South Korea, Spain (covering Spain and Portugal), Thailand (covering Thailand, Laos, Cambodia and Myanmar), Argentina (covering Peru, Chile, other neighbouring Spanish speaking countries) as these countries are new source markets for tourists.
 - **Ministry of Tourism can also employ a public relations strategy team or a dedicated special cell for advertising and marketing of brand tags.**

RECOMMENDATIONS FOR WORLD ECONOMIC FORUM

The methodology adopted by WEF in TCI report is thoroughly examined and few relevant indicators which seem to be biased (against India) or have some loopholes have been identified.

After analysing all the 90 indicators, 3 indicators have been identified and the loopholes present in these indicators are as follows:

Indicator 12.04 - Automated teller machines per adult population

This indicator measures the number of automated teller machines per 100,000 adult population

Till 2015 this indicator was calculated as the number of automated teller machines accepting visa cards per 1 million population. Majority of the economies are moving towards becoming cashless economies, hence the need of installing ATMs is reducing every day in order to encourage digital transactions.

Hence, instead of calculating this indicator as the number of ATMs installed, this indicator should focus on calculating number of adults using digital cash as the mode of making payments to give a more global and recent picture.

Indicator 12.03 - Presence of major car rental companies

Index of presence of major car rental companies (1 = no company is present, 7 = all seven considered companies are present)

This indicator measures the presence of seven major car rental companies: Avis, Budget, Europcar, Hertz, National Car Rental, Sixt and Thrifty. For each country WEF counts how many of these companies operate via an online research.

The car rental companies that are considered in this indicator are at a nascent stage in Asian countries. These companies are either based in Europe or North America and hence have major markets in these continents. Such disparity in the operations of these companies creates a bias against Asian countries. India and other Asian countries have domestic car rental services catering to the people. One such example of a domestic car rental company is Zoomcar which caters to the Indian customer base. These domestic car rental companies are not considered by WEF as part of this indicator.

In order to give an even-handed opportunity to all countries, domestic car rental companies should also be considered while scoring this indicator.

Indicator 1.06 - Cost to deal with construction permits

This indicator measures the cost associated with the procedures necessary for a business to build a warehouse (with respect to its value).

Value of a country = $\frac{\text{Cost of construction permits (warehouse)} \times 100}{\text{Warehouse value (50 times per capita income)}}$

The value of a country for this indicator is calculated with the denominator as value of warehouse multiplied with 50 times the per capita income of the country. For this indicator higher value means lower rank.

Countries having lower per capita income significantly, despite these countries having equal or even lower cost of construction permits than countries with higher per capita income leads to lower rank/score in the indicator.

The observed trend in this indicator's dataset is that countries in the first stage of development tend to be on the lower side of the score spectrum despite having considerably low cost of construction. Thus, having per capita income as a factor in the denominator obscures the true value of cost of construction permits. Hence, we recommend that either the true cost of the permits should be analysed or the per-capita income should be normalised into the slabs.

Indicator 5.07 - Mobile network coverage

This indicator refers to the percentage of inhabitants who are within range of a mobile cellular signal, irrespective of whether or not they are subscribers.

This indicator "Mobile network coverage" should be improved and changed to "Number of Towers per 100 population" since it would be a more accurate and appropriate indicator to assess any country.

Indicator 5.04 – Broadband internet subscribers

This indicator refers to the fixed broadband internet subscriptions per 100 population. This refers to total fixed (wired) broadband Internet Subscriptions.

Majority of the tourist (either domestic or international) do not use fixed broadband internet since they tend to use their own mobile internet service. Moreover, globally it has been observed that fixed broadband internet usage is falling because there is a trend of using personal internet. Hence, we recommend that either this indicator should be removed completely or its definition can be changed accordingly.

CLARIFICATIONS REQUIRED FROM WORLD ECONOMIC FORUM

During the study, it was observed that in 3 indicators, formula derived for calculations of value was not matching with the definitions provided for the indicator. Following mentioned are the indicators:

1. Indicator 6.05: Timeliness in providing T&T data
2. Indicator 7.02: Openness of bilateral Air Service Agreements (ASA)
3. Indicator 9.05: Environmental treaty ratification

Indicator 6.05: Timeliness in providing T&T data

Value of the indicator - Number of latest data available (0 = no data, 22.5 = data reported for all the periods considered) | 2015–2016

This indicator shows the availability of two key T&T indicators (international tourist arrivals and tourism receipts) on a monthly or quarterly basis

In TCI report 2015, the period considered is from October 2013 to November 2014 (i.e) 14 months. 50% of the weightage has been given to the lower of the two scores, so the scores range from a minimum of 0 to a maximum of 21. For a country which scores full in both the measures, the value will be calculated as 14 for one measure and 7 for the other, making a total of 21.

In TCI report 2017, the period considered is from October 2014 to November 2016 (i.e) 26 months. The calculation methodology remains same. Therefore, the maximum value a country can achieve in this indicator becomes 26 for one measure and 13 for the other, total being 39. The scale mentioned in TCI report 2017 is given as 0 for no data and 22.5 for data reported for all periods considered.

A clarification is required regarding the scale of this indicator.

Indicator 7.02: Openness of bilateral Air Service Agreements (ASA)

Value of the indicator - Index measuring the average openness of air service agreements (0 = most restricted, 38 = most liberal) | 2011

A simplified definition of this indicator needs to be obtained so as to implement corrective measures for the same.

Indicator 9.05: Environmental treaty ratification

Value of the indicator - Total number of ratified environmental treaties (0-32 scale, where 32 is best) | 2016

Total number of treaty's mentioned in TCI report 2017 are 33, whereas the maximum value a country can achieve in this indicator is 32 (as given in the definition). A clarification is required regarding the scale of this indicator.