

ENVIRONMENTAL GOVERNANCE TWO YEARS OF NDA



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Centre for Science and Environment (CSE), has reviewed the performance of the National Democratic Alliance (NDA) government at the end of its two years in office on measures of environmental governance, particularly as undertaken by the Ministry of Environment, Forest and Climate Change (MoEF&CC). CSE analysis focuses on some key areas which have remained matters of discussions and debates- including green clearances, industrial pollution control and monitoring, air pollution, waste management, cleaning Ganga, proposed reforms for forest governance and climate change. Following key trends emerge in terms of action and decision-making in these areas.

KEY TRENDS AND HIGHLIGHTS

GREEN CLEARANCES

- Going by the available data, there is no significant departure with respect to environmental clearances (EC) granted for key sectors in NDA from the United Progressive Alliance (UPA) Government. For forest clearances (FC), the average rate of forestland diversion in fact has reduced under the NDA government (see *Figures 1, 2 and 3*).
- The mining and infrastructure sector was focus of green clearances in the past two years. For ECs granted at the Central level in the first two years of the NDA, more than 300 projects (new and expansion) combining coal and non-coal mining have been cleared. Among these, there are 68 coal mining projects with nearly 164.29 MTPA capacity. Mining sector was the focus of FC as well. The highest share of total forestland diversion was for the mining projects- 29 per cent of about total 47,473 hectares of land diverted (combining in-principle and final approvals).
- The rejection rate of projects remains very low. In fact, the rejection of projects coming up in wildlife sanctuaries and national parks has reduced under the NDA government.
- Changes have been made to simplify and bring transparency in the green clearance processes. Particularly four policy measures have been adopted in this regard-
 - A single window clearance interface for environmental, forest and wildlife clearance has been set up to reduce hassle, make clearances time-bound, and increase transparency.
 - Terms of Reference (ToR) has been standardised for various sectors to expedite the environment impact assessment (EIA) process.
 - Project clearances are being devolved to state level, district level and regional authorities.
 - Public consultation has been diluted. Exemptions have been provided in the public consultation process, most pronounced in the case of coal mining sector. Also the requirement of Forest Rights Act (2006) compliance has been relaxed in parts.

The overall trend suggests that green clearances have been made faster through incremental changes 'easing' the clearance process. However, there is no evidence that the quality of EIA reports have improved or enforcement on the ground have become effective. The NDA government has not undertaken necessary reforms and strengthened institutions to improve the green clearance process for safeguarding environment and community interests.

INDUSTRIAL POLLUTION CONTROL AND MONITORING

- The NDA government has taken significant measures to improve pollution standards and monitoring for industrial sectors. For instance-
 - The standards for coal-based thermal power plants have been made stringent. The standard for the coal based power sector has been revised after a decade and will have significant impact on improving the quality of environment in the country. In addition, a new



notification on fly ash utilization has been issued that will improve the use of fly ash in various sectors like bricks, cement, road making etc.

- ❑ Initiatives have been undertaken to tighten the pollution standards for many other industrial sectors as well such as iron and steel, cement, pulp and paper, fertilizer, sugar etc.
- ❑ The NDA government is focusing on reducing water pollution from industries, which is a very positive step. Most of the sectors where new pollution standards have been proposed or already enacted, have been asked to recycle and reuse all wastewater.
- ❑ The 17 categories of highly polluting industries have been asked to install continuous emissions monitoring systems (CEMS). If this technology-enabled monitoring system is implemented well, it would improve pollution enforcement from industries significantly.

All the above measures now need to be closely watched for implementation. There is indication that the Government is viewing technology based mechanisms and self-regulation as main tools for enforcing the regulatory provisions. There is no effort to strengthen regulatory institutions. Technology is important but not sufficient to ensure better compliance and enforcement. Experience from world over shows that “self-regulation” and “technology-enabled monitoring” required strong institutions to deliver results.

AIR QUALITY AND TRANSPORTATION

- Some important steps have been taken by the Government to address the pressing problem of air pollution in urban areas. For example-
 - ❑ An air quality index has been implemented to inform people about daily air quality along with advisory on health consequences.
 - ❑ The government has decided to leapfrog to Euro VI emissions standards in 2020, skipping the Euro V emissions standards, which will lower the gap between emissions standards for diesel and petrol cars, and effectively lower all emissions.
 - ❑ Co-relating high traffic volumes to increased air pollution, has levied an infrastructure cess on all cars. This has been done on a sliding scale of pollution potential, the lowest being one per cent on small petrol, LPG (liquefied petroleum gas) and CNG (compressed natural gas) cars and the highest- four per cent- on other higher engine capacity vehicles and Sport Utility Vehicles (SUV). A one per cent tax has also been imposed on all luxury cars exceeding value of Rs 10 lakhs.
 - ❑ The voluntary vehicle fleet modernisation scheme has been announced for lowering pollution emissions from old vehicles.
- The Government’s pro-activeness to extend LPG connection among rural poor, and households below the poverty line is another welcome move. The clean fuel option if extended effectively will significantly reduce indoor and outdoor air pollution in rural areas and improve the health of women folks.

However many of these measures remain as isolated ones, and their potential for improving air quality is challenged by lack of complimentary and comprehensive action plan. Till date the Government has failed to put in place a framework to enable cities to implement clean air action plans to meet ambient air quality standards. Over the last two years it has also failed to deploy transportation strategies and related infrastructure that are needed to clean up the air in cities.

WASTE MANAGEMENT

- Waste management has clearly emerged as a priority issue for the NDA Government. Six waste management Rules have been notified covering the areas of solid, plastic, electronic, bio-medical, hazardous, and construction and demolition (C&D) waste. Most of the Rules have been significantly improved from their earlier versions to address several challenges of the day; the C&D Rules has been brought for the first time.
- Some key improvements include, separation of various wastes at source for better treatment and management (such as for solid waste, bio-medical waste), encouraging reuse and recycle, expanding the scope of application of most Rules.

It now must be ensured that these Rules are properly implemented. For this empowerment of local and state-level agencies and with proper co-ordination between various agencies in the chain of processes is crucial. Suitable and formal integration of the informal sector must also be ensured.

CLEANING GANGA

- The NDA Government has made cleaning Ganga a top priority. A corpus of Rs 20,000 crores was outlayed for the Namami Gange (Clean Ganga) project in May 2015 for five years. A plan was also rolled out to clean the river by 2019, and the National Mission for Clean Ganga (NMCG) has been coming out with several promising plans.
- The Union budget of 2015-16 also proposed tax benefits for contributors to Clean Ganga projects, declaring a 100 per cent tax exemption.
- However actions on ground remain far from satisfactory. For instance-
 - The Union Ministry of Water Resources, River Development and Ganga Rejuvenation so far has met only three points in its thirteen point agenda for cleaning the river. These include cleaning the river surface and ghats, creation of a Ganga task force and creation of Ganga *grams* (model villages) along the main stem of the Ganga.
 - All of the 21 proposals sanctioned since July 2014 for cleaning Ganga (according to NMCG), are yet to be implemented.

The situation thus stands that the potential of the big money and the plans have not been matched by actions on the ground. The Government and the implementing authorities need to step up for quick and effective action.

FOREST GOVERNANCE

- Forests remain a key focus of the reform initiatives as evident from various moves made by MoEF&CC in the last two years. But the various initiatives are piecemeal and do not address the challenges of forests comprehensively.
- There are indications that the government is shifting from a people-centric approach towards a more industry-centric, technocratic approach for forest management. For instance-
 - A major effort of the Government remains unlocking the Compensatory Afforestation Fund (CAF), the corpus of which currently stands at Rs. 42,000 crores. Within a year of taking office, in April 2015, the Union Cabinet chaired by the Prime Minister cleared the CAF Bill 2015, and in May 2016, the Bill has been cleared by the Lok Sabha as well. The potential of this money remains enormous for improving the state of forests as well as the livelihoods of forest dependent communities if used through proper planning and accountability. However, the Bill as drafted has several limitations. A key concern remains that it does not have any scope for participation of local communities. It also lacks provisions for sharing forest benefits with communities.
 - The Government has also come out with a proposal to divert “degraded” forests to the private sector in carrying out afforestation for industrial use. If this proposal was implemented, it would destroy the flourishing farm-forestry sector of the country that employs millions of farmers to supply wood to various industries.

The proposed measures of forest conservation and management are geared towards increasing forest cover, without emphasizing equally on improving biodiversity and productivity of forests. It also does not ensure forest benefits to local communities.

These approaches if continued with will neither be able to ensure the overall improvement of the quality of our forests, nor their sustainable use by people. Any proposed reform must capture the perspective of both ecology and people’s livelihoods. Forests also must not be regenerated or protected in a fenced and technocratic manner.

CLIMATE CHANGE

- Changing the name of the Union Environment Ministry- from Ministry of Environment and Forests to Ministry of Environment, Forest and Climate Change, soon after taking office in 2014, indicated the importance the Government wants to give to the issue of climate change. The NDA Government has remained more proactive than the UPA in communicating to the world the concerns and actions taken by the country on climate change. However, engagements and responses of the Government over the past two years in various platforms gives a mixed signal on how successful we will remain in dealing with the multiple challenges of this crucial issue.
- The Climate Change Conference (COP 21) held in December 2015 in Paris, has been largely a lost opportunity. Though India came out as a proactive player and took lead in the area of renewable energy by setting up the International Solar Alliance, overall the Paris Agreement did not prove to be favourable for India or other developing countries. The Agreement remained largely as a win-win one for the big polluters, where no target have been set on countries to cut emissions. On the other hand India lost the opportunity to exert the “right of development” of the world’s poor.
- Even terms which India could get in the Agreement- such as “equity”, “common but differentiated responsibility” (CBDR), “climate justice and sustainable lifestyles and consumption”, there is no elaboration on how these terms can be operationalized. Many of these are only mentioned in the “preamble” and not in the operational part of the Agreement.
- In the Montreal Protocol, India has now agreed to negotiate in amending the Protocol to phase down hydrofluorocarbons (HFCs). The success of the amendment will depend mainly on how government is able to bypass the interest of multinational companies who want to benefit by selling a patented synthetic chemical called hydrofluoroolefin (HFO).
- On the domestic front climate change adaptation remains a key concern as farmers are facing huge crop losses in successive years due to erratic and extreme weather events. The Government’s proposal of the crop insurance scheme – Pradhan Mantri Fasal Bima Yojana – thus is a welcome move. If implemented well, this can safeguard farmers ravaged by extreme weather events.
- The Government has also increased the ambition of renewable energy – 100 gigawatt (GW) for solar and 75 GW for other renewables by 2022, that can help to mitigate green house gas emissions.

FACTS AND ANALYSIS

I. GREEN CLEARANCES

Easing clearance, but no improvements in enforcement

A. ENVIRONMENTAL CLEARANCE FACTS

1. PROJECTS CLEARED IN MAJOR DEVELOPMENT SECTORS

In the past two years (June 2014 until April 2016), the MoEF&CC has given environmental clearances (EC) to nearly 385 development projects (combining new and expansion projects) in major sectors – mining (coal and non-coal), thermal power plant, hydropower, iron and steel and cement (see Table 1: *Environmental clearances granted to major sectors*). The number accounts for clearances given at the Central level.

- Among these, a key focus has been the mining sector combining both coal and non-coal projects. For coal mining, 68 projects with a cumulative production capacity of about 164 million tonnes per annum (MTPA) were cleared.
- For non-coal mining projects a total number of 250 projects of about 338 MTPA were cleared. Among this, majority clearances involve mining for sand/bajri/gravel/stone etc.
- Besides the Government has also granted considerable clearances for roads (also connecting roads) and highways including projects in coastal areas. About 150 projects have been cleared under this as per Government categorization.

Table 1: Environmental clearances granted to major sector (June 2014 - April 2016)

Sector	No of Projects	Capacity (Unit)
Coal Mining	68	164.29 MTPA
Iron Ore Mining	12	41.66 MTPA
Lime Stone Mining	34	64.68 MTPA
Bauxite Mining	10	9.57 MTPA
Other Minerals (including sand/bajri/gravel/stone)	194	222.43 MTPA
Iron and Steel	24	25 MTPA
Cement	15	49 MTPA
Thermal Power	21	19,517 MW
Hydro	7	3643 MW

2. UPA VS. NDA

(i) No clear trend indicating a massive increase or decrease in ECs in the first two years of the NDA Government as compared to the UPA

- For instance, for coal, bauxite and limestone mining, the average trend of granting clearances has remained more or less same when compared between the last five years of the UPA terms and the first two years of the NDA, taking a yearly average of number of clearances granted and capacity cleared for the respective periods (see Figures 1-2).
- The clearances given to the coal based thermal power plants have significantly reduced actually in the last two years. This is reflective of the stagnation in the industry. Between 2009–2013, the industry had taken clearances for more than 1.5 lakh megawatt (MW) worth of projects. However, there was a slow down since 2013, which continues in the first two years of the UPA term.

(ii) Outstanding concerns with coal remains

For years, a key concern with coal mining has been how and where mining is happening. There have been two outstanding concerns; the first is with respect to mining happening in critically polluted coalfields such as Singrauli, Hazaribagh-Chatra, Korba, Angul-Talcher etc., and the second is with respect to provisions of public consultation that have been undermined. Unfortunately the trend has not been reversed yet.

Figure 1: Environmental clearances for major sectors: UPA vs. NDA

(Yearly average for UPA: period 2009- May 2014; and NDA: June 2014- April 2016)

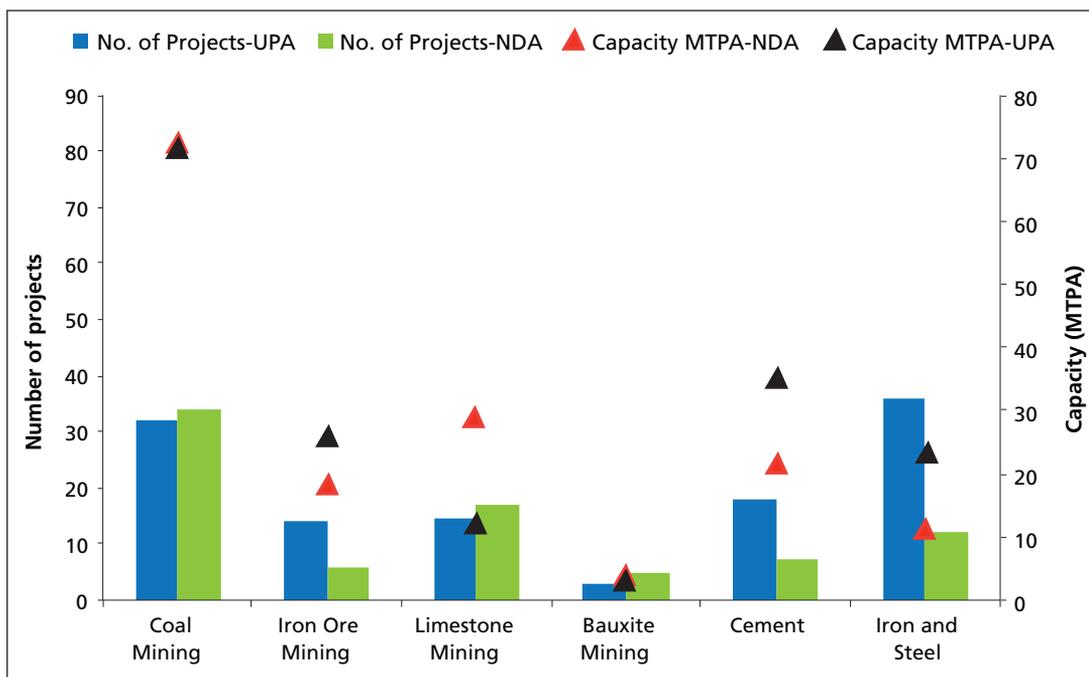
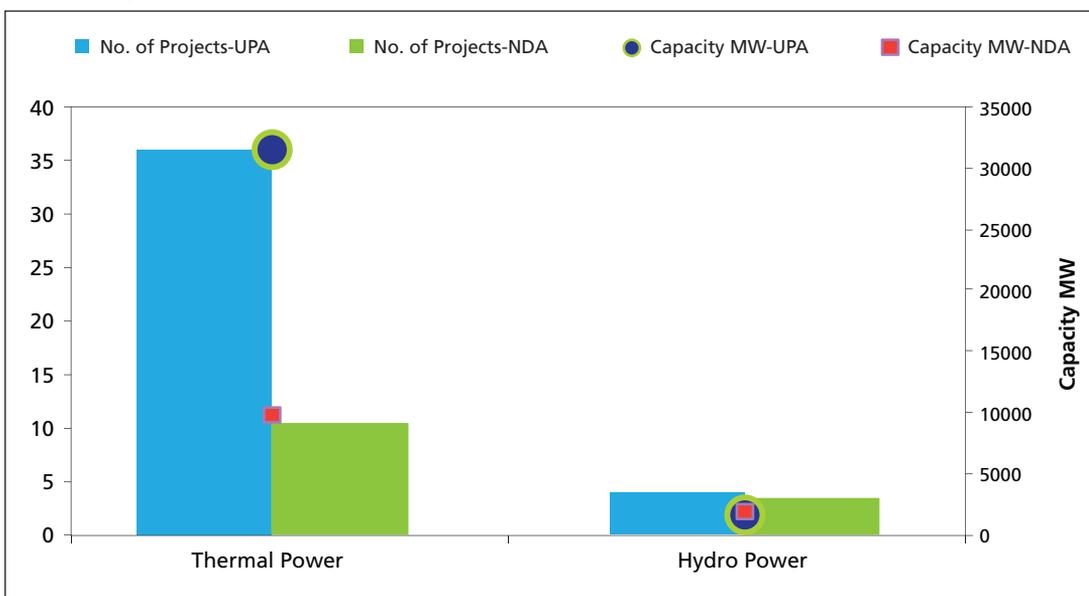


Figure 2: Environmental clearances for Thermal and Hydro power sectors: UPA vs. NDA

(Yearly average for UPA: period 2009- May 2014; and NDA: June 2014- April 2016)



- Projects (including expansion) continue to come up in critically polluted coalfields, such as in Singrauli district of Madhya Pradesh and Dhanbad district of Jharkhand. For instance, out of the eight coal mining projects cleared in MP with a cumulative production capacity of 18.45 MTPA between June 2014 to April 2016, four were in Singrauli (10.95 MTPA) two in nearing Sonebhadra (2.5 MTPA), and one in nearing Sidhi (4 MTPA).
- The provision of public hearing also has been progressively relaxed for expansion of coal projects. The trend was set during the UPA times, the NDA Government has hastened the process further (see section *Less projects requiring public hearing*).

The MoEF&CC has also taken measures to expedite coal production from a number of mines that were cancelled by the Supreme Court in 2014. Following the passing of the Coal Mines (Special Provisions) Bill 2015, by the Parliament (March 20, 2015), Ministry facilitated transfer of ECs from the previous coal mine allottees to the new leaseholders, without them having to obtain any extra approval. This was done by amending the EIA Notification 2006. The Notification until now required a “no objection” certificate to be obtained from the original holder of the EC and also from the concerned authority when a particular project or activity changes hands. The amended notification dated March 23, 2015, removed the requirement of the no objection certificate. The EC of a cancelled block can be transferred to the person whom such block will be subsequently allotted without it.

Similarly transfer of FC has also been facilitated by removing the need of a no objection certificate from the original user agency as was earlier required under the Forest Conservation Act (1980). The direction was communicated on March 31, 2015.

B. FOREST CLEARANCE FACTS

1. FORESTLAND DIVERSION FOR MAJOR DEVELOPMENT SECTORS

- In the past two years (June 2014 until April 2016), the MoEF&CC has allowed about 47,473 hectares (ha) of forestland diversion including in-principle (Stage I) and final (Stage II) clearances (see Table 2: *Forest clearances granted to major sectors*).
- Among these, mining accounts for highest share of forestland diversion, about 29 per cent. This is followed by total diversion for power sector (combining hydro power, wind power, thermal power and transmission lines) accounting for about 25.5 per cent.

Table 2: Forest clearances granted to major sector (June 2014 till April 2016)

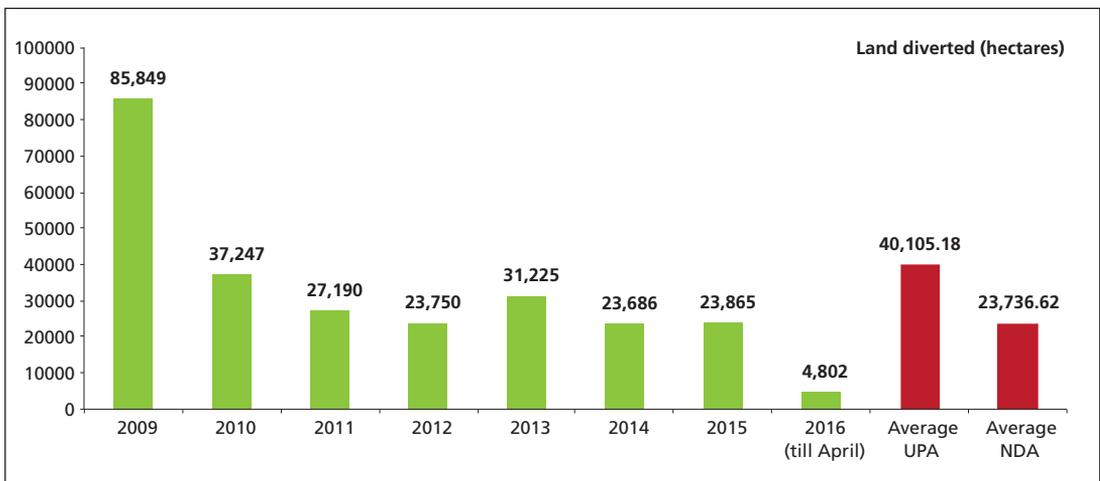
Sectors	No. of clearances final	Land diverted (ha)	No. of clearances in principle	Land diverted (ha)	Total no. clearances	Land diverted (ha)
Mining	49	9668.01	39	4045.42	88	13713.43
Transmission Line	87	2052.77	60	2130.79	147	4183.56
Thermal Power	5	2071.38	0	0	5	2071.38
Wind Power	3	101.76	7	432.26	10	534.02
Hydro Power	5	481.91	7	4825	12	5306.91
Irrigation	25	2219.035	26	2695.12	51	4914.16
Railway	14	490.35	24	1639.27	38	2129.62
Road	113	1807.13	138	2374.82	251	4181.95
Defence	1	180	3	3898.69	4	4078.69
Industry	27	67.527	8	0.92	35	68.45
Borehole Prospecting	1	5	1	1457.33	2	1462.33
Dispensary/Hospital	4	41.895	1	0.02	5	41.92
Drinking Water	9	72.86	6	21.28	15	94.14
Rehabilitation	9	1208.78	0	0	9	1208.78
School	3	0.488	1	22.08	4	22.57
Others	381	2208.46	234	1252.89	615	3461.35
TOTAL	736	22677.36	555	24795.89	1291	47473.25

2. UPA VS. NDA

Average pace of forestland diversion remains low under the UPA Government: Going by the available data as obtained during the UPA and the NDA times, it appears that the average rate of forestland diversion has been significantly low under the NDA term (see Figure 3: *Forestland diversion: UPA vs. NDA*).

Figure 3: Forestland diversions: UPA vs. NDA*

(Yearly average for UPA: period 2009- May 2014; and NDA: June 2014- April 2016)



Note: * The total forestland diversion includes both in-principle and final approvals, as a breakup was not available for majority of the UPA years at that time

C. WILDLIFE CLEARANCES

1. DECISIONS OF THE NATIONAL BOARD OF WILDLIFE

- The issue of wildlife clearance encountered some controversy during the early days of the NDA Government. In its first meeting under the new Government, in August 2014, the National Board of Wildlife (NBWL) recommended 133 projects. There was only one rejection, and 26 were

Table 3: Decisions on wildlife clearances by the NBWL

(2009- April 2016)

Year	Number of Meetings	Recommended	Deferred	Rejected	Percent Recommended	Percent Rejected
Under NDA						
2016	1	34	9	1	77.27	2.27
2015	5	134	70	2	65.05	0.97
2014	1	133	26	1	83.13	0.63
Under UPA						
2013	3	56	71	21	37.84	14.19
2012	3	42	58	6	39.62	5.66
2011	4	88	33	6	69.29	4.72
2010	3	30	44	24	30.61	24.49
2009	4	44	37	11	47.83	11.96

deferred/sent back. The issue became hugely controversial as it was suspected that this large number of recommendations followed the re-constitution of the NBWL that happened just a month earlier in July 22. The matter moved Supreme Court. The Court questioned the constitution of the NBWL, and put the projects that were cleared on hold. Following this the NBWL was reconstituted in September 11, 2014.

- In 2015, decisions remained more conservative. Though rejection rate remained low- less than one per cent, several projects were held back. The same holds for the first meeting of 2016 as well (see Table 3: *Decisions on wildlife clearances by the NBWL*).

2. UPA VS. NDA

Decisions taken by the NBWL during the last five years of the UPA (2009 to 2013), as compared to the two years of the NDA term, however suggest that decisions by the Board remain more lenient since 2014. Average rejection and also deferrals were much higher in the UPA period.

D. POLICY MEASURES TO EXPEDITE GREEN CLEARANCES

Regulatory and policy changes with respect to green clearances proposed by the MoEF&CC, is primarily oriented around expediting clearances for “ease of doing business”. This has been done chiefly through the following measures.

1. MAKING CLEARANCES ONLINE AND SINGLE WINDOW

The MoEF&CC soon after taking charge in May 2014, has set up an online mechanism for clearances. The move was arguably to make green clearances time-bound, reduce hassle for industries, and make the process transparent. In due course, a portal called the “Online Submission & Monitoring of Environmental, Forests and Wildlife Clearance” (OSMEFWC) was rolled out. The portal essentially allows submissions of EC, FC and WL through a “single window” interface. The portal also gives a unique id for each proposal for future reference, allows monitoring of the proposals submitted by the user agencies, editing/updating the details of proposals and displays status of the proposals at each stage.

Though features such as a single window interface and particularly a “unique id” for each proposal is helpful for tracking clearances, the system is largely focused on the convenience of the project proponent. There is no conclusive evidence of better and comprehensive assessment of projects or compliance of clearance conditions. To improve the single window system and making it truly effective for environmental protection, while also keeping clearances time bound, the following needs to be further done-

- The government should develop a mechanism to integrate the various consents, clearances and authorization. It must evolve a system of one integrated clearance for environment, forests and coastal zone. Wild life clearance process can be kept separate.
- The clearance(s) needs to be given based on one comprehensive impact assessment report that captures the impact of a proposed project in entirety, and decisions can be made on such comprehensive understanding. Clear monitoring and compliance conditions should also be set as part of the clearances.

2. STANDARDIZATION OF PROCESS- TERMS OF REFERENCE

- The MoEF&CC nearing its one year completion also developed standard Terms of Reference (ToR), for preparation of EIA reports or Environmental Management Plans (EMP) for projects that requires EC under the EIA Notification, 2006. A prime reason for standardization remained “expediting the process of EC”. Also this would help in “rationalizing the process of EC, remove arbitrariness and make the system transparent”.
- The standard ToR guideline notes that the proponent can commence the EIA study after online registration based on such ToR. However, the expert appraisal committee (EAC)/ state EAC will have the right to stipulate additional project specific conditions within 30 days of the online registration ‘considering’ project’s features.

Proposing sector specific standard ToRs for preparation of EIA reports/ EMPs is a good move as this can reduce time and put fewer burdens on EAC/SEAC members and potentially minimize arbitrariness in the process. However, the standard ToRs fall short on the following accounts that must be integrated to make the EIA report/ EMP comprehensive, including accounting for the concerns of communities.

- The standard ToRs does not require a site visit by EAC/SEAC members to give specific recommendations before the EIA can commence. This essentially means that the developer will choose the site, apply online and start the EIA. No doubt, it will reduce time but it will not ensure optimum site selection.
Poor site selection has made projects extremely contentious in several cases after ECs were granted. This has been both due to environmental concerns as well as issues of livelihood loss. Examples include the Nagarjuna thermal power project in Sompeta district of Andhra Pradesh, the Nirma cement plant in Bhavnagar district of Gujarat, the Gare IV/6 coal mining project of Jindal group in Raigarh district of Chhattisgarh, the Lanjigarh bauxite mining of Vedanta in Kalahandi district of Odisha etc.
- Therefore site selection must not be left at the will of the project proponent. The MoEF&CC should provide a standardized protocol for site selection taking into account all considerations, and only after conforming to that a developer can go ahead with preparing an EIA based on the ToR. This will not only help development to happen in a sustainable manner, but will also make projects less controversial once they are cleared.
- Integrating a protocol of Cumulative Impact Assessment (CIA) is also of utmost importance. The Ministry should come up with a guideline of projects for which CIA must be undertaken and specify a framework.

3. UNDERMINING COMMUNITY VOICES TO CLEAR PROJECTS

i. Less projects requiring public hearing

- Over years, if one issue is to be picked up for easing clearances, it is undermining the process of public consultation. The current Government continues to follow the path.
- Within its first 100 days in office, the MoEF&CC issued notifications aiding exclusion of public consultation for larger coal mining expansion projects. The process was initiated by the UPA government in 2012, but the process was hastened by issuing three notifications in quick succession. The justification for such exemption, as specified in the various office memorandum of



Table 4: Public hearing exemptions for coal mining

Dates	Exemption provisions
Under UPA	
December 19, 2012	Coal mines seeking one time capacity expansion of up to 25 per cent, with a ceiling of two million tonnes per annum (MTPA) additional production
January 7, 2014	Coal mines with up to 8 MTPA production capacity, seeking one time capacity expansion up to 50 per cent (or incremental production of 1 MTPA, whichever is more)
Under NDA	
May 30, 2014	Coal mines with production capacity over 8 MTPA and up to 16 MTPA, seeking one time capacity expansion with production enhancement up to 4 MTPA
July 28, 2014	Coal mines with production capacity more than 16 MTPA, seeking one time capacity expansion with production enhancement up to 5 MTPA
September 2, 2014	Coal mines with production capacity more than 20 MTPA, seeking one time capacity expansion with production enhancement up to 6 MTPA

MoEF&CC issued in this regard, is “to quickly ramp up coal production for enhancing power production in public interest” (see Table 4: *Public hearing exemptions for coal mining*).

ii. Gram Sabha consent and FRA compliance relaxed for certain forest diversion projects

- Public participation has also been restricted in the FC process. In a letter dated July 4, 2014, MoEF&CC directed that proposals seeking prior approval for diversion of forest land for prospecting are exempted from submitting documentary evidence in support of settlement of rights under the FRA.

In response to this, on August 27, 2014, Ministry of Tribal Affairs (MoTA) issued a memorandum addressed to MoEF&CC stating that FRA does not provide for any exemption to its provisions for any category of forests, projects and persons. The MoEF&CC therefore, should provide, in every circular, a disclaimer saying that there will be no relaxation of any norms provided under the FRA as well as the special provisions under Schedule V.

- The MoEF&CC issued another guideline in October 2014, noting that proposals seeking diversion of plantations notified as ‘forests’ for any period less than 75 years prior to December 13, 2005, and in villages which have no recorded population of Scheduled Tribes as of Census 2001 and 2011, are exempted from ensuring FRA compliance.

Again this is not a new trend and has been continued from the UPA times. For instance, in January 2014, the then MoEF had issued a circular stating that Gram Sabha consent was not required for linear projects. At that time MoTA had responded through letter in March 2014, that FRA compliance is mandatory for forest land diversion and that the January circular was illegal and should be withdrawn.

Public support and involvement is essential for improving the status of environment and forests in the country. We must involve the people in regulatory processes and procedures, as stipulated under the EIA Notification (2006), or the FRA (2006). In fact, there should be efforts to strengthen people’s participation, so that communities do not feel alienated. Under no circumstances the scope should be diluted or restricted.

4. DECENTRALIZATION OF GREEN CLEARANCES

(i) Decentralization of Environment Clearances

Creation of district level authorities to clear small scale mining projects

- In January 15, 2016, the EIA Notification (2006) was amended, making EC compulsory for mining of minor minerals in areas less than or equal to five hectares. District level authorities- District Environment Impact Assessment Authority (DEIAA) and District Expert Appraisal Committee (DEAC), have been created for this. The authorities have also been charged with ECs for clusters of small leases, where the cluster size is greater than five ha. but less than 25 ha., with no individual lease being more than five ha.

- The four-member DEIAA, chaired by the District Magistrate / District Collector, will be responsible for grant of EC. The Sub-Divisional Officer of the district head quarter will be the member-secretary. For the purpose of assisting the DEIAA, there will be an 11-member DEAC. The DEAC will be chaired by the senior most Executive Engineer of the Irrigation Department. The Assistant Director or Deputy Director or District Mines Officer or Geologist in the district (in that order) will serve as the Member Secretary.
- Provisions have also been brought in to aid scientific mining and improve monitoring of small scale mining activities. Measures include:
 - Preparation of a District Survey Report to determine areas where mining can be allowed and where it must be prohibited. The report should be developed for each minor mineral in the district separately,
 - Provisions for cluster mining including procedure for obtaining an EC for clusters. A cluster situation will arise when distance between the peripheries of one lease is less than 500 meters from the periphery of other lease in a homogeneous mineral area. For consideration of EC of one cluster, one EIA report/ EMP should be prepared for the entire cluster. Also there will be one public hearing. However, ECs shall be applied for and issued to individual project proponents in the cluster based on the common EIA/EMP and the public hearing,
 - Stricter monitoring of mining activities through various technology-enabled services has also been provided.

More projects to be cleared by states

The MoEF&CC in earlier occasions has allowed more projects to be cleared by state- level clearance authorities, i.e., State Environmental Impact Assessment Authority (SEIAA) and State Expert Appraisal Committee (SEAC). This was done by amending the “schedule” in the EIA Notification, 2006, and placing more projects under category B.

According to the EIA Notification 2006, depending on the spatial extent and potential impacts of proposed development projects/ activities, they are broadly categorised into A and B. All category A projects are appraised by the Central EAC of the MoEF&CC and cleared by the Union ministry, while category B projects are cleared by state authorities – SEIAAs, following appraisal by SEACs.

In June 25, 2014, the Notification was amended to place more projects under category B in sectors such as thermal power, river valley, mining and other industrial sectors such as paper and pulp, distilleries and fertilizers. Some significant changes are as follows:

Thermal power plants: Two new fuel types used in thermal power plants- “biomass” and municipal solid non-hazardous waste”- were introduced to distinguish projects placed under category B. Now following types of thermal power projects can be cleared by states:

- Projects greater than or equal to 50 MW but less than 500 MW capacity; using coal, lignite, naphtha and gas based fuel.
- Projects greater than or equal to 5 MW, but less than 50 MW capacity, using all other fuels except biomass and municipal solid non-hazardous waste.
- Projects between 15-20 MW capacity, using municipal solid non-hazardous waste as fuel.
- Projects equal to or more than 15 MW capacity using biomass fuel.

Irrigation and river valley projects: “Irrigation projects” was inserted as a category in the schedule distinguishing it from river valley projects. The 2006 notification had specified that all river valley projects under 10,000 of culturable command area (CCA) are under category B, thus requiring a clearance by the state, and more than that as category A.

- The new amendments specify irrigation projects involving command area between 2,000 to 10,000 ha under category B. These are particularly medium irrigation projects.

- The amendment has done away with clearances for projects below 2,000 ha. These fall under the official classification of “minor irrigation projects”. These typically include all groundwater irrigation projects.

ii. Decentralization of Forest Clearances

The MoEF&CC also decentralized the FC process, particularly for linear projects. This was done by proposing amendments to the Forest (Conservation) Rules (2003) in October 2014. The Regional Empowered Committees (REC) constituted at each Regional Office of the MoEF&CC were empowered to grant clearances to all linear projects like road, canal, transmission lines, pipelines etc., irrespective of the forestland involved.

There must definitely be efforts to devolve the power of giving clearances. But this should only be done after adequately enhancing the capacity of the respective authorities for better assessment, ensuring transparency of the process, and accountability.

The capacity and accountability of the state level clearance authorities, the SEIAAs and SEACs, have been one of the major issues concerning ECs at the state level. The challenges now will simply multiply with the creation of district level authorities as the DEIAAs have been made accountable to the SEIAAs. Similar concerns exist with decentralization of FCs. Despite the fact that the number of regional offices have been increased (10 now), but does that ensure better assessment of projects? The status quo does not suggest so.

Therefore, institutional strengthening and accountability must be prioritized by the Government, if protection of environment and compliance of conditions on ground is to be ensured. Otherwise it will just be a shifting of bureaucratic responsibilities. Also decentralization should not only be limited to the shifting of bureaucratic processes, it also should be done in terms of resource management by empowering and integrating communities.

Expediting mining projects, inter-ministerial group to propose revisions

To expedite clearances of new mining projects, the Government on March 23, 2016, has constituted an inter-ministerial group, under the aegis of the Ministry of Mines. The MoEF&CC remain at the core of it. Out of the 12 members from various central ministries, three are from the MoEF&CC, second highest after four members from the Mines Ministry.

The group, named the Post Auction Mining Clearances and Approvals Facilitator (PAMCAF), as evident from the name is to come up with strategies/ measures to “facilitate and expedite” clearance for mining blocks that are now being auctioned. The first meeting of the PAMCAF, held on May 10, 2016, gives a sense of how clearances are to be facilitated. According to the minutes of the meeting, the group has proposed a revision of timeframe for ECs and FCs for mining. Simultaneously changes have also been proposed for mining plan and land acquisition process. For ECs, a time reduction is under consideration for ToRs period and public consultation. For FC, a standard timeline is being considered for different stages- Stage I approval, application for Stage II after Stage I compliances, and Stage II approval.

II. INDUSTRIAL POLLUTION CONTROL AND MONITORING

Significant tightening of standards

The NDA government has taken several steps on industrial pollution control during its last two years tenure. Some of the initiatives are new while others are carried over and updated from previous government’s initiatives. These includes-

a. Proposing real time monitoring of emissions and effluent discharges

Traditional pollution monitoring system in India, primarily based on manual means, has been infamous for being manipulated and fraught with problems of reporting. To address this, the Government has stepped up to implement a real time monitoring system- continuous emissions monitoring systems (CEMS).

- The Government's pro-activeness to institutionalize CEMS and the plan to implement it nationwide is a certainly a welcome move. In April 2015, the Government issued a draft notification to amend the Environment Protection (EP) Rules, 1986 and create provisions for real-time monitoring of air emissions and effluents quality. The draft containing various provisions for installation, calibration, data collection, data transfer, and compliance for CEMS are yet to be notified. The Government is currently revising the draft following consultation/comments of various stakeholders.
- The need to install CEMS by industries had been flagged more than two years back by the central pollution control board (CPCB). In February 2014, the CPCB had given directions regarding installation of CEMS by industrial units. The directions required 17 categories of highly polluting industries (as identified by CPCB) to install real-time monitoring systems for air emission and/or effluent discharge. The directions were also applicable for other common pollution control facilities such as common effluent treatment plants (CETP), common bio-medical treatment facility, common hazardous waste treatment facilities, Municipal solid waste treatment facilities and other industries as mandated by CPCB/SPCBs/PCCs.
- So far, nearly 80 per cent of industries have installed CEMS. Nearly 10 continuous water quality monitoring systems (water/effluent CEMS) have been already installed while 113 are proposed. More than 200 continuous ambient air quality monitoring systems (CAAQMS) have been installed.

However, there still remain issues to be addressed to ensure that the system functions optimally. There is a need to develop proper guidelines and protocols for its operation, certification system, lab empanelment systems etc. Though these should have been addressed early on in the process, before industries had installed CEMS, it's better late than never. The Government lately has started taking measures on these accounts. This now needs to be completed urgently.

b. Stricter pollution standards for various industries

The Government has proposed new set of stricter pollution standards for many industrial sectors during last two years. If implemented properly, pollution from industrial sources can be considerably reduced.

- In July 2015, draft notifications were issued to revise standards for a number of industrial sectors such as cement, pulp and paper, paint, textile and fertilizer. These yet remain to be finalized.
- In December, 2015, new standards for coal based thermal power plants were notified. In January 2016, standards were also revised for the sugar industry. The latest proposal is for the iron and steel sector, for which draft standards have been issued in March 2016.

The new standards as proposed, was a task long overdue. The standards in many ways also take in account the urgency of the day. For instance, given the dire state with water pollution particularly resulting from industrial discharges in key water bodies (such as Ganga), the new set of standards has special focus on water pollution.

Specific instructions have also been given with respect to smaller sources of emissions in an industrial unit, which were not regulated earlier – such as storm water discharge, stack height of smaller processing sub-units etc. Some parameters which are difficult or costly to monitor regularly have been advised to monitor and report periodically (like 6 monthly and yearly).

c. Notification to encourage fly ash use

The recent fly ash Notification, issued in January 2016 has been an attempt to increase fly ash use by

Industries are asked to be Zero Liquid discharge

The government has put emphasis on water pollution control by industries. It is a good initiative by the government which will not only check water pollution but also reduce overall water consumption. The new set of standards limits the water consumption level by industries and has asked many to entirely recycle and reuse the wastewater and become a Zero Liquid Discharge (ZLD) unit.

- Textile plants, discharging more than 25 kilolitres per day (KLD) wastewater have to install ETP and achieve ZLD. Those plants in cluster have been asked to install CETP and achieve ZLD condition.
- Pulp and Paper industry has been proposed to meet water consumption norms for the first time. The effluent discharge norms have been further tightened in the draft proposal.
- Cement plants with co-processing have been proposed to make all efforts to achieve ZLD for its service water, incase discharge is required tighter norms will be complied.
- Most of the units in an Iron and steel plant have been asked to phase out wet type pollution control facilities and become ZLD.
- Paint industries have also been asked to make efforts to achieve ZLD for its service water, incase discharge is required tighter norms will be complied.
- Sugar industries have been given limits for wastewater discharge and asked for reducing fresh water use but to reuse treated recycled water more.
- Coal based power plants have been given limits tighter limits for water use which may require industries to be ZLD.
- CETPs have been asked to meet tighter influent and effluent quality norms. Discharge of toxic effluents on land has been discouraged. All the industries situated in Ganga basin have been asked to install CEMS and follow the guidelines given by CPCB. A charter for "water recycling & pollution prevention in Pulp & Paper industries in Ganga River Basin" implemented by CPCB and industries in 2012 have also been revised in February 2015. Now, paper plants have been asked to assess the performance and improve their effluent treatment facilities in order to achieve zero effluent discharge in river stream.

other industries. Several initiatives have been taken by government in the past 25 years but with mixed success. Significant change in utilisation rate of fly ash was achieved with the introduction of fly ash notification, 1999, its amendments in 2003 and 2009. However, 100 per cent utilisation target could not be achieved.

Some key provisions of the 2016 Notification include-

- Use of fly ash bricks in all government projects with built up area over 1000 sq.ft.,
- All cities having a million and above population should amend their by-laws mandating use fly ash bricks,
- Road projects within 100km radius of a power plant should use fly ash,
- Coal or lignite based thermal power plants in the vicinity of the cities should promote, support and assist in setting up of ash based product manufacturing units so as to meet the requirements of bricks and other building construction materials,
- The cost of logistics for fly ash transport is to be borne mostly by the generator (entirely upto 300 kms and shared basis above 300 kms) rather than the consumer.

However the authorities in-charge to implement these norms have not been indicated clearly. The law vaguely places the responsibility on state authorities.

d. New categorization for industries

In March, 2016, the MoEF&CC updated the existing colour code categorization of industries which includes- red (highly polluting), orange (moderately polluting), green (less polluting) and a new category "white" for potentially non-polluting industries (See Table 5: *Number of industries falling*



Updating pollution control and management in Critically Polluted Areas

Revised Comprehensive Environmental Pollution Index (CEPI) Methodology

The CEPI was introduced in 2009 for identification of critically polluted areas (CPA) in order to prioritize the pollution mitigation plan. The CEPI methodology published in 2009 was debated among stakeholders for its subjective indicators which allegedly had possibility of favouring and affecting some areas on CEPI scoring. In April 2016, CPCB published the revised CEPI version in order to remove the issues of subjectivity while making it more elaborate and uniform. Despite the revision, the concept of CEPI does not seem to serve the purpose; many urban areas which are more polluted than the industrial areas have not been considered. Moreover, in order to bring real changes on the ground, additional initiatives such as strict implementation of CEPI, adoption of supplementary tools such as stricter standards, emission permits, taxation, penalty and emission trading etc. in CPAs and the regulations for cumulative Impact assessment (CIA) in such areas are crucial. These are still missing.

Set of Directions for regular pollution monitoring activities in CPAs

However, as an important move, a set of directions have been issued to state pollution control boards (SPCB)/ pollution control committees (PCC) of relevant CPAs to ensure better pollution monitoring and transparency in reporting. The authorities have been asked to carry regular environmental quality monitoring, installation of CAAQMS and Continuous Water Quality Monitoring Stations in all CPAs. This is addition to the manual monitoring for ambient air quality under National Ambient Air Quality Monitoring (NAMP) and water quality monitoring under Monitoring of Indian National Aquatic Resources (MINAR) programme. The identified critically and severely polluted areas will be reviewed based on revised CEPI methodology and action plan will be prepared. All the data related to pollution monitoring, action plan, compliance will be made public on SPCBs/PCCs websites.

There also remains an outstanding concern. Though monitoring pollution in CPAs are certainly important, there should also be simultaneous effort to prevent industries to come up in these areas before pollution reduction to acceptable level is ensured. However, both during the UPA and NDA times this has been allowed.

Table 5: Number of industries falling under various categories

Colour code	Number of industries as per Old categorization	Number of industries as per new categorization
Red	85	60
Orange	73	83
Green	86	63
White	Not available	36

under various categories). The categorization is based on the Pollution Index (PI) which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources. It has also been specified that no Red category industries shall normally be permitted in the ecologically fragile area / Protected Area.

However, there remain certain concerns about the effectiveness of this categorization.

- The validity of consents for different categories of industry has been increased- five years for Red, 10 years for Orange and 15 years for Green – without specifying/ensuring check points for compliance assurance during the operational period. The earlier range was two to five years. Consent to Operate is not necessary for white category of industries,
- The categorization is also not consistent. Many of the potentially polluting industries such as CFLs manufacturing and oil and gas transportation pipelines have high risks of contamination; have been put under Green category. Many low impact and small scale industries such as silk and saree screen printing, wooden furniture, grill manufacturing etc. have been placed under “Orange

category” category. Renewable energy projects such as wind, solar and hydro with capacity less than 25 MW are placed under Green category, while these projects use many hazardous oils and have significant impacts on ecosystem,

- There also remain questions about the comprehensiveness of the exercise. It does not take into account existing environmental conditions of areas where an industry is located or will be located. The entire exercise has only focused on the re-categorisation of industries, while it has ignored incentivising any better performing industries and penalising the non-compliant ones.

e. National Air Quality Index

The Government had also launched the National Air Quality Index in April 2015 to disseminate air quality information. The index has six categories representing various air qualities- good, satisfactory, moderately polluted, poor, very poor and severe with distinct colour scheme. Each of these categories is associated with likely health impacts.

III. AIR QUALITY AND TRANSPORTATION

Mixed result; need comprehensive action plan

- In the last two years, few critical good steps have been taken by the Government through a mix of policy mechanisms to address the pressing problem of air pollution. In the urban context these include-
 - Implementation of the air quality index that informs people about daily air quality along with advisory on health consequences to help them take precaution on bad air days. But this has not catalyzed emergency response mechanisms and implementation strategy in cities.
 - The government has also decided to skip Euro V emissions standards and leapfrog directly to Euro VI emissions standards in 2020. This is needed to lower the gap between emissions standards for diesel and petrol cars and also effectively lower all emissions.
 - The Union budget of 2016-17 has also made explicit reference to the “pollution and traffic situation in Indian cities” as a “matter of concern”. To address this, an infrastructure cess has been levied on all cars- one per cent on small petrol, liquefied petroleum gas (LPG) and compressed natural gas (CNG) cars; 2.5 per cent on diesel cars; and four per cent on other higher engine capacity vehicles and Sport Utility Vehicles (SUV). In addition, a one per cent tax has also been levied on all luxury cars exceeding value of Rs 10 lakhs. This differentiated tax based on pollution potential of technologies establishes the polluter pay principle. In future, we need to build on this to create an effective deterrent on dieselisation.
 - For lowering pollution emission from old vehicles, the Government has also announced a draft scrappage policy- the voluntary vehicle fleet modernisation scheme, for old vehicles. This is an incentive programme for replacement of old vehicles with new ones. However, the caveat remains that this cannot become a mere stimulus package for car industry. The replacement vehicle must meet the most stringent emissions standards.
- Paying heed to serious health hazards resulting from unclean cooking fuels, the Government has taken positive steps to address air pollution in rural households and also for those below poverty line (BPL), by aiding change in their cooking fuel.
 - The extension of LPG connection among rural poor can help cut down air pollution considerably in their homes, and also decrease its contribution to outdoor air pollution.
 - In the ‘Give It Up’ campaign, the government has asked households earning more than Rs 10 lakhs per annum to surrender LPG subsidy. The amount saved is being used for giving over five lakh new LPG connections to those who still use firewood or kerosene stoves for cooking. The aim is to cover 1.5 crore households below poverty line in 2016-17 and five crore more below poverty line households in next two years and achieve universal coverage of cooking gas.

If implemented effectively, this would significantly reduce indoor air pollution in rural areas and improve the health of women folks.

However, the efforts at various instances have not been matched by proper planning. For instance-

- The Government has failed to put in place a framework to enable cities to implement clean air action plans to meet the ambient air quality standards. Though an attempt has been made to frame a 40 point action agenda for the National Capital Region of Delhi, this lacks stringency and monitoring. Clean air action is still being pushed by the judiciary in cities with sharper public opinion.
- Over the past two years it has also failed to address the transportation strategies needed to clean up the air in cities. The government has not put any hard money to promote bus transport, which measures up to 40-60 per cent of all travel trips. In its latest budget it has only proposed to stimulate private investment in bus transport sector and has proposed to amend Central Motor Vehicles Act to open up passenger road transport sector to bring entrepreneurs and investments to operate buses on many routes. Though funding of metro projects has been augmented in a few cities, there is no fiscal support for buses and safe access infrastructure for commuters.
- It is also extremely worrying that there is excessive focus on wide and high speed corridors in cities and highway grid across the country in the absence of efficient public transport connectivity. If not reversed with people centric infrastructure in cities and more sustainable rail links for both passengers and freight across the country, this can lock in enormous pollution and ill health. Some of the sustainable mobility strategies have been taken on board through the smart city projects. But these are limited and exclusionary in scope.

IV. WASTE MANAGEMENT

Improvements in rules and regulations

Another key issue related to pollution preventions remains waste management. The Government has taken note to address this through better waste management practices. Between March and April, 2016, six waste management Rules have been notified with respect to- solid, plastic, electronic, bio-medical, and construction and demolition (C&D) wastes. While the first five Rules were improved from their previous forms, the C&D Rules is a new addition.

a. Management of solid waste

The Rules guiding solid waste management (SWM) have been revised after 16 years and is a significant improvement from the previous one both in terms of its applicability and management procedure. Some of the key features of the 2016 SWM Rules are as follows:

- Applies to urban and industrial areas, in addition to municipalities (the only one under the previous Rules),
- Mandates source segregation of waste by generators, including bulk generators. Waste should be segregated into three categories- wet, dry and domestic hazardous waste,
- A user fee will be imposed on generators including bulk generators on a monthly basis for waste disposal, as determined by local bodies,
- Brand owners should ensure collecting back the packaging waste generated by them,
- Promotes composting in association with other Government departments. For instance, the Ministry of Chemicals and Fertilizers (Department of Fertilisers) and Ministry of Agriculture has to promote organic composting along with chemical fertilizers,
- Promotes waste to energy. All industrial units located within 100 km from a solid waste-based Refuse-Derived Fuel (RDF) plant should replace at least five per cent of their fuel requirement by RDF. Also non-recyclable waste having calorific value of 1500 K/cal/kg or more to be utilised for generating energy either through RDF or by giving away as feed stock for preparing RDF,
- Acknowledges the need of formalizing the informal sector.

The 2016 Rules has flagged some key issues such as source segregation, composting, formalization of informal sector etc. However, there remain certain factors that the Government must ensure for making the Rules effective:

Swachh Bharat Mission

Only building toilets will not be sufficient

The NDA Government launched the flagship program, Swachh Bharat Mission in October 2014, within months after taking office. As the name suggests, the program spans across urban and rural areas of the country covering 4,041 statutory towns. The plan envisions a clean India by October 2019. This is primarily envisioned by eliminating “open defecation” through various measures, and also by ensuring 100 per cent “collection and scientific processing/disposal/ reuse/recycle of municipal solid waste”.

The Mission has a budget outlay of Rs. 62,009 crores for the five year period. Among this, the Centre’s contribution will be Rs 14,623 crores, which is about 25 per cent, and the remaining should come from the State Governments/Urban Local Bodies (ULB). Among the State’s share, Rs. 4,874 crores has to come from the state coffer and the rest has to be generated through various other sources of funds including public-private partnership, a Swachh Bharat Cess, Corporate Social Responsibility etc.

Nearly two years into its implementation the progress has been mixed. The main progress has been with respect to building toilets, where the Government has reached a 34 per cent target (the total target by 2019 remains of 1.54 crore units). Till date 54 urban local bodies (ULBs) have been declared open defecations free, where additional 400 has committed to be free from open defecation by December 2016. Though the focus has been on building toilets, little focus has been given on managing septage from these toilets. The wastes from these toilets, if not handled properly, will contaminate ground and surface water.

For solid waste management, the progress is not very encouraging. The mission had planned to address the 100 per cent management in a phased manner over the five year period in 79,500 wards. So far only 23 percent of this target has been achieved. The fund availability for its implementation also is emerging as a challenging issue particularly on the part of states.

- It must be strictly ensured that only residual wastes (“non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive waste”) go to the landfills,
- Land filling should also be dis-incentivised by fiscal mechanism. For instance, a ‘landfill tax’ should be introduced. Also the redesigning of contract and reversing of payment term between municipalities and private contractors by imposing a tipping fee on the contractors can reduce entry of waste to landfills,
- A key next step also remains developing proper guidelines for formalizing the informal sector, ensuring appropriate wages and other benefits,
- The ultimate question though remains how to ensure strict implementation of the Rules on ground, such as monitoring of waste segregation, imposition of ‘spot fine’ by local bodies for non compliance, successful incorporation of informal sector etc.

b. Management of bio medical waste

The Bio Medical Waste (BMW) Management Rules, 2016, extends the scope of managing BMW wastes, and also puts a lot of emphasis on monitoring and compliance. Some of the key features of new Rules are as follows:

- The Rules now cover vaccination, blood donation, medical or surgical camps, first aid rooms of schools, forensic and research laboratories; clinics, dispensaries, ayush hospitals, and clinical establishments. It also requires non-bedded healthcare facilities to obtain a one-time authorisation from the concerned authorities to run the facilities,
- Technology- based tracking of waste movement has been provided. A bar code system should be put in place for bags and containers carrying bio medical waste, to track their movement from generation point to treatment facility,
- Occupier and operators of common bio medical waste treatment facilities have to phase out chlorinated plastic bags, gloves and blood bags within two years of implementation of rules in order to prevent later burning of chlorinated plastic,

- New emission standards for dioxin and furans from incinerators have been set for the first time, which is a very important step,
- Requires segregation of BMW waste generated at the household level in separate bags. Urban local bodies should make arrangements for its collection in a prescribed manner.

Despite some very essential inclusions, certain aspects still need to be looked into:

- One time authorization of small scale set up will surely ensure transparency of operation, but at the same time, monitoring and ensuring their compliance will be a big challenge as they are numerous. The various SPCBs lack the capacity and resources to do so,
- Defining major accidents as part of the Rules is no doubt a good step, but it has left out incidents like needle prick injuries, mercury spills etc. which can potentially cause equal harm to human health and environment (data shows an average sized hospital can conservatively release approx 3 kg mercury per year into the environment),
- Ensuring segregation and disposal of household bio medical waste is also a big challenge for the local bodies. In fact compliance remains an overall concern. The Government's claim that these Rules "will change the way country used to manage this waste earlier", will only be a reality if compliance on the ground can be ensured.

c. Management of electronic waste (e-waste)

The urgency for managing e-wastes came through the e-waste Rules in 2011. The revised 2016 Rules takes into account some key issues that were earlier left out, and improves on various others.

- Brings under ambit compact fluorescent lamp (CFL) and other mercury containing lamps,
- Extended Producer Responsibility (EPR) has been made stringent. Producers are now required to meet 30 per cent target for take back during first two years of implementation of the Rules. Also to ensure compliance of EPR target, producers can now charge an additional amount as a deposit fee at the time of sale of the product under "Deposit Refund" scheme. This will be refundable when the consumer returns the product,
- Introduces single window authorization for producers for better operation. Producers can now take a single authorization from CPCB, as opposed to separate ones they had to take from various SPCBs in all the states the company was operating. Without authorization, producers will not be able to sell a product, which was not specified earlier,
- Refurbishers have been recognized and asked to take one time authorization for easy tracking and monitoring of these sectors and proper channelization of e-waste generated,
- CPCB is now required to maintain exclusive online register of EPR.

The e-waste Rules also need to take into account certain issues to effectively handle the growing burden of e-wastes.

- Inclusion of CFL and other mercury containing lamps will be of no use unless responsibilities of different stakeholders in the entire logistics of collection till final disposal, is clearly provided.
- The Rules must take into consideration of integrating the informal sector.
- The Rules remain silent on many products like toys and many household electronic appliances (except for air conditioner, refrigerators, LCD/ LED televisions, washing machine, CFL and other mercury containing lamps as listed in Schedule I) which are significant sources of waste.

d. Management of plastic waste

In lines with SWM management, the Rules regulating plastic wastes has also been revised. Key features of the Plastic Waste Management Rules, 2016 are as follows.

- Individual and bulk generators are required to segregate plastic waste at source. In case of non-compliance, fines will be imposed as specified in by-laws of urban bodies.
- As a measure of EPR, for the first time the producers and brand owners of plastic products have been made responsible for collecting waste generated from their products. Earlier, EPR was left to the discretion of the local bodies.

- Have brought rural areas in its ambit, where the Gram Panchayats have been made responsible for ensuring implementation of Rules.
- Requires the thickness of plastic bags to be increased from 40-50 microns. Also, shopkeepers or street vendors registered with the local body have to pay a fee (Rs 48,000 at Rs 4,000 per month) to be eligible to provide plastic carry bags for dispensing the commodities. The local bodies are required to utilize the money exclusively for waste management systems within their jurisdictions.
- Municipal bodies to engage agencies or groups working in waste management including waste pickers.

The new rules, though better than the earlier one, remain limited on some key aspects.

- Fails to take into account the consideration of replacing plastic products. The Rule almost perpetuates the status quo use of plastic products and then speaks of a system to clean it up. It also fails to integrate learning from the States that has successfully banned the use of plastic bags, such as Himachal Pradesh and Sikkim.
- Also imposing a fee on shop keepers (particularly if they are small) and street vendors will only encourage corruption and not solve the problem of plastic menace in the cities.
- Introducing EPR is a good initiative, but needs to be improved. Like the e-waste Rules a take back/re-use mechanism should be brought in.

e. Management of hazardous waste

The new Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016, attempts to ensure safe and environmentally responsible management of hazardous waste. Some key features of the Rules include:

- The Rules now distinguish hazardous waste from others such as waste tyres, paper waste, metal scrap and used electronic items. The Rules also recognize these other items as resources that can be recycled and reused,
- Standard Operating Procedure (SOPs) specific to waste type, have been prescribed for the waste processing industry to safeguard environment and public health which is good.

However, there remain some salient concerns:

- The Rules still miss out to take into account certain waste materials which are potentially hazardous. For instance, dye and dye-intermediates, basic organic chemicals etc. which are potentially hazardous are not listed under off-specific products,
- Some parts of the listing also remain inappropriate. For example, “date expired” bulk drugs and pesticides remain listed under “process generating hazardous waste” which are actually finished products. These can be stored/ stockpiled at various sources such as dealers, retailers, hospitals etc. These should have been listed under a special class such as – non specific source,
- Another important concern remains the capacity of small states to treat hazardous waste as it is not economically viable for them to develop a TSDF. In that case, movement of such waste across states becomes essential. Therefore, the Rules should have clearly institutionalized the provisions of interstate movement to manage hazardous waste in an effective manner.

f. Management of Construction and Demolition Waste

The first ever notification of the Construction and Demolition (C&D) Waste Management Rules happened in March 2016. The Rules include various provisions for recycling and reuse of C&D waste. Some of the key provisions include:

- Applies to everyone who generates construction and demolition waste,
- The generator, including individual, organisation or authority, shall be responsible for collection, segregation and storage of construction and demolition waste. The generators will be required to pay relevant charges fixed by the concerned local authority,
- Mandates use of recycled products in construction. Local bodies will have to utilise 10-20 per cent of material from C&D waste in municipal and government contracts for construction. All cities will have to set up facilities in a phased manner,

- Bulk C&D waste generators are required to submit a waste management plan detailing the appropriate collection centres, mechanisms of transportation of C&D waste to treatment and processing facilities etc.

The new C&D Rules is a much needed development of the hour, as the reuse potential of C&D waste is extremely high and it cannot enter sanitary landfills. A clear and stringent mechanism now needs to be set up for improved segregation, collection, treatment and processing of C&D waste. Also, emphasis should be laid on decentralizing collection and recycling for easy availability of the recycled products across the country. The local bodies must incentivize use of recycled products by lowering the cost and through public awareness.

V. CLEANING GANGA

Lots of plans but little action on the ground

- Cleaning of Ganga has been placed as a top priority of the NDA Government. In May 2015, the cabinet had approved an outlay of Rs 20,000 crores for the next five years for the “Namami Gange” program- which aims to “clean and protect” Ganga in a comprehensive manner.
- The Union Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD&GR) also brought out plans to clean the river by 2019. Considering the multi-sectoral and multi-dimensional challenge of rejuvenating Ganga, several other key ministries including MoEF&CC, had been roped into the process of drawing up the action plan.

But the question that is uppermost in the minds of all is whether the Government is taking enough action to clean the river?

- The first year of the NDA largely saw meetings and plans around the issue. The MoWR- RD&GR, called upon several national and international experts to get ideas for cleaning Ganga. The Union Budget of 2015-16 also proposed tax benefits for contributors to Clean Ganga projects, declaring a 100 per cent tax exemption.
- In its second year, the Government signed a Memorandum of Understanding with Germany (German International Cooperation) for cleaning the Ganga. Also, MoWR, RD&GR tried to meet three points in its thirteen point agenda of cleaning the river. These include cleaning the surface of the river and ghats, creation of a Ganga task force, and creation of Ganga grams (model villages) along the main stem of the river. The major cities which pollute the Ganga include Kanpur, Allahabad, Varanasi and Patna.
- According to National Mission for Clean Ganga (NMCG), the implementation wing of National Ganga Basin River Authority (NGBRA), 21 projects have been sanctioned since July 2014 for cleaning Ganga. Proposals include construction of new Sewage Treatment Plants (STP) and sewerage network, restoration and reconstruction of sewerage schemes, river surface cleaning, project on assessment of fish and fisheries in the Ganga, assessment of water quality and sediments, conservation of the Ganga River Dolphin through a survey, revival activities for the Gharials and turtle breeding and forestry interventions. Till date all these proposals await implementation.
- So far, two STPs of 260 MLD capacity are under construction at Varanasi, which were actually passed under the UPA government and are funded by Japan International Corporation Agency (JICA). Sewerage projects of over Rs 500 crores are also waiting for implementation on the ground at Patna. A negligible amount of money has been spent till date on actual implementation.

NMCG is coming up with more and more promising plans but when actual implementation will take place remains to be seen. We have already lost 30 years after the launch of the first Ganga cleaning programme. It is high time for effective and quick action on ground.

VI. FOREST GOVERNANCE

Industry-centric and technocratic

The NDA government has made some key policy moves with respect to instituting reforms in forest governance. The proposed reforms are particularly directed towards increasing or incentivizing the forest cover in India through a mix of policy mechanisms.

a. Providing incentives to high forested states

- To incentivize states to conserve forests, the 14th Finance Commission has recommended to include forest cover as one of the five parameters, for determining a state's share of the Union tax revenue. Forests have been assigned a weight of 7.5 per cent.
- Recognizing that the states might have to forego revenues/ economic opportunities at the cost of maintaining forest cover, the Finance Commission's idea is to compensate the states for such losses. This is a welcome move as the revenue would be credited directly to the state's accounts. States like Arunachal Pradesh, Madhya Pradesh, Chhattisgarh, Maharashtra and Odisha with a relatively high share of dense and moderately dense forest cover, will get rewarded with higher revenue shares.

However, the proposed incentives as of now, is based on dense forest cover in the various states. It leaves out other natural ecosystems such as wetlands and grasslands, which although lack tree cover, have huge ecological values. This shortcoming needs to be addressed. Payments to states should also be made on the basis of changes in the conservation values and not merely dense forest cover.

b. Unlocking CAMPA funds

Unlocking the Compensatory Afforestation Fund (CAF) has been a key focus of the NDA Government. In April 2015, the Union Cabinet chaired by the Prime Minister cleared the CAF Bill, 2015. The corpus of the CAF at that time was Rs 38,000 crores. Currently it stands at Rs. 42000 crores, rising by about Rs 6,000 crores annually.

The Bill after being reviewed by the department related PSC on Science & Technology, Environment & Forests, and taking into account some the Committee's recommendations, was tabled in the Parliament on May 3, 2016 and passed by the Lok Sabha on the same day. The Bill now awaits the decision of the Rajya Sabha.

The CAF Bill 2015 (as passed by the Lok Sabha) mainly provides for-

- Establishment of CAFs at the National and the State levels to credit amounts collected by State governments/ UTs towards compensatory afforestation.
- Constitution of a National Authority to manage and utilize amounts credited to the National CAF. Similarly, a State Authority should be constituted in each State/UTs.
- Establishment of a Monitoring Group to assist the National Authority in monitoring and evaluation of activities undertaken from amounts released from National and State CAFs.

However, the Bill as it stands has a number of shortcomings. Some key concerns include:

- No prescription of people's participation or benefit sharing with communities,
- No social monitoring or social audit process included, process remains bureaucratic,
- No effort to find synergies with other forest schemes/programs,
- No prescription for periodic revision of Net Present Value (NPV) rates,
- No mechanism specified to ensure survival of planted stock,
- Lack of ecosystem approach and scientific monitoring of compensatory afforestation,
- No involvement of grassroots organizations such as Community Forest Resource Management Committees, Joint Forest Management Committees, Van Panchayats etc.

The money accrued in the CAMPA funds has huge potential to improve the quality of our forests, as well as the livelihoods of forest dwellers and forest dependent communities. However, as evident, the

Bill needs to be improved from its current form. It must take into account the shortcomings as mentioned above, if we want to put an effective law in place for compensatory afforestation.

c. Participation of private sector in afforestation of degraded forests

- The MoEF&CC in 2014 (F.No.7- 8/2014-FP, date not available) had issued guidelines enabling participation of private sector entities in carrying out afforestation of degraded forest. The proposal is to make available 'degraded forests' to different private agencies including industries requiring timber and other forest produce for their end use.
- As per the guidelines, in the first (pilot) phase, degraded forests with forest cover not exceeding 10 per cent will be made available to industries for their use. State forest departments have been asked to identify 5000-10,000 ha of such forest areas for industries. From the leased area, industries can use 85-90 per cent to raise plantations, and 10-15 per cent is to be used to plant mixed species of use to the local community. After the pilot phase, the guidelines will be implemented nation-wide.

However, the proposed guidelines can have serious consequences if implemented-

- Will destroy the flourishing farm forestry-industry partnership model which is able to supply almost all of the raw material requirements to paper and wood based industries in India. Currently, close to 20 million farmers are involved in farm forestry,
- Will stand in variance with the National Forest Policy (1988) which provides for sourcing industrial wood from farmers,
- Will potentially violate the rights of people as recognized under the Forest Rights Act (2006). It restricts the user rights of the community (to be used to plant mixed species) to mere 10-15 per cent of the total allotted land to industries.

This is not the first time that handing over of degraded forests to private entities has been proposed. But such proposals have not seen the light of the day, as they were opposed by community groups and the civil society. However, this is not the approach that should be adopted to improve productivity of our forests. Instead of handing over forest to private agencies, the Government should focus on strengthening farm and social forestry. This in turn has huge potential to strengthen the agriculture sector as well as to create jobs in the rural areas, which will be a sustainable way to manage forests.

In general, any proposed reform should capture the perspective of both ecology and people's livelihood. Only by addressing this in totality we can ensure the protection of forests.

d. Notifying Eco-Sensitive Zones gets a push

The guidelines for constitution of Eco-Sensitive Zones (ESZ) around National Parks (NP) and Wildlife Sanctuaries (WS) were issued by the union environment ministry through an Office Memorandum of February 9, 2011. However, actions did not happen as expected on part of various States, and the Ministry on Feb 15, 2013, gave a deadline of May 15, 2013, for declaration of the ESZs But still most States remained lax.

The NDA government however has given a big push to the matter. A total of 491 proposals have been received by the ministry (as per Lok Sabha unstarred question no. 1422 dt. 3.5.2016). Of these, draft notifications have been issued for 187 proposals, while 33 have been notified.

VII. CLIMATE MATTERS

A. INTERNATIONAL

Lost opportunity?

- Changing the name from Ministry of Environment and Forests to Ministry of Environment, Forest and Climate Change, soon after taking office in 2014, the NDA government indicated the importance it wanted to give to the issue of climate change.

The NDA Government has been certainly more proactive than the UPA in communicating to the world the concerns of climate change and actions taken by the country on the front.

- The Intended Nationally Determined Contributions (INDCs), submitted by the government was “balanced”.
- At the Climate Change Conference (COP 21) held in December 2015 in Paris, India came out as a proactive player and took lead in the area of renewable energy by setting-up the International Solar Alliance.
- Nevertheless, the Paris Agreement in totality was not favourable to India or other developing countries. The Agreement remained as an ‘agreement’ of big polluters, where no targets have been set on countries to cut emissions. In fact, developed countries are going to misappropriate more carbon space in the future leaving very little for countries like India for meeting its basic development needs. The Paris agreement is also not sufficient to keep global temperature increase within 2°C, thereby endangering the lives and livelihoods of millions of poor Indians.
- Though India could get the words “equity”, “common but differentiated responsibility”, “climate justice and sustainable lifestyles and consumption”, in the text of the Agreement, there is no elaboration on how these terms can be operationalized. Many of these terms are only mentioned in the “preamble” and not in the operational part of the Agreement. As such, these are just concepts with no consensual uniform understanding among the countries.
- A mechanism for ‘loss and damage’ is established as a separate pillar but the decision says this will not involve or provide basis for any compensation or liability.
- Overall, COP21 was a lost opportunity for India to exert the “Right of development” of the poor of the world.

B. DOMESTIC

Opportunity for adaptation and mitigation

- On the domestic front climate change adaptation remains a key concern as farmers are facing huge crop losses in successive years due to erratic and extreme weather events. The Government’s proposal of the crop insurance scheme – Pradhan Mantri Fasal Bima Yojana, announced in February 2016, is a welcome move.
- Rs 5500 crores have been set aside in the Union budget 2016-17 for the scheme. The government has set a target of insurance coverage for 50 per cent farmers in three years. If this insurance scheme can be implemented well, it can safeguard the livelihood of farmers ravaged by extreme weather events.
- The government has increased the ambition of renewable energy significantly that can mitigate the emission of green house gases. With a target of 100 GW of solar and 75 GW of other renewables by 2022, the NDA Government has given a strong signal to the industry about its preference for renewables. If these targets are met, India will easily meet about 40 per cent of its electricity demand from renewables by 2030. This would be one of the highest in the world.

C. MONTREAL PROTOCOL

New approach required

- After years of indecisiveness, India under the NDA Government has finally agreed to amend the Montreal Protocol to phase down hydrofluorocarbons (HFC), a super greenhouse gas used in refrigeration and air conditioning sectors.
- The success of the amendment will depend mainly on how the Government is able to bypass the interest of multinational companies who want to benefit by selling another patented synthetic chemical called hydrofluoroolefin (HFO). In this regard, the amendment proposal put out by India is “weak” and is not in the best interest of the country.
- India needs to go to the Montreal Protocol with a proactive agenda to leapfrog to less polluting, non-patented alternatives. It also needs to push developed countries to phase-out HFCs quickly.