DIRECTORATE GENERAL OF HYDROCARBONS
(Ministry of Petroleum & Natural Gas,Government of India)

STAKEHOLDER SENSITIZATION WORKSHOP

April - May 2021

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This is the proceedings report of the Six-Day Workshop Series, conducted by the Directorate General of Hydrocarbons for sensitizing all concerned stakeholders for the Oil & Gas Exploration & Production activities in the Indian sedimentary basins.

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Day 1

April 9, 2021

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Types of Various Approvals/ Clearances Required During the Entire Life Cycle of an Oil Block

Joydev Lahiri, ED, OIL and CGM (Env), DGH

India's compliance universe is large with 1,536 acts, 69233 compliances and 6,618 filings in the various states. In the Environment sector, there are 107 acts, 2,922 compliances and 231 filings.

Typically, an Oil or Gas Field Life cycle includes the following phases:

- Exploration phase – comprises discovery of field and its appraisal. It takes 5-10 years and is operated with PEL (4 years) with 'B2' category EC from the state.
- Development/production phase - comprises implementation design, production and decommissioning. It takes 15-30 years and is operated with PML (20 years) with 'A' category EC from centre.

The key approval s required to carry out E&P activities in a block are as follows

- The block is allotted by the GoI. It may be PEL or PML. Offshore blocks are given by the central government directly. Onshore blocks have to be allotted by the state.
- If it's a PEL in forest land, the state government can allot it directly.
- If it's a PML in forest land, the state government will seek centre's approval under section 2 (iii) of FCA, 1980.
- Once PML has been granted, the location has to be identified and released after taking out a survey.
- Post survey, Environmental Clearance (EC) ("A" category [Development] or B2 [Explosion]) is mandatory.
- A project that combines both development and explosion proponents can apply for "A" category clearance but is not eligible for exemption under the Explosion part.
- EC (CTE, CTO and Hazardous Waste Authorization) from State Pollution Control Board and NOC from Central/State Ground Water Authority for drawl of ground water are mandatory for all E&P projects, requiring EC under EIA notification, 2006.
- EC is kept on hold till Stage -1 FC is submitted and delay in submitting FC beyond 12 months (max extension by 6 months), has to be started afresh on a de-novo basis.
- CRZ (coastal on land and location) clearance is also mandatory if the location is falling under a coastal area.
- Before the start of the drilling, mines have to be notified and declared by appointing an owner, agent, mines manager etc.
- PESO license for the HSD tank of the rig also needs to be obtained for each individual drilling location as per rig movement/drilling program.
- PESO license is also required to store petroleum class B exceeding 1,000 litres in a storage tank.
- After a meeting with the Hon'ble Minister of State Commerce & Industry on 18.12.2019, it was decided to deploy Refueller/Browser by obtaining license for transporting petroleum in Form XIX instead of seeking Storage License for HSD tank for each drilling location.

The 20 Other approvals required are as follows:

- Permission/NOC from State Forest Directorates for geophysical surveys
- Revenue Land Acquisition for drilling locations and other purposes
- Land Acquisition/ Right of Use for pipelines
- Director General of Foreign Trade (DGFT)
- Clearance from the Ministry of Defense (MOD)
- Clearance from the Defense Research & Development Organisation (DRDO)
- Visa/Clearance etc from the Ministry of Home Affairs for

Foreign Experts
- Approval from Directorate of Mines Safety
- Directorate of Industrial Safety & Health (Factory Inspectorate)
- Petroleum and Explosive Safety Organization (PESO) Licenses/Plan Approval:
- Consent to Operate from OISD for Off-shore Drillings (since 2009):
- Approval from the Labour Commissioner
- Approvals from Tax authorities
- Approval for Excise and warehousing
- Pre-Commissioning Safety Audit Clearance from OISD for E&P Installations and Pipelines
- PNGRB
- Approval of Offsite Disaster Management Plan
- NOC from Gram/Village Panchayat
- NOC from Town Planning Officer:
- Approval from Fire Services
- Communication Licenses from MTNL/BSNL

Categorization of projects under EIA Notification, 2006
Development activities are classified into Category "A" or Category "B".
- Category "A" projects include onshore oil and gas exploration & development and Oil & Gas transportation pipeline. The EC would be granted by MOEF&CC, HQ.
- Category "B" projects include isolated storages and handling of hazardous chemicals plus exploration drilling. EC granted by SEIAA.
- General Condition (GC): category "B" project will become a Category A project if GC is applicable.

An "A" category EC takes 11-12 months. A rapid EIA/EMP study should be completed in 4 months' time by collecting 2 samples/week per season (3 months). Therefore a total of 24 samples should be collected.

Forest Clearance Approval Process
Depending on the size of the forest land under consideration, FCs are granted by the concerned authorities:
- For projects < 5 hectares, the state regional office grants clearances.
- For projects between 5-40 hectares, the Regional Empowered Committee under the Regional Office is responsible for FCs.
- For projects > 40 hectares, the FC division, MoEF&CC at the centre is responsible for clearances.
- For projects > 100 hectares, site inspection is mandatory and the FC division, MoEF&CC at the centre is responsible for clearances.

FCs generally take 3-4 years because of four crucial components of FC proposals which are the major sources of delay:
- Delay with the Nodal Officer
- Delay with the DFO
- CA land
- FRA, 2006 Certificate

Issuance of FRA certificates by District Commissioner: 2-3 years minimum
a) PP submits the following documents to ITDP:
- Resolution of Gram Sabha from concerned Gaon Bura
- Resolution of concerned FRC Committee.

b) ITDP forwards the application to the concerned tehsil
c) Sub-divisional Level Committee evaluates application and forwards recommendations back to ITDP
d) ITDP forwards recommendations to the District Level Committee (DLC)
e) DLC evaluates the proposal and submits their recommendations.
f) The concerned Deputy Commissioner issues the FRA, 2006 Certificate.

Note: Steps 1, 2, 3 and 5 are classified as "long lead time activities."

Wildlife Clearance Approval Process

- This is also a time-taking process.
- Once the applicant submits an application to the concerned Park Manager/DFO, the latter must forward it to the CWLW within 30 days but practically it takes much longer.
- The CWLW forwards it to the state government.
- The state government forwards it to the Director, Wildlife Preservation, MoEF
- The complete proposal is placed before the Standing Committee of NBWL for consideration.
- If recommendation is granted, it is communicated to the State and Centre for further action.
- It is then approved by the Hon'ble Supreme Court for activities within PA.

Note: Steps 1, 3, 4 and 6 are classified as "long lead time activities."

Regulatory Returns/Submissions – Oil & Gas E&P Activities

Irrespective of whether a project is categorised as "A" or "B", regulatory returns must be filed according to a fixed frequency.

- Hazardous waste return, Environmental statement, Bio-medical waste return and E-waste returns must be submitted annually.
- CTO compliance, Battery return and EC compliance must be submitted six-monthly.
- TSDF returns must be submitted quarterly.
- Environmental monitoring reports must be submitted monthly.

Recent changes in the Environmental Regulations of MoEF & CC

- Oil & Gas Seismic Survey in Forest land without FC: 800 shot holes per 10 sq km now permitted in forest land against the restriction of 25 bore holes per 10 sq km
- Oil & Gas Exploration Activities are now notified as B2 category projects.
- Exploratory drilling can be applied under B2 category while development projects can be applied under 'A' category. A proposal that combines exploration and development can be applied under 'A' category by conducting Public Hearing and EIA study.
- B2 Category EC Approval: Either the SOP adopted in Jan'21 in Assam will be introduced across the country or the DGH may be authorised to grant 'B2' category EC.
- CRZ Notification Amendment for B2 category EC is likely to be released soon.
- Form-2 for B2 category EC has been omitted.
- Amendment of EIA Notification, 2006 but this is still under active consideration
- Validity of FC obtained under sec 2(ii) of FCA, 1980 during exploration phase for the future developmental activities, provided the land area remains unchanged
- Two monthly meetings of Expert Appraisal Committee (EAC) for prior grant of EC have been introduced w.e.f November, 2020 for faster approval of projects.
- TOR validity has been extended from 3 years to 4 years in connection with EC for E&P sector
- OM on EC-CTE One step process has been issued but its implementation is still under active consideration
- Any violation of EIA Notification, 2006 cases are now needed to be apprised before the EAC.
- If EDS queries against EC proposals are not replied to within 30 days, proposals will get auto delisted.
- EC proposal getting auto delisted due to lapse in submitting Stage-I FC can be Relisted by the PP themselves without any help/ approval of MoEF&CC

- 'CER' in connection with EC has been abolished; only the issues addressed during Public Hearing to be taken care by the PPs.
- The EC validity for PML block is likely to be coterminous with the PML validity period (in place of 7 years) and in the case of PEL, it would be either 7 years or the validity of PEL, whichever is less : this is still under active consideration by the MoEF&CC
- DGH is likely to be authorised to issue EC Compliance Certificate for Expansion project along with IROs.
- MoEF&CC and State/UT PCB is still under active consideration by the MoEF&CC
- SDMs may be authorized to chair the PH proceedings against the present restriction of officers below the rank of ADC/ADM: this is still under active consideration by the MoEF&CC.

Guidance on Obtaining Prior EC Under EIA Notification, 2006, EC Transfer process and Preparation of Sustainable EIA Report

Dr. R.B Lal, Additional Director & Member Secretary, MoEF&CC

It is crucial to expedite the process of getting environmental clearances (ECs). ECs are under the provision of the Environment Impact Assessment (EIA) Notification, 2006 for project activities related to petrochemical products and petrochemical based processing.

The EIA is used as a management tool to minimize adverse impact of development projects on the environment to achieve sustainable growth through timely and adequately protective measures.

There are four important stages of getting ECs as outlined by the EIA notification:

- Screening
- Scoping
- Public consultation
- Appraisal by respective appraisal committees or at the state SCAC committee.

Projects are classified into two kinds

- Category "A": such projects are appraised by the Expert Appraisal Committee at the center.
- Category " B": such projects are appraised at the state level. Category "B" projects are further divided into categories "B1" and "B2"

Irrespective of the category, root cause analysis must be done to ensure that there are no violations or court cases. The process doesn't end with getting the EC. Monitoring and implementation of the project can invite a lot of litigation. Therefore it is crucial to prepare reports every step of the way with the help of consultants.

Major initiatives taken by the MoEFCC regarding EC process

- Categorisation of offshore and onshore oil & gas exploration activities as Category "B2" projects: this is an extremely important initiative by the ministry. This allows for the project to be completed within 1-2 years by the centre or the state because the process of getting an EC is simplified through the Parivesh portal:
  Fill Form 1
  Fill PFR
  No public hearing (PH)

The EIA, 2020 once approved will further simplify this process

- Increasing the validity of the EC from 7 years to 10 years. This has been further extended by 1 year due to the Coronavirus pandemic.
- Meetings of the EAC are being held twice a month via video conference.
- There is a 100% chance that EC applications will reach the appropriate committee within 15 days from the date of the application. However it is crucial that the application is complete in all respects before submitting it to the Parivesh portal. Currently, applications are riddled with errors as a result of which the member secretary ends up spending close to 2 hours per application.
- The Parivesh portal allows users to raise complaints relating to any technical problems while uploading the application.
- The MoEF & CC reviewed the EIA notification 2006 and issued a draft EIA notification 2020 which is under deliberation currently.

Know Your Project (KYP) initiative:

- The KYP initiative goes above and beyond the Parivesh portal to assist applicants in the process of getting ECs. The KYP system will be able to guide prospective applicants as to what kind of clearances are needed for a specific kind of project. The system will then automatically forward the application to the specific clearance page on the portal.
- It is a one-stop technological solution to the problem of multiple applications that needed to be filed earlier for multiple clearances.

This way, ECs will not take as much time if applicants know exactly what parts of their project require time-taking clearances and what parts do not. For example, if a block has 100 hectares out of which 25 hectares does not require FC, it is pertinent to file an application to start the project there so that it is not delayed.

The various forms available on the Parivesh portal are as follows:

- Form 1: Applicable for making the draft EIMP report in Category "A" projects. This is also necessary for category "B2" projects.
- Form 2: For filing application for ECs.
- Form 3: In case of necessary amendments to terms of reference
- Form 4: In case of amendments to be made to ECs.
- Form 5 : In case of any extension to validity to terms of reference
- Form 6: In case of extension of validity of EC. Form 6 has an "Implementation Status" column that applicants must use in order to report problems such as delays and financial crises. It has been noticed that applicants generally attach pictures of forests, stones etc in this column which is detrimental to their own cause and results in the file being stuck in litigation.
- Form 7: In case of transfer of ECs. The transfer of ECs is a very simple process and is governed under para 11 of EIA notification 2006. The transfer is done on a case-by-case basis:
  - » Complete transfer of ECs: This happens when company A, for example, got the EC in 2015 but its ownership changes hands to company B, the whole project that got the EC will be transferred from A to B because company A is now owned wholly by company B. Company A has to provide the "No objection certificate" in such a case. Company B will have to sign an undertaking confirming the transfer of ownership and that they will now implement all the conditions mentioned in that particular EC.
  - » Complete transfer is an administrative issue which means the issue does not go to the level of the EAC.
  - » Partial transfer of EC: This happens when company

A, for example, has a total of 10 projects/activities and wants to transfer 5 of those to company B. It is essentially a splitting of the EC wherein a part of the EC remains with A and a part of it is transferred to B.

» Partial transfer is a technical issue which means the issue goes to the EAC who will decide on how the EC is to be split among the companies in question.

» As per the EIA notification, 2006, no criteria for splitting two-part or three-part have been mentioned. This issue has been taken up and scrutinized in the draft EIA notification, 2020.

» Splitting and bifurcation of EC: This happens when company A, for example, got the EC and due to some business strategy, a part of the clearance is given to company B and a part of it to company C and so on. In such a case, the project should be designed at inception in such a way that it shows the various levels or stages at which splitting of the EC will happen in the future. This allows for the ease of transfer of the EC from company A to B.

The EAC is involved in such a bifurcation.

Closing Remarks

Project proponents must know what types of approvals are required and how to make use of "Know Your Project" initiative in order to file applications with minimum errors. Blocks can be divided into simple, medium and difficult on the basis of ease of getting EC. For example, if the block does not have forest land or Badlands, the process of getting an EC will be simple. In blocks involving EC, FC, NBWL and other clearances, the project must be designed accordingly so that minimum time is wasted.

Filing and preparation of E&P report, EIA report should be quantitative in nature as opposed to being verbose and filled with history. The reports should be crisp and should be easy to monitor. These reports should be able to answer the following questions:

- What is the impact of the project?
- How to mitigate the consequences of the project?

Risk assessment must not be qualitative in nature. It should be quantitative in nature. The risk assessment report must supply details of whom to contact in case of an emergency, where to go, how to link onshore and offshore plants etc.

If the PFR, EIA E&P reports are filed correctly without any errors, PPs can expect their files to move through the system without inordinate delays.

The 2nd March 2021 notification by the MoEF&CC clarifies those projects that no longer need ECs. PPs should check the notification in case of doubts over the requirement of EC wrt pollution load and expansion.

SOP for Grant of B2 Category EC Within 45 days in the state of Assam

Mr. Pradyut Kumar Choudhury, Chairman, SEIAA Assam
Mr. Swapan Seal Sharma, Chairman, SEAC, Assam

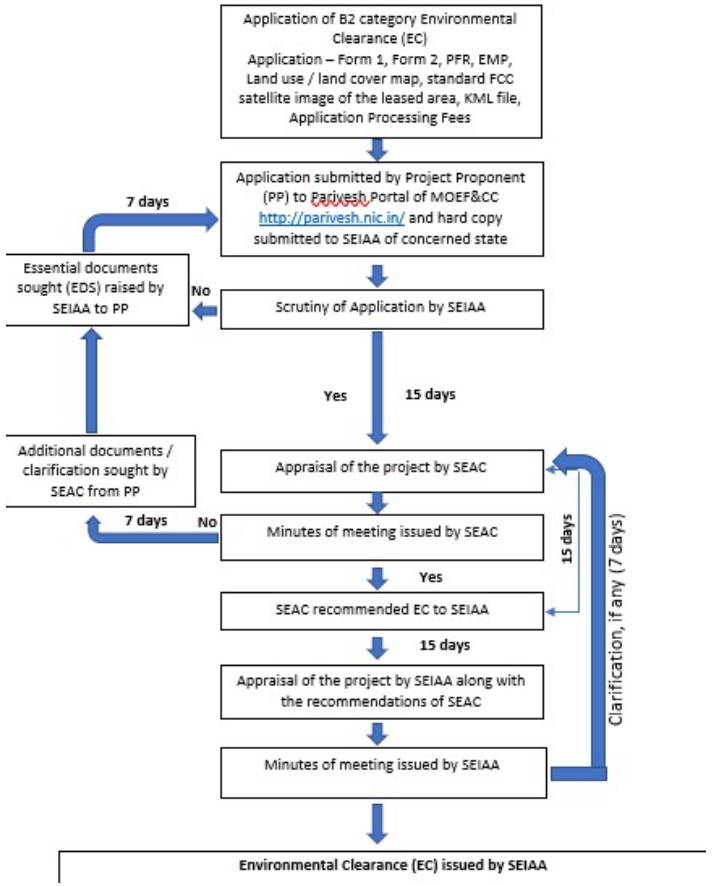
As per MoEF&CC notification dated 16th January 2020, all projects with respect to offshore and onshore oil and gas exploration are now considered as coming under "B2" category.

During the initial evaluation of oil & gas exploration projects submitted by Vedanta Ltd., ONGC and OIL at SEIAA Assam it was found that the Project Proponents' submitted documents did not objectively clarify:

- Where the exploratory well will be made
- Whether the tentative coordinates submitted represent the surface location or subsurface location of the proposed well
- The process in which land acquisition will be done for the well site; proper lease/sell deed of the project land
- Land use/land cover pattern in the exploration leased area and also of the proposed well sites
- Topography, slope and aspects of the well site and its immediate surroundings, nearest waterbody or rivers/ streams evaluation which are very essential to assess possible damage hazard in case of any unexpected eventuality.

In this backdrop, SEAC Assam members discussed the issues along with the chairman, SEIAA Assam and came to the conclusion that project proposals for exploration of oil and gas need to be submitted by the Project Proponent with clarity. Meanwhile a meeting was held on the 23rd of December 2020 at the conference Hall of the Pollution Control Board of Assam to discuss the matter of issuing of EC and for formulation of SOP to grant of "B2" category (Oil & Gas Exploration) under the Chairmanship of the Chairman, SEIAA Assam.

Accordingly, a time frame of 45 days for granting B2 category EC for Oil Gas Exploration has been worked out:



EC issued by SEIAA: This will be a provisional EC only if proper land documents are not submitted by the PP before the SEAC recommendation to SEIAA, and will be valid with the conditions that appropriate land documents with evidence of possessing the land will be provided by the PP to SEIAA at least 15 days prior to the beginning of drilling activity for each of the exploratory well. Failure to follow this condition by the PP will invite cancellation of the issued EC.

Two Check lists were prepared:

Check List 1

Check List for Scrutiny & Acceptance of Application

Sl. No.	Particulars	Submitted (Yes/No)	Remarks
1.	Form-1		
2.	PFR (Pre-feasibility report)		
3.	Project summary (in 1 to 2 pages)		
4.	KML file of the project area		
5.	EMP around 2 km radius of the drilling site		
6.	Form-2		
7.	Land use / Land cover map of the leased block prepared from standard false colour composite (FCC) of satellite images on 1:50000 scale		
8.	Land use / Land cover map around 1 km radius of the drilling site prepared from standard false colour composite (FCC) of satellite images on 1:5000 scale		
9.	DEM derived relief map around 1 km radius of the drilling site		
10.	Application processing Fees		

Check list – 2 for Environment, Ecology and Socio-economic factors:

- In case of forest land

> Delineation of forest boundary on the leased block's FCC satellite image (1:50000 scale) and also on LU&LC (1:50000 scale)

> FC under FCA

- In case of ESZ

> Delineation of ESZ boundary on the leased block's FCC satellite image (1:50000 scale) and also on LU&LC (1:50000 scale) [On the same map and satellite image of (1) above]

> FC under FCA

- In case of groundwater use

> Permission from CGWA with intimation to PCBA

- In case of land acquisition

> Credible land documents 15 days prior to exploratory drilling work

- If Schedule-1 species exist in and around the drill site

> W/L conservation plan

- Submit a budget for EMP
- Submit a budget for OHS (occupational Health& safety)
- Submit a report on Environment, Ecology and Socio-economic features of the well site
- Submit a Risk Assessment (RA) and Emergency Response Plan (ERP)
- Submit a report and plan on waste water generation & treatment
- Submit an air pollution control plan
- Submit a noise pollution control plan
- Submit a plan for hazardous and non-hazardous waste management plan
- Submit a report on baseline environmental status based on primary and secondary in a 2 (two km) radius area around the proposed exploratory well
- Land use and land cover map of the block on 1:50000 scale and in the well site at 1:5000 scale prepared from standard FCC of satellite images not older than 3 (three) years.
- Relief map prepared from satellite DEM in the well site at 1:5000 scale.

Importance of the LU&LC map of the leased area (on 1:50000 scale)

- The land use map along with a report on how the image

features are identified and how much area they cover help in visualization of exactly how the well sites are related to the existing terrain conditions so that there is information of what kind of impact an unknown eventuality could have in that area.

- LU&LC map is essential in order to evaluate waste water management and impacts of
- air pollution and noise pollution and hazardous waste disposal on the environment and ecology.
- Google natural green colour map is for general viewers only, and the purpose is not to identify features on the basis of spectral response. For this dedicated satellite bands and their interpretation techniques are required.

Importance of LU&LC map of the leased area (on 1:5000 scale, large scale):

- The details at close level of features can be interpreted from high resolution satellite images. A spatial resolution less than 15 meters is suggested as many satellite images are found freely available on the internet. However, 6-meter multispectral bands are also available from Indian remote sensing satellites. The 1:5000 scale mapping is to be carried out from higher multispectral satellite data, approximately of 5-to-6-meter resolution for finer details. A simply enlarged printout of 1:50000 scale has no meaning and cannot give any finer information.
- DEM derived relief map helps in evaluating the slope, aspect and elevation variation of a terrain which together with the LU&LC help in visualizing environmental hazards and impacts on the immediate surroundings in case of any eventuality.
- To compare the terrain relief condition and LU&LC, the relief map and LU&LC map should be in the same scale, i.e 1:5000
- Shifting of well location during land negotiation map may arise, and is limited to 500 m radius only so that very purpose of LU&LC and relief map aren't redundant.

The purpose of designing the SOP is to smoothen the process of granting of EC for oil & gas projects taking due care for protection and conservation of environment, ecology and socio-economic development of the region.

Prevailing Facilitation Mechanisms in DGH - Environment and Clearances

Ms. Debjani Bose, HoD (Env), DGH

A few regulatory/statutory Regimes for Onshore & Offshore E&P operators that are regularly dealt with by the DGH are as follows:

- Petroleum Exploration License (PEL) : Governed by PNG Rules 1959
- Petroleum Mining Lease (PML) : Governed by PNG Rules 1959
- Forest Clearance : Forest Conservation Act, 1980 and Forest Rights Act, 2006
- Environment Clearance & CRZ Clearance : Governed by Environment Protection Act, 1986, EIA 2006 & CRZ notification, 2019
- Wildlife Clearance : Governed by Wildlife Protection Act, 1972

A delay in the grant of any of these clearances causes significant delay in the project to be undertaken by the operator.

Likely logjams and difficulties in regulatory/statutory approvals faced by the DGH are as follows:

- PEL: Pending MoD clearances, probable intervention in foreland areas of States (if a block falls in two states, the PEL is granted for one state and not another), procedural delays at Central & State Governments., delays in signing deed agreements (leads to long delays), E&P Operators' response. Formulating checklists is one way in which to ease delays.
- PML: Requirement of diversion of forest land, noncompliance with the checklist provided by DGH, resistance by local community
- EC: Public Hearing takes significant time, preparation and submission of EIA report in the prescribed format by the E&P Operators (errors in the EIA report can lead to delays in answering queries), EC grant by MoEF&CC.
- FC: Site inspection by DFO (a step that involves major delays), Approval by CCF, FC grant by MoEFCC.
- WLC: Notification of ESZ.

Empowered Coordination Committee

- Empowered Coordination Committee (ECC), a high-level committee, was constituted in May, 2019 for streamlining and expediting grant of licenses/clearances in the Hydrocarbon sector under the chairmanship of Cabinet Secretary.
- Meetings of the ECC are held biannually.

ECC Meetings	Conducted On
1st	29.07.2019
2nd	20.01.2020
3rd	14.09.2020
4th	To be held shortly**

- Policy issues that are raised in the ECC are resolved with clear and timely verdict. Some of the issues considered include:

> Finalization of ESZ notifications, particularly in the north-eastern states

> Delinking Hydrocarbon Sector from Mining

> Composite Clearance for category A projects

> Amendments in CRZ notifications

> Land Bank for compensatory afforestation

Headway made in the 3rd ECC meetings wrt 100 cases of pendency:

- 50 cases have been resolved
- 30 cases are still under progress with policy modifications having been proposed.
- 20 cases are still on hold

State	Pending					Resolved				
	PEL	PML	EC	FC	WLC	PEL	PML	EC	FC	WLC
Andhra Pradesh	3	7	-	-	-	-	9	1	-	-
Arunachal Pradesh	-	1	-	2	-	-	1	1	5	1
Assam	-	2	1	6	-	-	6	-	1	2
Gujarat	-	1		-		-	11*	1	-	1
Nagaland	6	5	-	-	-	-	-	-	-	-
Puducherry	-	-	-	-	-	2		-	-	-
Tamil Nadu	2	13	1	-	-	4	-	-	-	-
Tripura	1	-	-	1	1	-	-	-	1	-
Grand Total	12	29	2	9	1	6	27	3	7	4
	53 Pending					47 Resolved				

- **1 PML rejected (Jotana-II)**

PEL: Petroleum Exploration License

PML: Petroleum Mining Lease

EC: Environment Clearance

FC: Forest Clearance

WC: Wildlife Clearance

The following are a few policy modifications undertaking by the DGH through the ECC:

- Digitization of forest boundaries in protected areas: This is another issue that DGH has taken up for which the password has been shared by the MoEF&CC and the FSI for obtaining the data from the FSI portal. The images are sourced from FSI and the DGH is evaluating how to

convert them into vector data for uploading them onto DGH's NDR portal.

- This will facilitate reporting any issues in the block to the operator and the total forest area available will be known. The operator will be able to furnish an accurate application for getting a FC.
- For enhancing E&P activity in Andaman & Nicobar basin, exploration areas have to be enhanced in order to get clearances from MoD, dept of states. DGH is in constant touch with these departments and clear directions have been given in the ECC meeting to the respective secretaries (Secretary of Defence, Dept of states etc.)
- Delinking of EC and FC is another policy issue taken up by the DGH. DGH has proposed an amendment to the Oil Mines Regulation and Development (ORD) Act which is under consideration at the MoPNG. Many issues will be resolved once this amendment takes place.
- Exemption of Forest Clearance Act for underground oil & gas drilling operation by drilling from outside of forest boundaries through extended reach drilling or directional drilling. This way the jurisdiction of the FC Act is no longer applicable outside of the forest boundaries.
- MoEF&CC has constituted a committee comprising the heads of research institutes like IDT, Dehradun, KDMIPE, Dehradun and ICFRI of which the AD, DGH is the chairperson. A report has been submitted to the MoEF&CC which has asked for further substantiation wrt additional data. A subcommittee has been formed to gather technical data for which field visits to ERD sites will be carried out shortly.
- Exemption of fresh FC during re-grant of PML is applicable in a case where existing FC can be extended. A working group between DGH, ONGC, MoPNG has been formed to collect suggestions and compile inputs related to PNG rules.
- Delinking of projects in the Hydrocarbons sector from mining activities is another policy issue brought to the notice of the ECC. Since hydrocarbon activities are considered to fall under mining, lots of laws and regulations come in the way of granting FCs. This issue has been proposed under the ORD Act that is under consideration.
- Granting one-time lease covering both exploration and production is another issue covered under proposed amendment of the ORD Act.

Hydrocarbon Clearing Cell (HCC)

There is a compelling need to institutionalize the facilitation of grants and clearance was felt at the 49th meeting of the Executive Committee. This led to the setting up of the Hydrocarbon Clearance Cell (HCC) at DGH, dedicated to the facilitation of grant of clearances and licenses.

ToR of HCC:

- End-to-end facilitation to expedite grant of statutory clearances
- Facilitate grant of PEL, PML, EC, FC and WLC
- Escalate bottlenecks and issues to ECC for further intervention
- Maintain a dedicated IT enabled database of coordination points with State/Central Governments.
- 24*7 DGH Helpdesk portal
- Review existing clearance structure/mechanism

Composition of HCC:

- HoDs of PSC/HELP/DSF/MoD shall work under the Chairmanship of ADG (E&C) to carry out the facilitation process

Way Forward for the Future:

- Launching of Petro-Pragati e-portal: Operationalize the portal for holding virtual meetings of ECC and interactions with State Governments for streamlining

clearances and resolving pending issues. DGH is working very hard to fast-track the setting up of this portal. The AD, DGH will be meeting monthly on the portal with the various operators and stakeholders. There will be quarterly review at the secy. MoPNG level as well. There will be a bimonthly review by the ECC. The portal is expected to be live in 2-3 months.

- Increased Virtual Workshops: Conducting workshops on an increased scale through the virtual medium by inviting E&P operators on-board and thereby conducting brainstorming sessions
- Field Inspections: Undertake more number of field inspections for an in-depth groundwork for licenses and clearances segment with the E&P Operators, State and Government officials.

Facilitation of E&P Operators - Discovered Small Fields

Ms. Tinku Nischal, HoD (DSF), DGH

DSF is a niche policy of the government of India where new operators are given a chance to enter the E&P space. Technical knowledge of the space is not necessary; however there has to be a desire to increase domestic output of oil & gas production, keeping in line with the idea of an Atmanirbhar Bharat.

The contract areas awarded under DSF Bid Rounds in 2016 are as follows:

- 43 discoveries were made with a total in-place hydrocarbon of 45 MMTOE
- 30 Contract Areas were awarded of which 23 were Onshore & 07 were Offshore. Contracts were awarded to 22 companies a majority of which were very small or are newcomers.
- 3 Sites are ready to commence production in 3 sites (2 onshore and 1 offshore)

The second round of DSF Bid Round-II (2018) took place buoyed by the success of round 1 leading to:

- 44 discoveries which were lying unmonetized for many years with a total In-place hydrocarbon of ~190 MMTOE
- 24 Contract Areas were awarded of which 15 were Onland and 09 were Shallow Offshore
- Contracts were awarded to 14 companies a majority of which were very small or were newcomers.

DSF Interactive Portal

Since operators are small companies and are new to the space, they needed a greater amount of hand-holding. The DSF interactive portal was launched so that all the new operators could register on it and complete all the steps they are required to take all in one place. Some of the

functions allowed on the portal are:

- PEL/PML transfer
- ECs
- Bank Guarantees to be submitted
- Operating agreements
- The Work Programme

The DSF-Interactive portal was launched on 27th March, 2017 by the DGH. It is representative of all the operators registered to the portal who need to update the portal on a regular basis and can raise issues and queries on the portal.

The following are the Post-Award activities that take place once a DSF is awarded to a company: Since these are already discovered fields, there is no exploration lease applicable but only a mining lease which is transferred from the existing operators to the fresh operator.

1. PML transfer/ grant:

- DGH expedites the submission of Consent to Transfer of PML from erstwhile Operators. For offshore transfers, it takes a maximum of 1-2 months. With the exception of a few states, onshore PML transfers take up to 6 months or even less.
- DSF Section flags issues of delay in grants/ transfer of PML to Hydrocarbon Clearance Cell (HCC), DGH with detailed chronology of events.
- HCC takes up the pending issues with Empowered Coordination Committee (ECC), under the chairmanship of Cabinet Secretary for early resolution.

2. Environmental Clearance/ Consent to Operate/ Consent To Establish:

- EC/ CTO/ CTE are mandatory for on-land Contract Areas to commence Petroleum Operations.
- DGH regularly interacts with State Government Pollution Control Boards for timely issuance of CTO/ CTE. It also holds regular meetings with Chief Secretaries of State Governments for early scheduling of Public Hearings.
- In case of requirement of Secondary Data for EIA Studies, DGH expedites the submission of data from surrounding blocks for preparation of EIA studies.
- In case of transfer of EC from erstwhile Operators, DGH expedites the submission of NOC from erstwhile Operator for transfer of EC to new awardees

3. Offshore Vessel Clearance:

- DGH has a Vessel Clearance Management System (VCMS) in place.
- Offshore Operators need to upload the survey

coordinates and the technical details of survey vessels on the portal.
- DGH expedites the clearance of the vessels in coordination with the Ministry of Defence (MOD).

4. Clearance of Expatriates

The Operator sends the list of technical expatriates required for any Operation to DGH which forwards the DGH recommendation to Ministry of Home Affairs (MOHA) for the expatriates.

5. Essentiality Certificate/ No Objection Certificate:

- Operator submits Annual Work Programme for the Financial Year which is noted by
- Management Committee (MC).
- Operators apply for Essentiality Certificates for the services imported by them.
- DGH expedites the issuance of the Essentiality Certificates to the Operators based on the Work Programme noted by MC.

Special Dispensation due to COVID-19 Pandemic:

The Government approved the extension of timelines for performance of contractual obligations (bearing obligations to make contractual and statutory payments) for a period of a maximum of 341 days, spanning from 25.03.2020 up to 28.02.2021 on account of Covid-19 Pandemic.

Special Dispensation in terms of extension of Development Period has been given for 28 Contract Areas. Further, the Government has approved to defer 75% of amount of applicable Bank Guarantee (BG) which was due for submission/ renewal between 25-03-2020 to 28-02-2021.

- Special Dispensation in terms of defer 75% of amount of applicable Bank Guarantee (BG) has been given for 07 Contract Areas.

The DGH and DSF are also involved in other Facilitation Initiatives such as:

- DGH organises regular workshops/ webinars for Knowledge Transfer to Operators
- DSF interacts with National Oil Companies (NOCs) for finalization of Tolling &
- Processing Charges for using spare capacity.
- DSF facilitates interaction between NOCs and the Operators for resolution of issues
- like sharing of services, documentation, geoscientific data etc.
- DGH organizes frequent Management Committee Meetings (MCMs) for resolution of issues raised by Operators.

Facilitation of E&P Operators - OALP Blocks

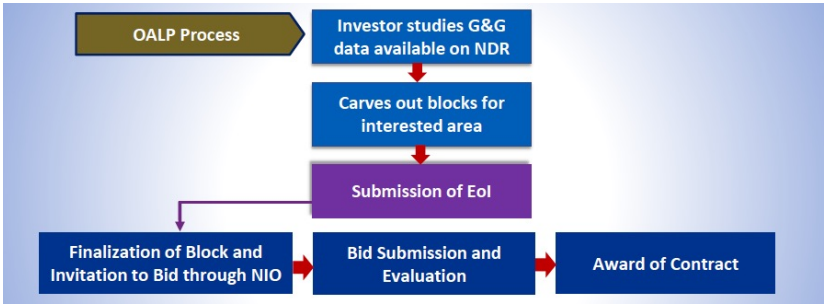
Mr. Vikesh Jain, GM (Production), HELP, DGH

The Hydrocarbon Exploration and Licensing Policy (HELP) was announced in March 2016 with the Government of India further notifying further policy reforms on February 28, 2019.

The five rounds of OALP that have been completed under HELP resulted in the following developments:

- 105 Blocks covering an area of 1.5 Lakh sq. km have been awarded till OALP-V
- 10 Blocks with 2,2205 sq. km area will be offered under OALP-VI
- 11 EoIs received for Approx.13,800 sq km under EoI window ended on 31st March, 2021

The OALP Process of awarding of contract is described in the flowchart below:



The party submitting the EOI for an area shall be 'Originator' and eligible for originator incentive.

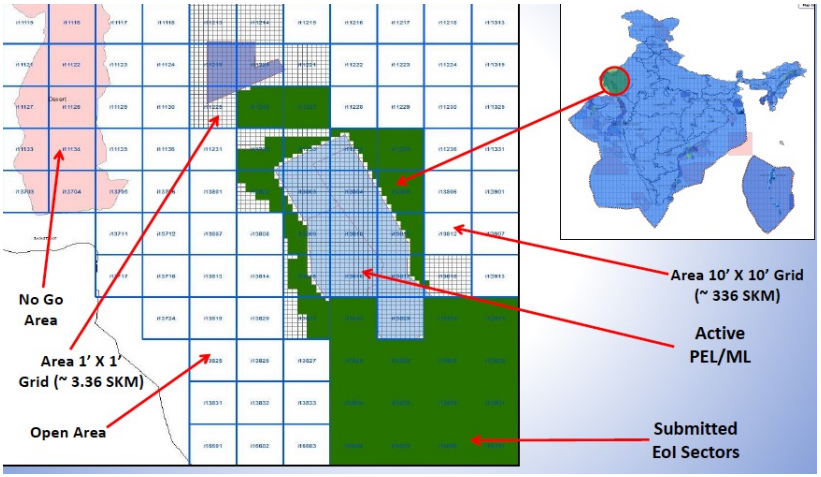
Bidding cycle happens thrice a year (with continuous EOI submission that is pooled every 4 months). Bidding is thoroughly secured via the e-bidding platform.

The four pre-award OALP facilitators are as follows:

- National Data Repository (NDR)
- It is a data bank created in order to store, preserve, maintain, reproduce and disseminate Oil & Gas information and data in order to promote and encourage exploration and development activities in the country.
- EoI submission portal facilitates investors to submit Expression of Interest as per the gridding pattern shown on the NDR.
- E-bidding portal allows for STQC certified e-bidding portal for secure and transparent bidding.
- OALP facilitation desk (facilitationoal@dgh.gov.in) is functional 24*7, where any query or assistance required related to OALP are addressed.

The National Data Repository (NDR) provides highly specialized maps that are layered multi-dimensionally and provide information to the

user pertaining to all the necessary data that is available to a particular block. It also shows maritime and riverine boundaries so that operators can know the type of jurisdiction in which they are carrying out their block. An NDR map looks like the figure displayed below:



The extent of the data available on the NDR can be quantified as follows:

- The NDR is used by 256 Companies and boasts of 820 Users.
- The total 2D and 3D Seismic Data available on the NDR amounts to 2.504 Million LKM and 0.848 Million SKM respectively.
- Well and log data amount to 18,686 numbers while well reports amount to 38,072 numbers.
- The NDR has 14,514 Seismic Reports amounting to 14,514 nos.

Registration on the EoI Portal can be done at http://online.dghindia.org/oal .For submission of New EoI, one has to click on the "EoI submission" tab and furnish required information such as Corporate Information, Consortium Details, Qualification Criteria, Participation Bond, Due-Diligence Report etc., and upload required relevant files. Applicants are required to pay INR 75,000 through Online payment gateway.

The E-Bidding Portal available at https://ebidding.dghindia.gov.in is STQC Certified and is therefore secure and transparent. It has an e-tendering mode which allows for

- Confidential & Sealed bids
- Single stage –two-part bidding

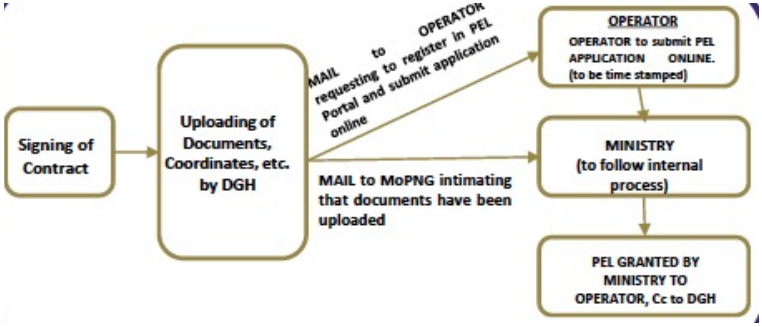
PAN/CIN equivalent based registration and Class-III DSC (signing & encryption) for secure login and bidding.

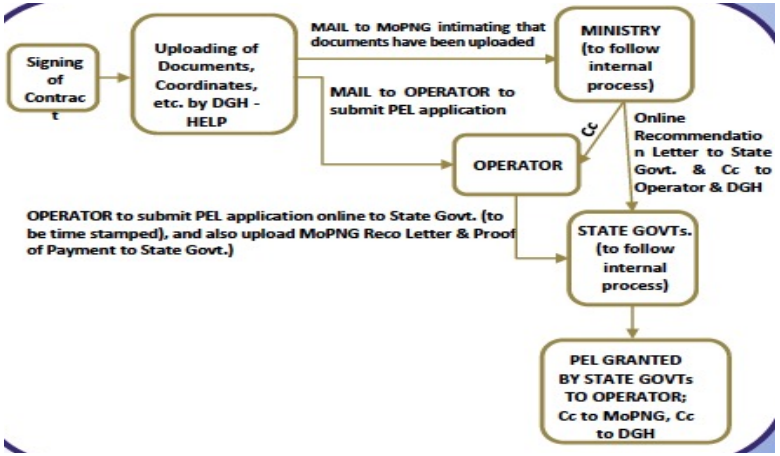
Revision of bids are allowed for a number of times. All blocks on offer with details will appear in the public domain.

The post-award OALP facilitators are described as follows:

- Online PEL application portal
- Liaising
- Processing other operational clearances
- Simplification and standardization of RSC processes.

The PEL is an online portal for submitting online applications for grant of Petroleum Exploration License. The process for offshore (1) and onshore (2) PEL application process are described in the flowchart below:





The details to be submitted through the online PEL application portal include regime, block name, contract copy, block coordinates, the MoPNG recommendation letter and others.

The details to be uploaded by the contractor include the copy of the PEL application form per Rule 5 (1) of the PNG Rules, 1959, the name of the applicant, details of the company, intent period of PEL applied, intend period of pEL extension, details of RSC, particulars of payment among others.

DGH actively facilitates the expeditious grant of PEL from various state/UT jurisdictions through regular liaising with respective governments both formally & informally. It holds several meetings with State government officials (including at Chief Secretary levels) as well as with Other Statutory Bodies for granting of PEL and other clearances.

Other Operational Clearances necessary include MoD clearances, MoHA clearances for expatriates and Essentiality Certificate for Goods and Services imported.

With a view to simplify and standardise the RSC process, an online portal is under development for data submission on self-certification basis. RSC process categories are of two types:

- Category A includes processes where information shall be accepted on self-certification basis and no approval is required
- Category B is applicable where information shall be accepted on self-certification basis but approval

is required.

A few salient Features of the simplified and standardised RSC Process include:

- Automated Online Portal for data submission
- Online approval of RSC Processes
- Integrated Computation of Technical & Commercial Parameters
- Automated Royalty & Revenue Share Calculation
- Increased transparency & ease of doing Business
- Faster approval Process
- Reduced feeding of same data multiple times

Day 2

April 16, 2021

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CPCB Central Rule/Regulations and Various Amendments in Regulation/ OMs from time to time for the Oil & Gas Sector

Dr. Dinabandhu Gouda, Additional Director (Scientist E), Divisional Head, IPC-I, CPCB

India has produced 32.17 MMT of oil and 32.18 BCM of gas per annum (2019-20). Out of total 647 wells drilled, 121 were exploratory and 526 were development wells. ONGC produces 64% of India's oil while OIL produces 10%.

The Four major steps of the oil drilling and gas extraction process are:

- Exploration
- Appraisal
- Development and Production
- Decommissioning and abandonment

Drilling waste comprises drilling fluids and drilling cuttings. The three basic types of drilling fluids are:

- Water Based Fluids(WBFs)
- Non Aqueous Fluids(NAFs)
- Diesel Based Fluids

Pollutants are produced at the drilling stage and the production stage. Pollutants may be liquid effluents, gaseous emissions or solid waste. Liquid effluents produced at the drilling stage are referred to as formation water while those produced at the production stage are known as produced water.

Flow rates of effluents from drill sites are of the order of 5-10 m3 /day.

The total quantity of the effluents during the drilling operation depends on well depth.

- For well depths less than 3000 m, 400-1000 m3 of effluent is produced.
- For well depths more than 3000 m, 900-2500 m3 of effluent is produced.

Typical characteristics of drilling stage effluents include a pH of 7.15-10.3 and oil and grease levels of 5-50 mg/l.

During the production stage, the oil, the associated gas and formation water are separated. The water so separated is the major source of wastewater generated during oil/gas production and is identified as 'produced water.'

Effluent generated from the production stage are taken to centralized facilities such as Group

Gathering Station (GGS), Oil Collecting Station (OCS) or Gas Collecting Station (GCS).

The quantity of effluent generated at the GCS and the GGS/OCS is in the range of 60-100 m3/day 1000-4000 m3/day respectively depending upon the water cut and the number of wells connected to each station.

The oil and grease levels of produced water are very high (100-2000 mg/l at the GGS/OCS). Other major pollutants found in produced water are sulphides, chlorides and phosphates. The BOD and COD levels are also very high.

The treatment and disposal of drill site effluents nowadays is either carried out using mobile ETPs, biological treatment or in-situ treatment. The treated water will be reused for mud preparation or disposed off suitably. For offshore installations all the drill site washing is discharged into sea.

The major pollutants in produced water are free oil, emulsified oil and BOD. Produced water is collected in an equalization tank followed by a CPI unit for removal free oil. The effluent will then be passed through a DAF unit for the removal of emulsified oil. Depending upon the BOD level it is subjected to either one stage or two stages of biological treatment.

When produced water contains high dissolved solids, there is no alternative but to dispose of the effluent by re-injection in an abandoned well.

In onshore wells, solid waste generated during drilling stage are crushed sedimentary rocks and used drilling mud which are not further usable. The solid waste generated during production stage is the oily and biological sludge produced in the GGS/OCS waste water treatment plants

The quantity of drill cuttings depends upon the depth of drilling, the hole size and average figures are of the order of 800-1200 tons/well. Heavy metals may be present too.

Small quantities of sand and other solids are produced along with the produced water at approximately 1 barrel per 2000 barrels of oil.

In offshore wells, drill cuttings are separated from the drilling fluids on
shale shaker units and then washed with high pressure spray or by immersion in a tank containing wash solution equipped with an agitator.

The wash solution may be sea water, a water based wash solution which separates the solids, oils and additives from the wash solution.

Only drill cutting of oil-based mud is brought to shore and transported further by trucks to the secure landfill facility site.

The mechanism of separation of drill cuttings from drilling mud in the case of on-shore facilities is the same as off-shore except that the disposal point on-shore is mud-pit and the wash water used in the process is also accumulated in the pit.

Drill mud is another solid waste generated during the process. Since mud is made up of very costly chemicals, mud is used and reused at different drilling sites by safely collecting and transporting it from one site to another site.

But after several reuse, part of the mud becomes unusable as drill ud and it is disposed off at drilling sites nearby for onshore installations and dumped into sea for offshore installation.

Water based mud is used by both OIL India and ONGC. In rare cases, a specialized mud system based on either oil or polymer is used.

Solid waste in the production stage is in the form of a dried sludge from the wastewater treatment plant. It is disposed of at a secure landfill.

In case oil content in the sludge is high it is incinerated and ash is disposed off at a secured landfill.

The E (P) Act 1986 is an important legislation for activities involving exploratory and productive drilling for oil.

- The Act lays down standards for discharge of effluents emission by specified industries, restriction on the location of industries in certain areas etc.

- The Act lays down procedures and safeguards for the prevention of accidents which may cause environmental pollutants and provides remedial measures for such accidents, especially oil spills.

- The Act lays down procedures and safeguards for handling management of Hazardous Chemicals, Hazardous Waste, and others.

- According to the Act, MoEF SPCB are responsible for monitoring control of marine pollution up to 12 nautical miles in seawater after which the coast guard (MoD) takes over.

International waste disposal standards are outlined in the table below:

Country	Whether water-based bud and cuttings are discharged to sea	Whether use of oil-based mud is permitted	Oily drill cutting disposal standard (g/kg)
U.K	Yes, with restricted volume of discharge	Yes, with approved method of disposal	10
Norway	Yes, when mud is composed of green chemicals	-do-	10
The Netherlands	Yes, based on toxicity limit (LC_{50} > 30,000) [Applies to India as well]	Yes, in very specific conditions	OBM waste not allowed to be discharged off-shore
Canada	Yes, with maximum dispersion	Yes, with the restriction of <5% aromatic oil	150
The USA	Yes, based on toxicity limit and and discharge rate 1000bbl/hr	No	Not defined
India	Drilling mud to be brought onshore for disposal, water based drill cut disposal to sea, discharge rate 50 Pbl/hr/well, toxicityLC_{50}>30,000	No	10

The standards suggested are based on:

- Guidelines for effluent discharge standards by BIS
- Most practicable control technology available
- International conventions followed in the drilling industry.

The E (P) act lays down standards for on-shore (marine) facilities for many parameters such as pH, oil and grease, suspended solids and BOD. For on-shore discharge of effluents within a distance of 50m from the discharge point, additional parameters prescribing maximum levels of metals such as chromium, mercury, nickel etc have to be met.

For offshore facilities, oil content in treated effluent is 40 mg/l (average of three 8 hrs samples) for 95% of the observations and shall never exceed 100 mg/l without dilution.

A few guidelines for disposal of drilling fluids/drill cuttings for onshore facilities are as follows:

- Prescribed Toxicity limit i.e 96 hr LC 50 value > 30 000 mg/l
- Chemical additives used in drilling fluid should be biodegradable
- Use of diesel based mud is prohibited
- Use of Oil Based Mud is permitted only for specific hole problem and aromatic content in OBM < 1%
- Limit for Oil content for drill cuttings (prescribed at 10 gm/kg)

A few guidelines for disposal of drilling fluids/drill cuttings for offshore facilities are as follows:

- Barite used in preparation of drilling fluid shall not contain Mercury > 1 mg/Kg and Cadmium > 3 mg/kg.
- Hexavalent chromium based chemical additives should not be used in Drilling fluids

- The discharge rate of drill cuttings discharge rate must be 50 bbl/hr/well
- Drill cuttings (DC) should not be discharged in sensitive areas
- In case of specific hole problem, use of OBM will be restricted with zero discharge of DC
- The DC wash water should be treated to confirm limits notified under EPA before disposal into sea
- Bulk discharge of DF in offshore is prohibited except in emergency situations
- Discharge of DC from the installation located within 5 km away from shore should ensure that there is no adverse impact on marine ecosystem and on the shore.

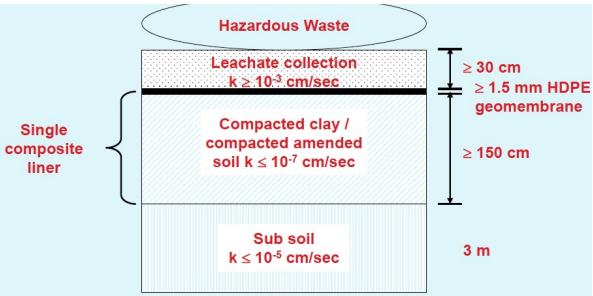
The Hazardous Waste (Management, Handling and Transboundary Movement Rules), 2008 provides guidelines for managing hazardous wastes (HWs) from drilling operations for oil and gas production. According to the rules, there are three types of hazardous wastes which are:

- Drill cuttings containing oil (category 2.1)
- Sludge containing oil (category 2.2)
- Drilling mud and other drilling wastes (category 2.3)

The SPCB issues authorisation for collection, storage, treatment and disposal of HW as well as approving the design of the disposal site as per the guidelines developed by MoEF /CPCB from time to time.

According to the HW Disposal Guidelines Single Liner, the single liner system must include the following components:

- A leachate collection layer of thickness 30 cm or more and coefficient of permeability 10-7 cm/sec (10-9m/sec) or less.
- A single composite liner contains an HDPE liner of thickness 1 5 mm or more and a compacted clay (or compacted amended soil) layer of thickness 150 cm or more having a coefficient of permeability of 10-7 cm/sec 10-9m/sec) or less.
- At locations where availability of clay is limited, soil will be amended by mixing bentonite or any other suitable clay to locally available soil to achieve the desired permeability.



Single Composite Liner System

A double liner system is used in regions where rainfall is high and /or subsoil is highly permeable (e g gravel, sand, silty sand) and the water table is high.

The five acceptable methods for disposal of drill wastes are land farming, bioremediation, incineration, SLF andTSDF

Oil Spill control and management is done primarily by the ONGC which has a capacity to tackle oil spills upto 700 T and within 500 m of the installation.

In case of spills > 100 T and /or beyond 500m , the Indian coast guard and M/s Oil Spill Response Ltd Southampton will be informed for necessary assistance.

Oilzapper product (a group of microbes) was developed at TERI, New Delhi and is used for clean up treatment, oil spills, drill cuttings and oily sludge identified as hazardous waste under HW (M& Rules).

With application of Oilzapper, 5000 hectares of cropland contaminated with oil spills have been reclaimed and oil slicks in many lakes have been cleaned.

Off shore and on shore operation for exploration, development and production of hydrocarbon resources

- Requires prior environmental clearance under EIA notification under 1 (of EIA Notification 2006) from MoEF and
- Must adopt environmental guidelines for disposal of liquid, gaseous and solid wastes.

Besides stipulating environmental standards guidelines by MoEF, other conditions are:

- Adequate infrastructure facilities near off shore installation like booms and skimmers chemical dispersants, to be used in case of oil leakage spills..
- Oil slicks to be curtailed within 500 m from installation for which action plan and facilities be provided.
- Project authority to comply with environmental protection measures recommended in the EMP risk analysis report.
- Project authority must strictly adhere to the stipulation made as part of any international convention(s) or Merchant Shipping Act.
- Project authority must comply with rules and regulations under MSIHC Rules.
- Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosive, Fire Safety Inspectorate, etc must be obtained wherever applicable

Prevailing Procedures/Facilities Available in Granting Consent to Establish, Consent to Operate, Hazardous Waste Authorization, etc. by the Rajasthan State Pollution Control Board for Oil and Gas E&P Operations

Mr. Neeraj Mathur, Senior Environmental Engineer, Rajasthan PCB

Notification No. S.O. 319 (E) dated 7th May 1992, specific to Rajasthan restricts certain activities in Alwar district of Aravalli Range. Under this notification, a permission must be acquired from the state government to conduct any industrial activity in certain pieces of land.

The organizational structure of the Rajasthan PCB consists of a two-tier structure with its headquarters in Jaipur and regional offices at 15 locations. 10 new regional offices have been announced recently. The RPCB has its central laboratory at Jaipur and 12 regional laboratories.

The Head Office is headed by a chairperson (IAS) has a full time member secretary (IFS) and many different groups such as for planning, technical groups (project/sector wise), legal, administration, climate change etc.

The consent mechanism of the RPCB is in accordance with the Water Act, 1974 and Air Act, 1981. The RPCB grants the Consent to establish (CTE) and the Consent to operate (CTO) under the Authorisation under HOWM Rules, 2016. To this end, industries/projects and activities are categorised under red orange green white categories.

One-time authorization for life is provided to green category activities operating under 5 crore.

Oil & Gas Extraction including CBM (Coal Bed Methane) (offshore & onshore extraction through drilling wells) is categorized under 'Red' category with the Head Office being the competent authority.

Fees with consent applications is on the basis of capital investment and category of the project/ industry as per State Government Notification dated 26th May, 2016.

All applications for obtaining CTE/ CTO/ Authorisation are submitted online after registering on the State Government portal – https://sso.rajasthan.gov.in/.
The fee is accepted through online mode only and all documents are to be uploaded online. All consent/ authorization letters are also issued through an online system only.

PCBs have a very limited role to play in the grant of the EC. The Regional Offices are mandated to conduct Public Hearings. They fix the date, venue and time of the PH in consultation with the District Collector, conduct the PH and forward the minutes to the competent authority at their own level.

The Consent to Establish (CTE) has to be obtained before starting any physical activity on the ground. The RPCB issues one CTE for each mine lease/ development area.

The following is a checklist of documents necessary for applying for CTO:

- Applications form in prescribed format under Air Act -1981/ Water Act-1974, duly filled and signed by the authorized signatory.
- Fee as prescribed under the Rajasthan Water (Prevention and Control of Pollution) Rules, 1975 and Rajasthan Air (Prevention and Control of Pollution) Rules, 1983.
- Authority letter in favour of authorized signatory.
- Affidavit in prescribed format.
- Certificate of capital investment in the specified format – Showing investment (without depreciation) and certified by the Chartered Accountant.
- Compliance report of previously granted CTE/ CTO.
- Analysis/ monitoring report, as applicable (In case the project has been commissioned).
- Source of water. In case of GW - Copy of the receipt of application submitted to CGWA for abstraction of ground water or Affidavit to the effect that GW will not be extracted.
- Copy of Environment Clearance.
- Copy of authorization application under HOWM Rules, if applicable.
- Copy of valid insurance policy under Public Liability Insurance Act.
- List of names and addresses of all directors/ partners.
- Inspection by Regional Officers of the RPCB is mandatory for grant of CTO.

An application to renew the CTO must be made at least four months before expiration of its validity.

It is advised that application for Authorization under HOWM Rules is made along with that of the CTO. Authorisation is issued well pad/facility wise i.e. one authorisation for each well pad/ facility.

The following is a checklist of documents necessary for applying for Authorization under HOWM:

- Applications in the format prescribed under the Rules duly filled and signed by the authorized signatory.
- Processing fee prescribed by the Board.
- Copy of CTE and CTO under Water Act and/ or Air Act, as applicable.
- Authority letter in favour of authorized signatory.
- Affidavit in prescribed format.
- Details of expected generation of HW and mode of storage, treatment and/or disposal for each category of HW.
- Copy of membership/ agreement with HW CTDF or registered recycler / re-processors/ incinerator of HW or for each category of waste generated.
- Photographic proof of installation of Display Board of size 4' X 6', at the main gate.
- Photographic proof of hazardous waste storage area in the premises along with display Board.
- Point wise compliance report of previously granted Authorization.
- Inspection

With respect to compliance of Battery Rules and E-waste Rules, there is no need for any permission/ consent/ authorisation/ registration etc. from the SPCB. However, the following rules are applicable for Bulk Consumers:

Battery Rules

- Ensure that used lead-acid batteries are either returned to registered dealers or given (sold) to authorised recyclers.
- Submit half yearly return to the SPCB.

E-Waste Rules

- Ensure that e-waste generated is given to authorised recyclers/ dismantlers/collection centre/ or returned to the dealer under buy back scheme.
- Maintain record of E-waste and submit Annual Returns to the SPCB.

The necessary compliance reports must be submitted off-line in hard copy before their respective due dates.

Prevailing Procedures/Facilities Available in Granting CTE, CTO, Haz Waster Authorization by Gujarat State Pollution Control Board for Oil and Gas E&P Operations

Mr. N.M Tabhani, Dy. Chief Engineer, Gujarat Pollution Control Board

62% percent of India's petrochemical industries and 53% of the country's chemical industries are located in Gujarat.

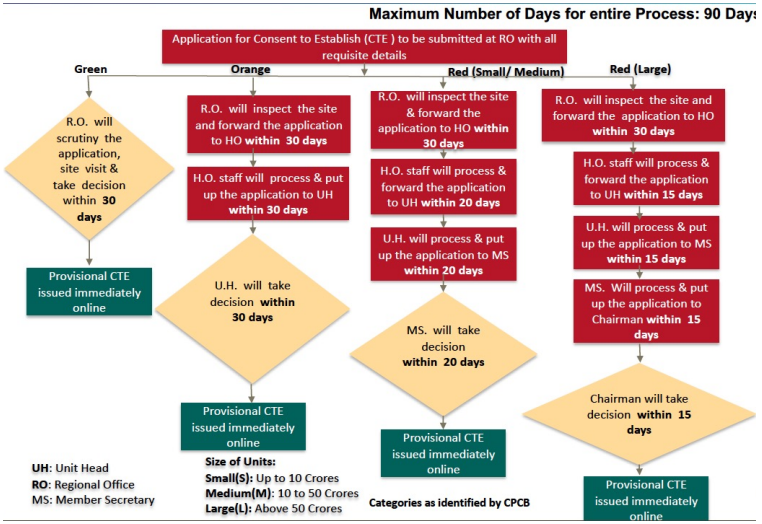
31% of Gujarat's GDP is constituted by the manufacturing sector with a strong presence of SSI units in the state.

Kandla, Mundra, Anjar, Sanand, Bhavnagar, Vapi, Ankaleshwar, Narol etc are a few important industrial hubs of the state.

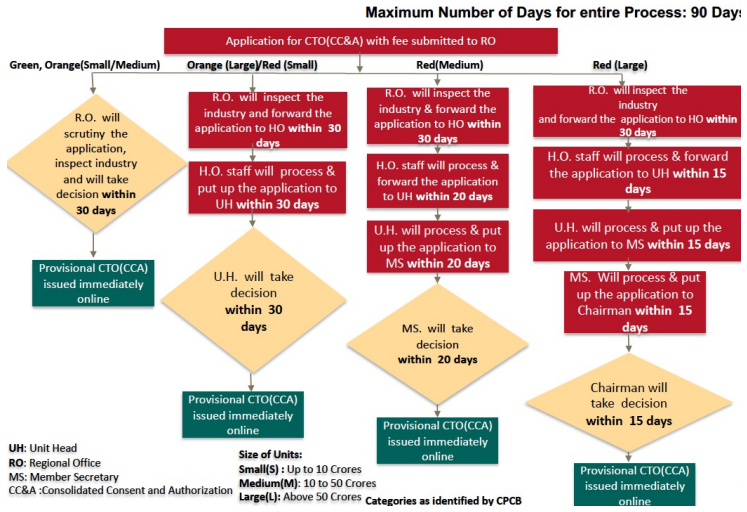
The Gujarat Forests and Environment Department is divided into the Gujarat State Forest Development Corporation Limited, and the Environment department which further branches into:
The Gujarat Pollution Control Board
The State Level Environment Impact Assessment Authority
The Gujarat Ecology Commission
The Gujarat Coastal Zone Management Authority

The approvals granted by the Gujarat PCB are as follows:
Consent to Establish
Consent to Operate (Consolidated Consents and Authorization- CC&A)
Authorization under The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016
Authorization under Bio-Medical Waste Management Rules, 2016
Registration under Plastic Waste Management Rules, 2016

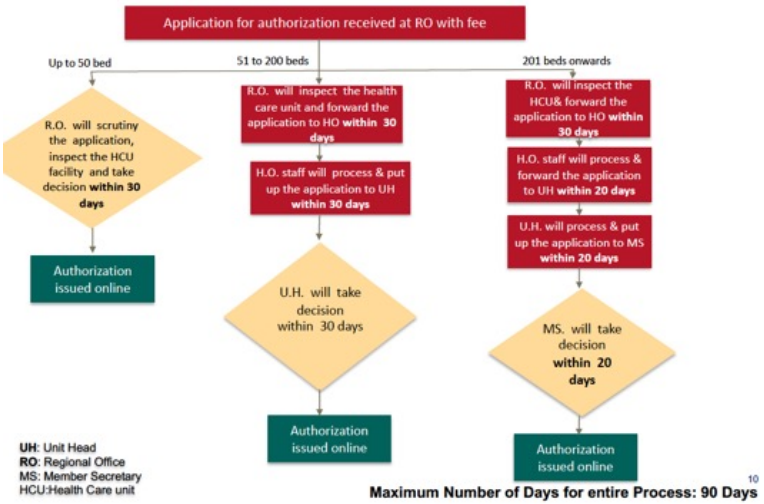
The procedure for obtaining Consent to establish (CTE) can be explained in the following flowchart:



The procedure for obtaining Consent to Operate (CC&A) can be explained in the following flowchart:



The procedure for obtaining authorization under Biomedical Waste Rule, 2016 can be explained in the following flowchart:



The Xtended Green Node (XGN) Portal allows for the procedure to obtain the CTE, CCA and the Authorization under Biomedical Waste Rules.

The XGN portal allows for efficient e-governance by lying at the intersection of industry, the GPCB, the health care units and the auditor.

The XGN portal facilitates online applications, online payments, written remarks, e-SMS, e-talk. As a result, there is efficient online processing of applications, , uniformity in process, reduction in time limit, und decision making and reduction in rejection ratio of applications.

Given below is an information checklist for Online CTE and CTO(CCA) application at the XGN portal

- Application processing fees for the period of five years with break-up
- Site plan showing the distance of (N/A if the industry is to be located in GIDC estate)

> Nearest residential area with certificate of Talati / Mantri from the proposed site

> Nearest of state/ national highway from the site of the unit/industries

> Nearest Lake/ Pond/ River/ Sea/ Canal/ Forest area and any water body

> Nearest spaces of tourist and historical important School, collage, Temple, Mosque etc.

- Lay Out Plan showing the location of the:

> Vents/ Stacks/ Chimney and emission points

> Drainage and final disposal for liquid effluent

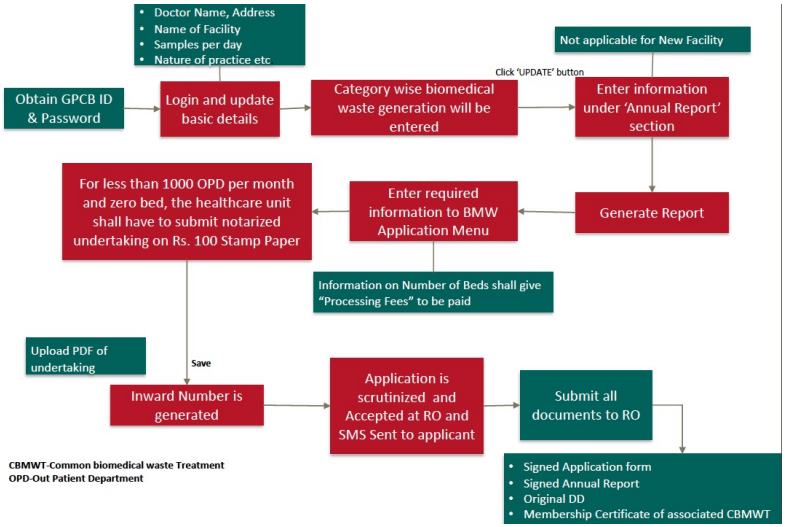
> Solid waste collection/ storage/ disposal facility

> Total available open land in the industrial premises

- List of partner/ Directors (names along with residential address) and telephone number
- Details of ETP along with flow diagram
- Letter of membership of CETP if applicable
- List of raw materials with quantity per month (MT/M)
- List of products/by-products with quantity per month (MT/M)
- Break-up of water uses and water balance
- Details of manufacturing process, with process flow diagram and all chemical equations
- Environmental statement (form-V)
- C.A. Certificate for project

- Air pollution control measures: stack/ chimney wise for flue gas and process emission details
- Details of HW as per 2016 rules for all categories of Hazardous Wastes
- Membership certificate of common TSDF / Common incinerator (if applicable)
- Annual Report in Form-IV (in case of renewal application), with documents of disposal complying Generation, Stock and Disposal justifying stock (Every Year by 31st January)
- Copies of previous CTE / CCA orders.

The procedure to obtain Authorization under BMW rules is outlined in the flowchart below:



With respect to waste utilization by co-processing, approximately 29.34 Million MT waste has been co-processed in cement industries till March 2021.

XGN is a tool for accelerating co-processing activity by providing availability of waste with its type, quantity and contact details of industry and also providing details of waste generation and utilization.

The two components of the GPCB that are widely appreciated are:

- Environment Clinic - Industries are invited with their problems and the experts at the GPCB provide them with better solutions for environment management with necessary process modifications.
- Open House - All industries are invited and their problems discussed and solutions given on the spot or forwarded to the Head office in case higher policy decisions are in order.

Every month all 27 regional offices are mandated to conduct at least one of the two: the environment clinic and open house.

Prevailing Procedures/Facilities Available in Granting CTE, CTO, Haz Waster Authorization by Telengana State Pollution Control Board for Oil and Gas E&P Operations

Mr. Bhadra Girish,Telengana Pollution Control Board

The Telangana State being a relatively new state in the country formed on 2nd June, 2014, its government has liberalized the process of getting industrial clearances.

The Telengana government has enacted the Single Window System called Telengana State Industrial Project Approval and Self-certification System (TS-iPASS) and given it a legislative status. Every industry looking to set up in the state has the right to do so and has a right to get clearances from the government until its rejected with reasonable justification.

Under the TS-iPASS, 16 departments issue one-time clearance whereas 6 departments issue renewals for continued operation of industries. TSPCB is one of the partnership departments under TS-iPASS.

In the website of the TS-iPASS, the PP will have to submit a single combined application form of just 8 documents for issue of clearances. It is open for everyone in the country. Based on a few basic questions, the portal will direct the applicant to the necessary clearance pages on the portal.

All documents are supposed to be submitted online and departments are mandated not to ask for other documents. Some of the documents of the common checklist necessary for grant of clearances consists of the following:

- PAN/Aadhar
- Site documents (site plan, registration)
- Process flowchart
- EMP in case of effluent generation.

Fees are paid through the TS-iPASS portal without PPs having to go to individual industries. The Industry Department of the Telangana govt is the nodal agency of the TS-iPASS and oversees the processing of fees and transfers it to the concerned departments.

The TS-iPASS will then transfer the finished

applications to individual departments for ease of doing business.

The timelines for processing approval of applications stipulated under TS-iPASS for both CFE nad CFO are as follows:

- Red category applications: 21 days
- Orange category applications: 14 days
- Green category applications: 7 days

The concerned department must tender a document either approving or rejecting the application within the stipulated barring which the industry has got a right to give clearance which will be granted by the TS-iPASS portal itself.

The central government has stipulated the Ease of Doing Business (EoDB) norms and mandated the state governments to implement them in order to liberalize the industrial environment.

Under the EoDB, the Telangana state has implemented the following initiatives:

- Online single-window system - TS-iPASS
- The Online Portal for Processing of Applications within Departments (OCMMS) wherein each individual department has a website that is integrated to the TS-iPASS. The NIC mandates that there is no physical touchpoint between the user and the OCMMS.
- Defined timelines for processing of applications
- Issues of consent for minimum period of 5 years or more
- Availability of information online
- Facility for users to download the final approval certificate.
- Auto-renewal of certificates (CFE&CFO) within 5 days based on self-certification by the industries.
- Facility for 3rd parties to easily verify approval certificates in the public domain.

The TSPCB website contains all necessary information pertaining to application flow chart, sent fee calculation, detailed procedure for processing of application, timelines of processing, delegation of powers at each stage etc. The TSPCB has been integrated with the TS-iPASS. The website allows for sms and email alerts at every stage.

The delegation of powers at the TSPCB follows a three-tier system with a head office, 2 zonal offices and regional offices. This allows for the processing of applications within the stipulated timelines.

So far there has not been any Oil & Gas exploration activities in Telangana state. Existing

industries are colour coded based on their pollution potential as follows:

Category	Pollution potential	Number of industries in Telangana state
Red	High	2923
Orange	Medium	3349
Green	Low	658
White	Nil	2692

Total number of industries under consent purview: 6930

White category industries need not file for regular consent of the PCB; an intimation to the Board would suffice.

Prevailing Procedures/Facilities Available in Granting CTE, CTO, Haz Waster Authorization by Tripura State Pollution Control Board for Oil and Gas E&P Operations

Mr. Bishu Karmakar, Member Secretary, Tripura Pollution Control Board

Tripura is a small state surrounded on three sides with Bangladesh and one side with Assam. Considering the size of the state, there aren't many large scale industries but industrial development is going on.

Tripura SPCB has been working since 1989. It has one head office and 3 zonal offices throughout the state.

The state government has prepared the zoning atlas for siting of industrial areas. There are 14 industrial estates, food parks and rubber parks. A majority of them are located in Agartala.

The Tripura SPCB issues CTE to industries willing to establish or operate in Tripura.

There are 2500 industrial units registered in the state of which 10% belong to the red category, 40% belong to orange, and 50% fall under the green category.

Since 2020, the SPCB has issued CTEs and CTOs through the Online Consent Management and Monitoring System (OCMMS) developed by the NIC, Delhi.

Via the OCMMS, the Tripura SPCB is able to issue CTE and CTO certificates within stipulated timelines as follows:

- Red category applications: 21 days
- Orange category applications: 15 days
- Green category applications: 10 days

All documents are submitted online and verifications are made online.

Inspections are carried out by the zonal offices and the head offices. Inspection reports are also uploaded online.

Consent certificates once issued can be downloaded by the entrepreneurs from the OCMMS website. SMS and mail alerts are also sent.

The Tripura SPCB is linked with the SWAAGAT portal under the Ease of Doing Business (EoDB) initiative of the government of Tripura. This is the second portal (after the Tripura state OCMMS) that is involved in consent management and monitoring. Entrepreneurs have the freedom to choose between either portal.

The SPCB has also developed an auto renewal system for green and orange category industries. Self-certification systems are also being developed.

Regular inspections by PCB members and other stakeholders are being held under the SWAAGAT portal. All certificates are displayed on the official website of the SPCB and on the SWAAGAT portal.

Even though Tripura is a small state without a large presence of industry, the SPCB has developed siting criteria for setting up of industrial units in the state. For example, due to the high number of complaints received due to the stone crushing industry, the SPCB has set up siting criteria for stone crushing. Similarly, siting criteria have been set up for brick kiln industries too. Siting criteria have also been developed for setting up of hotels and motels.

The Tripura SPCB has also requested the government to develop dedicated clusters for stone crushing units so that all the units are clubbed in order to reduce nuisance for the public.

Authorization and registration of Waste Management are also carried out through the OCMMS portal within 21 days to the entrepreneurs.

During 2019-20, 13 exploratory oil drilling activities and 12 development activities have been carried out by the ONGC in Tripura. In 2020-21, these numbers fell to 9 and 6 respectively.

There are efforts to maximize gas production in Tripura state due to the high level of vehicular CNG usage.

Project Indradhanush is an on-going project aimed at connecting all the gas gathering stations in the north-east, in eastern India and ultimately throughout the country.

Summary of Q&A Session

The volume of Oil and Gas activities are going to be accelerated in Tripura in the coming years because the Government of India is going to allow more blocks there under Vision for North East 2030.

Initiative will be taken to facilitate an auto-renewal system for red category projects in Tripura.

Fees for grant of consents in Tripura state are calculated on the basis of capital investment (project cost).

With respect to transfer of CTE/CTO from one company to other, the Tripura and Telangana SPCBs issue a fee-less amendment that facilitates the transfer of the consent certificate. The company in question has to submit online the consent certificate and a proof of change of management. There is no need for a fresh application.

With respect to compliance monitoring, the Telangana SPCB exempts green category projects from monitoring whole orange category projects that are monitored by third parties (EPTRI and IIT, Hyderabad). There is a randomized computerized monitoring for red category projects that is carried out by the SPCB.

SPCBs will consider making the process of granting CTE and EC a one-step process as per MoEF&CC guideline of February, 2020.

Site-specific legal litigations in Telangana pose a problem for the SPCB since the MoEF&CC might not be aware of such nuances. This is one of the reasons why the CTE has not been linked with the EC.

Both Tripura and Telangana SPCBs complete Public Hearing within the stipulated timeline of 45 days except in case of public unrest.

Oil & gas activities will soon start in the state of Madhya Pradesh.

Day 3

April 23, 2021

Watch the Session Recording >

Prevailing FC Regulations for Oil & Gas Sector, and General Lapses Observed in the FC Proposals at the Central Level

Mr. Sandeep Sharma, AIG (Forest), MoEF&CC

The Forest Conservation Act (FCA), 1980 is a unique piece of legislation, and a regulatory mechanism that reflects the collective will of the nation to protect its rich biodiversity and natural heritage and that permits only unavoidable use of forest land for various developmental purposes.

It is a regulatory, not a prohibitory act.

Between 1950 to 1975, 4.135 million hectares of forest land was diverted for non-forest uses without any mitigation measures. This led to the FCA coming into place in 1980 with the underlying principle of ensuring mitigation measures in case of diversion of forest land.

With the coming of the FCA, 1980, forests were no longer a state subject but now in the concurrent list as a result of which rules and regulations are jointly made.

According to the FCA, the following activities cannot be allowed without the approval of the government of India:

- Diversion or de-reservation of land notified as forest
- Use of forest land for non-forest purposes.
- Lease assignment of forest land to non-government/private entities.
- Clearing of naturally grown trees for the purpose of reafforestation

The scope of applicability of the FCA is defined in the landmark judgement known as the T.N. Godavarman judgement in 1995. It clarifies that the act is applicable in:

- Land notified as forest
- Land recorded in revenue/government records as forest irrespective of ownership
- Areas identified as forest by state committees formed to identify forests in 1996
- Area that resembles forest as per dictionary meaning
- Not applicable

It is crucial to understand what constitutes forest land as per the Supreme Court judgement before proceeding to start projects in an area.

From 1950 to 1980, an average of 1.5 lakh hectare

of forests have been diverted every year for non-forest use. After the FCA came into place in 1980, an average of 25,000 hectares of forests are diverted annually. A total of nearly 10 lakh hectare of forest lands have been diverted so far with mitigation measures coming into place only after the FCA, 1980.

The following measures have been adopted in order to compensate for the loss of forest land:

- Calculating Net Present Value (NPV) of the area: value of ecosystem services that will be lost when forest land is diverted to non-forest use. NPV is not the cost of the land. The Supreme Court institutes committees that calculate the per hectare NPV of forests of different types and densities.
- Mandatory compensatory afforestation
- Determining if the use of forest land for non-forest use is unavoidable
- Examining alternatives to use of forest area
- Ensuring minimum use of forest area by avoiding construction of roads etc.

Violation by any authority who diverted forest land for non-forest use without prior approval leads to 15 days imprisonment. Action will be taken as per Rule 9 of the FCA, 1980 and according to the penal provisions specified in Guideline 1.21 available on the Parivesh portal.

With respect to the MoPNG, all the exploratory wells and development wells are treated under the normal provision of FCA 1980. All agencies must apply to operate both development as well as exploratory wells by filling Form A of the FCA.

In Case of PML, permission under Section 2 (iii) of the FCA is required. A petroleum mining lease cannot be signed without this.

NPV is paid at 2% of the NPV for entire forest land within the PML.

In case of PEL no permission under FCA 1980 is required.

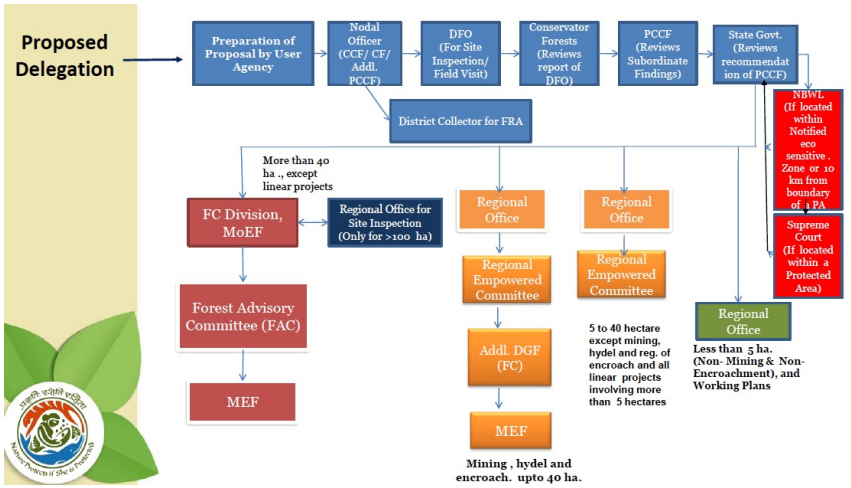
For the purpose of seismic surveys 80 number of shot holes over 1 sq km of forest area is permissible without approval under FCA 1980

For exploratory /developmental well, user agencies must apply on Form A (if fresh case) and Form B if renewal and Form for section 2 (for PML)

For Seismic surveys if shot holes are more than 80 per sq km, Form C must be used.

User agencies can apply for Forest Clearance on the Parivesh portal following which the

application for FC goes through an elaborate process that is described in the flowchart below:



The following are the functions of the Regional Offices:

- Processing of proposals up to 40 hectares in each case.
- Approval of working plans/ working schemes.
- Site inspection of cases more than 100 hectares.
- Monitoring of approvals
- Monitoring & evaluating ongoing forestry projects and schemes
- Issuing FRA certificates
- Allotting compensatory afforestation area.
- Ensuring payment of compensatory levies in the right account.
- Monitoring compliances of the conditions of past approvals in case FC is up for renewal.
- Issuing site suitability certificate for CA.
- Ensuring that user agencies with PML are not allowed the breaking of land unless permission is granted under Section 2(ii) of FCA 1980.

Some of the shortcomings noticed in the proposals of Oil & Gas sector are listed below:

- Lease/FC approval are being transferred to other user agencies without prior approval of
- Roads and other infrastructure are not being considered a part of the proposal for exploratory and developmental wells.
- Proposal do not have details of complete land use.
- Clear details of forest and non-forest area along with maps are not being furnished.
- Distance of sites from protected areas is not mentioned.

The following table lists timelines for processing Stage-1 FC proposals at the state level:

Level	5 ha.	5 to 40 ha.*	40 to 100 ha.	More than 100 ha.
Nodal Officer	10	10	10	10
DCF	30	30	45	60
District Collector for FRA				
CF	10	10	30	30
Nodal Officer/ PCCF	10	20	25	30
State Govt.	30	30	30	
Transit Period	20	20	20	20
Total	**110**	**120**	**150**	**180**

The following table lists the timelines for processing of stage-1 FC proposals at the MoEF&CC:

Activity	5 ha.	5 to 40 ha.*	40 to 100 ha.	More than 100 ha.
Pre-inspection by MoEF/ RO to examine completeness	5	5	10	10
Site inspection by R. O.	-	-	-	45
FAC	-	-	30	30
REC		30	-	-
Approval by competent authority (CA)	20	30	30	30
Communication of approval of CA	5	5	5	5
Transit Period	-	5	-	10
Total	**30**	**75**	**75**	**120**

Lapses in FC Proposals Observed at IROs of MoEF&CC and Suggestion to Expedite Faster Processing of FC Proposals

Mr. W.I Yatbon, Dy. IG of Forests (C), IRO MoEF&CC, Shillong

In order to expedite the processing of forest clearance (FC) proposals, the following is a list of the general information required on the proposed forest site:

- If it is a forest land, then the extent of land is required as well as its legal status
- If it is private land or deemed forest, then the extent of land is required.
- Details of total land required
- Density of proposed forest area and eco class
- Details of whether displacement is involved or not
- Purpose-wise breakup
- Layout plan of the proposed site
- Number of trees to be affected or felled.
- Net Present Value (NPV) amount
- Distance from Protected Area (PA)/ Ecologically Sensitive Zone (ESZ)
- Period of exploration
- Layout plan (DS, DSA or WP)

- Proposed site maps
- KML/ SHAPE file and GPS coordinates
- Compliance with Forest Right Act, 2006
- Site inspection report by DFO and CF
- Brief write-up of the project (an overview)
- Justification for proposing site on forest land
- Assurance that land proposed is minimum
- PML
- Cost of the project
- Employment to be generated
- Cost Benefit analysis
- No. of boreholes and size
- Copies of undertaking certificates

The following is a list of general information required for processing Compensatory Afforestation (CA) land proposals:

- C.A. applicability and scheme on forests land or on non-forests land
- Proposed CA area with financial outlay
- Site suitability certificate for the proposed CA
- KML/Shape file of the CA land

The following is a list of miscellaneous information required for expediting FC proposals:

- Accessibility/ presence of approach road
- Status of EC
- Presence of old wells and their status
- Recommendations from Nodal Officer and the State Government

With respect to details regarding the proposed land the KML file (polygon and area) must be furnished along with the forest attributes confirming that it does not have inviolate status.

The FC proposal must have a purpose-wise break-up of the approach to divert forest land for non-forest use along with the extent of encroachment into forest areas.

With respect to CA land proposals, details of the KML file polygon, density of forest, the cost estimate and details of the DSS and actual field must be furnished.

A few issues that hinder granting of FCs are:

- List of PML and their status along with maps for entire state are not being furnished
- Not handing over of land not in use
- The long-term welfare of people is not being considered
- Increase in instances of accidents/spills/etc

A few issues specific to the hydrocarbons sector concern the following:

- PEL
- The area and validity of the PML
- Payment of 2% NPV
- General approval

A few suggestions to expedite the processing of FC are:

- Safeguard the checklist
- Send complete information
- Follow- up at the most crucial level (state dependent)

Prevailing regulations for Wildlife Clearance for SC-NBWC for Oil & Gas Sector

Mr. Joydev Lahiri, CGM (Environment), DGH

With respect to proposal for Wildlife Clearance (WC), If the proposal is inside the PAs- both Forest as well as Wildlife Clearances will be required. In such cases, first the FC application form to be submitted followed by the submission of the Wildlife Clearance application form

For ESZ area, since Forest Clearance is not required, Wildlife clearance application Form can be submitted directly.

Once an application is uploaded in Parivesh portal, it is forwarded to the concerned DFO/ WildLife Warden.

DFO scrutinizes the proposal and sends an acceptance letter to the User Agency (UA), if all relevant documents are uploaded properly. If any document is missing or any other information is needed, the DFO may ask U.A. (EDS) to upload the missing information

Timeline will start only if the DFO accepts the proposal and sends the acceptance letter to the U.A.

DFO has to carry out site inspection and has to upload his recommendation along with Site Inspection Report and then forwarded to Chief Wildlife Warden (CWW).

CWW puts his/her recommendation and Site Inspection report (if site inspection done) and the proposal is forwarded to Environment & Forest Dept. of the State Government.

The State Government (SG) reviews the proposal and recommendations of DFO and CWW and approval taken from the competent authority for placing the proposal before the State Board of Wildlife (SBWL).

After recommendation of the proposal by SBWL the same is forwarded to Wildlife Division, MoEF&CC, HQ, New Delhi.

After taking approval of the Competent Authority the proposal is placed before the SC-NBWL for consideration and the decision of SC-NBWL is uploaded in the portal.

The list of enclosures that OIL had to submit along with Part-1 & Part-II of the application for the ERD proposal beneath DSNP (ESZ Area Proposal) is as follows:

1. Covering Letter
2. Copy of PML Grant letter
3. MoPNG's circular
4. Project Justification
5. Authorisation Certificate
6. Reply to EDS queries
7. KML File
8. Toposheet
9. Geo-referenced Map
10. Google map showing coordinates
11. Land Use Map in 1: 4,000 scale using DGPS or Total Station
12. Map of the outer boundary of Mining Lease Area
13. Coordinates of the outer boundary of Mining Lease
14. Biodiversity Study
15. Details of the previous projects executed in PAs
16. Details of compliance of conditions against each approval
17. Undertaking for LOI
18. Undertaking for Prospecting License
19. Undertaking for Mining Plan
20. Undertaking for 3D Subsidence Study
21. Undertaking that no drilling activities will be carried out in the core area of NP and its ESZ area
22. Undertaking for inability to upload KML File
23. Details of transportation of the minerals raised from the Mining Lease area
24. Details of CSR activities done around the area

The DFO has to enclose the following reports along with Part-III of the Form

1. Conservation Value of the PA
2. Impact due to diversion of area for the use of land for the Project
3. Comprehensive Details of the likely Impact of the current proposal in terms of section 29 and /or section 35(6) of the Wildlife (Protection) Act, 1972
4. Justification for Recommendation
5. Site Inspection Report

The following are a few regulations applicable for Wildlife Clearance

Approval from the Supreme Court is no longer

required for projects inside the PAs since October 2015, which was mandatory earlier in addition to approval from SC-NBWL for projects inside the PAs.

SC-NBWL to submit order copy to CEC within 30 days and CEC is at liberty to approach Supreme Court by filing a petition if not satisfied with the decision of SC-NBWL.

As per Supreme Court's judgement dated 21.04.2014 on Goa Foundation Case, mining activities are prohibited within 1 km from the boundary of PAs

A distance of 10 Km is considered as ESZ area from the boundary of PAs by default in pursuant to Supreme Court's order dated 4th December, 2006, till the Site Specific ESZ areas are not notified for the respective States.

As per the said order, projects executed in the ESZ area would require approval from SC-NBWL.

Approval from Standing Committee of National Board for Wildlife not required for Projects in ESZ area if the project doesn't attract Environment Clearance (EC) under purview of EIA Notification, 2006.

The previous time limit of "545 days" for finalisation of ESZ notification against publication of Draft notification has been increased to "725 days".

Payment of 2% of project cost or cost towards Impact Mitigation and Wildlife Conservation plan for 10 years, whichever is higher.

Oil & Gas Seismic Survey permits earlier inside the PAs are no longer permitted at present except Reserve Forest areas.

Oil & Gas E&P activities are classified as prohibited activity in the final site specific ESZ notifications published so far – It is desired that they should be considered as "Regulated Activities"

Same Five Part Form used for projects executed inside PAs need to be used for ESZ area proposals requiring approval from SC-NBWL.

Wildlife Division notified List of 57 Experts in 18 State/UTs for preparation of "Wildlife Management Plan".

The Supreme Court in its 11th December, 2018 order against pending site specific ESZ notifications for PAs, urgently ordered the MoEF

to declare an area of 10 Kms around these 21 National Parks and Wildlife Sanctuaries as Eco Sensitive Zone.

Liberty is granted to the State Governments to move an application for modification of this order along with a proposal only two weeks after submission of the proposals to the MoEF.

All proposals of the ESZ area have to be routed through SBWL at present.

Summary of the Interactive Discussion Session

Specific guidelines regarding CA can be found on the Parivesh portal where there is a comprehensive guidebook chapter 2 of which deals with CA. For up to 1 hectare area of forest land, CA plan must be made to the tune of 10 times the number of trees that have been felled. If it is more than 1 hectare of forest land, the equivalent area of non-forest land must be set aside and a CA plan of 1100 trees per hectare of land must be designed.

Digitization of forests is yet to happen across the country, and must be taken up as a priority.

Importance of Plant-Animal Interaction

Dr. Murali Krishna Chatakonda, Amity University, Noida

Some of the common plant animal interactions that are generally observed are pollen dispersal and seed dispersal.

Bats, bees, beetles, birds, butterflies, flies, moths and the wind are a few major categories of pollinators.

With respect to the economic valuation of the services of pollinators, animal pollination plays a vital role as a regulating ecosystem service in nature. Globally, nearly 90 percent of wild flowering plant species depend, at least in part, on the transfer of pollen by animals. These plants are critical for the continued functioning of ecosystems as they provide food, form habitats and provide other resources for a wide range of other species.

Given that pollinator dependent crops rely on animal pollination to varying degrees, it is estimated that 5-8 percent of current global crop

production with an annual market value of $235 billion-$577 billion (in 2015 United States dollars) worldwide, is directly attributable to animal pollination.

Climate change, habitat loss, forage quality, pests, pathogens and insecticides are a few of the pressures on pollinator species across levels of biological organization (DNA, cells, individuals, populations, species). While pests, pathogens and insecticides act on the individual organisms, climate change and habitat loss affect life of the pollinators on the level of the population and species.

The other vital ecosystem service is seed dispersal.

Direct human activities such as hunting and poisoning as well as indirect human activities such as habitat alteration, land-use and introduction of invasive species greatly threaten the life of seed disperser communities.

This can have devastating cascading effects on other trophic communities such as microorganisms, herbivores and predators as well as on plant communities resulting in irreversible changes in genetic composition, community shifts and regeneration potential.

In the long term threatening human activities imperil ecosystem functionality as well as human well-being.

A few ways to conserve the health and well-being of pollinators & seed dispersers are:

- Improving habitat quality
- Providing corridors
- Reducing the use of pesticides
- Reducing the impacts of climate change and global warming
- Minimising the impact of human activities in these areas
- Mainstreaming conservation
- Involving local/indigenous techniques to improve pollinator health.

Day 4

April 30, 2021

Watch the Session Recording >

Compliance of FRA, 2006 for Diversion of Forest Land for Non-Forestry Purposes

Ms. Priya Tayde, UNDP Consultant, MoTA

India has a Scheduled Tribe (ST) Population of 10.45 crores according to the 2011 Census. There are over 705 ST groups, making up 8.6% of the country's population.

75 groups of STs in 18 statues and 1 UT with a population of 27.68 lakhs (2011 Census) come under the category of Particularly Vulnerable Tribal Groups (PVTGs).

The major occupations of India's tribal communities include cultivation, animal husbandry, casual labour work, collection of MFP etc.

States with high tribal populations are:

- Madhya Pradesh - 21%
- Maharashtra - 9.4%
- Odisha - 22.8%
- North East Combined - 27%

With respect to development indicators in STs, the infant mortality rate is higher than the national average rate (44.4 deaths per 1000 births) and so is the prevalence of anemia in women (59.9 women per 1000). There is a higher-than-average percentage of people belonging to STs living below poverty line in rural areas versus urban areas (47.1% versus 28.8%). Literacy rates in people belonging to STs is also lower than the national average.

The profile of tribal livelihood in India can be split up as follows:

Occupation	% Of people involved
Cultivation	38
On farm manual casual labour	30
Off farm manual casual labour	21
Government jobs	4
Goods and Services sector	2
Domestic service	2
Primary sector enterprises	1
Rag-picking	0
Destitute, living on alms	0

The territories occupied by tribal populations in India perfectly coincide with forest areas. Therefore, the implementation of FRA is crucial for the development and well-being of tribal populations.

A majority of tribal populations in India do not practice settled agriculture but rain-fed cultivation instead as well as taking part in a variety of other livelihood practices such as fishing, grazing and nomadic grazing. They also depend on forest produce for livelihood and cultural practices.

The access of non-tribal entities to forests and forest

produce has seen gradual regulation over the years since free access in pre-colonial times to highly regulated access of the present day with the coming of the FCA, 1980. However, the recognition of the rights of forest dwellers was given due importance only as late as 2006.

Certain constitutional provisions for safeguards for STs secures their rights and their autonomy over governance of their own lands. Two major acts implemented to this end are:

- PESA – Panchayats (Extension to Scheduled Area) Act, 1996 grants them autonomy over governance of their lands as well as access to minerals.
- The Scheduled Tribes and Other Traditional Dwellers (Recognition of Forest Rights Act), 2006 which recognises and records their occupations on forest land and access to various resources therein. The rules of this Act come into effect in the instance of diversion of forest land for non-forest purposes where not only are forest dwellers seen as shared owners of the land and resources therein, they are also seen as responsible for maintaining the health of the forests, the catchment areas and their biodiversity.

Prior to 2006 the rights of FDSTs (Forest Dwelling Scheduled Tribes) and OTFDs (Other Traditional Forest Dwellers) were not recognized during consolidation of State forests.

This resulted in historical injustice to these communities who are integral to the very survival and sustainability of the forest ecosystem.

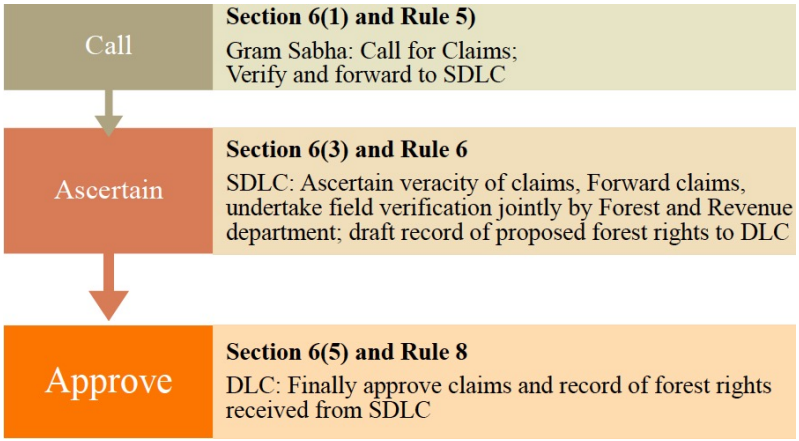
The objective of the FRA is to correct this historical injustice by recognizing and vesting forest rights in FDSTs and OTFDs who have been residing in such forests for generations but whose rights were not recorded.

The rights provided under the FRA fall into three broad categories:

- Individual rights that give forest dwellers the right to habitat and the right to cultivation.
- Community rights that give populations of forest dwellers the rights to collection of Minor Forest Produce (MFP), nomadic/pastoral rights (grazing), fishing and use of water bodies, and right to habitat for PVTGs.
- Community Forest Resource Rights of protection, conservation and management of forest land for sustainable use. These rights recognise the importance of traditional knowledge passed down along generations of forest-dwellers that must be acknowledged and valued by non-forest dwellers.

It is important to note that according to the FRA, the word "habitat" does not just refer to a particular dwelling site within the forest but is taken to mean the entire forest itself given the nomadic nature of forest dwellers. This is in keeping with the "National Park theory of conservation" where the entire forest is considered the home of the forest dweller.

The process flow for the recognition of rights under the FRA are depicted in the diagram below:



The Gram Sabhas are given a central role by the FRA where they are empowered to carry out various functions and responsibilities such as:

- Initiating and ensuring that all claims of forest rights are heard and settled
- Regulating the powers, functions and activities of the CFRC.
- Scrutinizing, modifying and approving annual plans and budget of the CFRC.
- Undertaking social and financial audit of work done by the CFRC.
- Making rules of harvest/disposal of MFP and utilization of funds/revenue.
- Taking a decision (consent/refuse) over a proposal for diversion of forest land for non-forest purposes.

With respect to mandatory compliance for diversion of forest land, the following activities must be met:

- The completion of recognition and vesting processes of forest rights
- Obtaining informed consent of Gram Sabha before diversion of forest land for non-forest purpose (MOEFCC circular dated 3.8.2009)

FRA does not provide any exemption to any category of projects

Various safeguards have been provided to FDSTs or OTFDs from eviction till recognition and verification procedure is complete (MOTA circular dated 07.03.2014)

Section 3 (1) (m) of FRA provides right to in-situ rehabilitation to FDSTs and OTFDs having been displaced without receiving entitlements to rehabilitation prior to 13.12.2005. This retrospective provision becomes especially crucial in cases where there is no record of rights of FDs.

The Gram Sabhas are the final and empowered authority under the Act to ascertain whether all the processes under FRA have been complied or not.

The Ministry of Tribal Affairs (MoTA's) OM dated 23.02.2018 relaxed FRA compliance at exploratory drilling / prospecting stage on the main conditions that the State Government will produce evidence that FRA implementation has begun and that evidence of FRA compliance will be obtained before initiation of

production stage.
However, the High Court of Andhra Pradesh issued an order quashing the MoEF&CC's circular dated 5.2.2013 relaxing FRA compliance. This order automatically renders MoTA's OM dated 23.02.2018 irrelevant/null and void.

What stays relevant is the MoTA's circular dated 07.03.2014 that does not provide any exemption to any category of projects

MoTA has also communicated on the floor of Parliament dated 18.3.2021 that FRA does not provide any exemption to any category of projects.

This further underlines the central role regarding consent of Gram Sabha that is also reflected in PESA,1996 and LARRA, 2013

Section 5 of the FRA empowers Gram Sabhas to protect Forests, Wildlife and Biodiversity. Therefore, FRA compliance is a mandatory requirement before diversion of forest land.

The Supreme Court in Odisha Mining Corporation V/s Ministry of Environment & Forests and others [Writ Petition (Civil) No. 180 of 2011] pronounced by the Hon'ble Supreme Court on 18th April 2013, pronounced a landmark judgement upholding the necessity of informed consent of Gram Sabha.

The court mandated that all matters concerning FDs be placed before Gram Sabhas for active consideration. The Gram Sabha will consider and verify if all claims of individual, community and cultural/religious nature are settled and see if there are future claims. They will also provide a timeline for the rights to be settled.

According to the court order, the Gram Sabha is supposed to ensure whether the project/diversion of forest land infringes on any of the rights of STs and OTFDs.

Subsequent to the above judgement, various High Courts as also Supreme Court again have also upheld the necessity of informed consent of Gram Sabha / FRA compliance

There is no timeline prescribed under FRA for completion of FRA compliance process

It is mandatory to obtain 'free and informed consent' of Gram Sabha for diversion of forest land and subsequent rehabilitation.

The implementing authority of the FRA is the individual state. Since implementation will differ based on the kinds of forests and composition of tribal populations, the Project Proponent will have to approach the relevant agencies of the concerned state government for achieving FRA compliance under Section 6 of FRA.

The PP must ensure that FRA processes are not

completed in haste as it may lead to perpetuation of historical injustice done to FDSTs and OTFDs where they were treated as encroachers on their own land.

FDSTs and OTFDs shall be duly compensated under RFCTLARR Act, 2013 if they face displacement, loss of livelihood, interference in access to Forest Rights etc. due to any development project.

Efficient Processing of Forest Clearance Proposals

Dr C Muthukumaravel IFS, CCF & Nodal officer (FCA), Assam

To bring more transparency and accountability in the forests, environment and wildlife clearance process, MoEF&CC has rolled out a portal named as "Online Submission & Monitoring of Environmental, Forests and Wildlife Clearance" (OSMEFWC)

There are two stages of processing of Forest clearances. In Stage I (Principal Approval), the application submitted by the user agency is processed as per procedure and various steps followed. In Stage II (Final Approval), the compliance of conditions of In-Principal Approval is checked.

The timelines for processing of forest clearance cases under Forest (Conservation) Act, 1980 are depicted in the table below:

Sl. No.	Activity	5 Ha.	5 Ha. to 40 Ha.	40Ha. to 100 Ha.	More than 100 Ha.
		No. of Days			
1	Nodal Officer	10	10	10	10
2	DCF	30	30	45	60
3	District Collector for FRA	30	30	45	60
4	Conservator of Forests	10	10	30	30
5	Nodal Officer/PCCF	10	10	25	30
6	State Govt.	30	30	30	30
7	Transit Period	20	20	20	20

However, these timelines are not met in practice because of inordinate delays at various stages.

An analysis of timeline data over the last 5 years has revealed the core areas where delays of more than 5 months take place. The critical points of delay are:

- Acceptance stage
- CA land (especially for private players in finding revenue land)
- FRA compliance
- Compliance Report

Stage I is the stage of accepting application and proper documentation at nodal level. This process often seems to take a long time, a few months to a year or more. The delay is due to defects in the documentation by the User Agency leading to continuous queries. This is especially relevant to the Department of Hydrocarbons.

The common issues observed during Stage-1 are:

- Incomplete SOI Topo-sheets, KML / shape files / layout maps
- Mismatch in DGPS survey
- Delays in site inspection by DFO&CF
- Defects in uploading hard copies
- Errors in uploading of proper documents
- Errors in furnishing of Aerial Distance from nearest PA
- Errors in uploading of proper undertakings
- Errors in signing of documents / maps by authorized officials with seal.

The common issues observed during Stage II (Compliance report) are:

- Delays of up to 2.5 years in processing of compensatory levies by UA.
- Errors in demarcation and fixing of boundary pillars
- Errors in providing of certificates
- Errors in undertakings by UA
- Lack of mandatory EC

It is suggested that UAs hire a team of experts with prior consultation with field officials and nodal officers to minimise errors and expedite the process of getting clearances.

Efficient Processing of Mining Category Proposals

Mr. V.G Jennar, CCF & Nodal Officer (FCA), Tripura

In Tripura, after 1980, almost 400 cases in the mining category have been cleared out of which 85 proposals have been cleared by ONGC. 2 proposals have been cleared by Jubilant Oil and Gas Pvt Ltd and GAIL.

Currently, 28 proposals of ONGC are in the pipeline while Jubilant Oil and Gas Pvt Ltd and GAIL have 12 proposals pending. OIL India ltd has 1 proposal pending.

Among pending proposals, almost 50% are pending at the UA end, some with the regional officers and some at the DFO and Forest Headquarters.

Common mistakes made by UAs while submitting proposals are and ways to correct them are listed below as follows:

- Basic mistakes in the title of the proposal where all locations are not mentioned. UAs must follow the following format of Form A with all locations mentioned in order to avoid mistakes: Name of proposal would be "Proposal for diversion of ..... hectares of forest land for drilling, waste pit and approach road etc, at ..... location of

Mouja-……in favour of …… under ……. District"

- In case of non-linear proposals, UAs must examine two alternative locations and show them on the map along with justification for rejection of those locations.
- Mismatch in information between hard and soft copies.
- Authorized officer's signature and/or seal are missing
- The complete compliance of the FRA, 2006 shall be ensured by way of prescribed certificate from the concerned District Collector.
- Geo-ref map/ Topo map / Digitized mouja map over proposed land is required to be submitted with seal/ signature of the UA. Soft copy of the shape file needs to be verified from the FHQ before the submission of the proposal.
- Layout plan of the proposed land mentioning purpose-wise break-up of the land as well as details of existing road/ approach road of the proposed location must be submitted.
- Status of the block with respect to whether 2% of NPV has been paid or not has to be mentioned along with undertakings towards paying of NPV, CA, additional NPV, and details of extraction of trees and demarcation cost.

If proposals are complete with all the details furnished, they do not take more than 60s for processing in the state of Tripura.

Suggestions to expedite the processing of mining clearances are listed below:

- User agency must submit fully completed proposals.
- Powers must be given to IRO, MoEF&CC, Shillong for issuing approval for mining cases for up to 5 hectares so that they are cleared at the regional office level instead of sending them to the government of India.
- UAs must declare Nodal Officers for early disposal of the case.
- Nodal Officers of all UAs operating in Tripura must participate in the monthly FCA review meeting.
- It has been observed that sometimes UAs send representatives who are not well conversant with the project. This must be discontinued and only Nodal Officers must attend the review meetings.

Efficient Processing of Forest Clearance Proposals

Ms. L.J Syiemiong, Dy. IG of Forests, IRO
MoEF&CC, Shillong

With respect to processing Forest Clearance (FC), as per the provisions of WildLife (Protection) Act, 1972 and Orders of Hon'ble Supreme Court dated 9th May 2002, any non-forestry activity inside a Sanctuary or National Park requires clearance from Standing Committee of NBWL. The application for this needs to

be submitted online.

User Agencies must furnish the following details in their proposals in their application of FC:

- Name of proposal
- Purpose-wise breakup of the proposed area: drilling site, approach road etc
- Extent of land required in terms of:
  > Forest land present
  > Legal Status of forest land – unclassed/reserve forest/community forest/PA such as National Park or Wildlife Sanctuary
  > Private land, if applicable
- Total land requirement
- Details of the relevant state, forests division, district, range, beat etc
- Name of the UA
- Number of trees to be affected/felled
- Undertaking by the user agency for payment for extraction charges of the trees to be removed from the proposed area
- Whether maps and GPS coordinates have been provided for:
  > proposed diversion site
  > map of C.A site
- Report of Decision Support System (DSS) software on the proposed diversion site and proposed CA site.
- Whether C.A. is applicable and the schemes are technically approved and signed by authorities. The extent of the CA site must be double the size of diverted forest land.
- Site suitability certificate for the proposed CA.
- Details of proposed CA area with financial outlay amount that has to be paid by the UA
- Distance from nearest PA (National Park or Wildlife Sanctuary) and whether drilling location is at least 10 km from the nearest ESZ.
- Whether there is any violation of Forest (Conservation) Act,1980/Indian Forest Act
- Whether EIA Notification & EC are applicable or not
- Whether human displacement involved or not
- NPV amount calculated by the Forest Department depending on the assessed eco-class of the forest and the density of forest cover.
- Undertaking certificate for payment of NPV and additional NPV if and when Hon'ble SC issues revised NPV rates by user agency
- Site inspection report by DFO. In case a project falls under more than one district, in which case all DFOs concerned must give their site inspection report.
- The same applies to site inspection reports by CF.
- Cost of the project as well as cost benefit analysis
- Employment likely to be generated. It is strongly recommended that local people are considered for Temporary Employment at the project site.
- Forest Right Act, 2006 certificate
- Recommendation of both the Nodal Officer (FCA) & State Govt. It has been noticed that one of the two is missing leading to delays.
- Date of approval of the mining plan
- Details of PML involved and its validity with

respect to the proposed location
- Number of borehole and size involved in proposed drilling

Once the proposal has been submitted with all the details mentioned above, it goes through two stages for clearance under FCA, 1980:

- In stage-I, the proposal shall be agreed to "in principle" in which the conditions relating to transfer, mutation and declaration as RF/PF under the IFA, 1927 of Equivalent Non-Forest for CA (wherever applicable) and remittance of all CA levies (funds for raising CA, NPV, other charges, if any) thereof are stipulated.
- In stage-II, after receipt of compliance report from the State Government in respect of all the stipulated conditions, final approval under the Act shall be issued by the IRO.

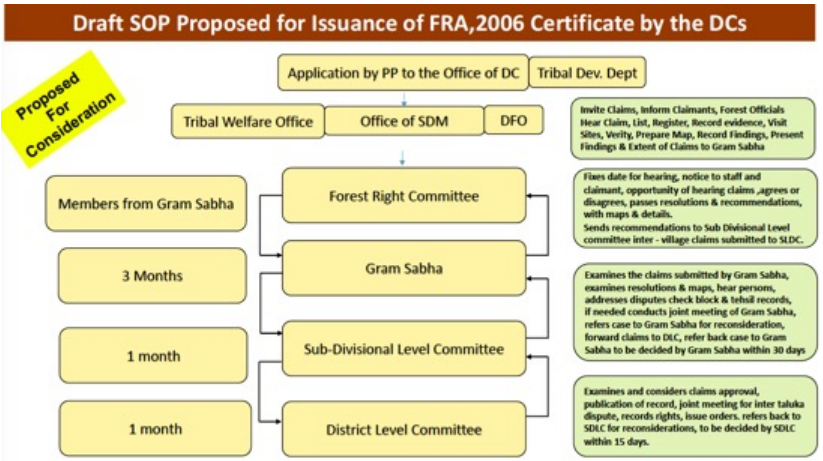
Guidelines specific to the Hydrocarbon Sector for undertaking seismic surveys and exploratory drilling in forest areas are given in Ministry letter No.11-423/2011- FC in letter dated 30.09.2019.

Guidelines under the provisions of the Forest (Conservation) Act 1980 for undertaking prospecting/exploration/Seismic Survey in Forest area and streamlining of procedure are given in Ministry letter No.5-3/2007-FC in letter dated 17.11.2020.

Interactive Session Amongst the Operators and Regulatory Authorities – Modifications Required in FC Approval Process and Way Forward for Expediting FC and Wildlife Clearance Proposals

FRA certificates take an average of 1.5 years for ONGC, Tripura, 4.7 years for ONGC, Jorhat and 1.5 years for HOECL, Assam.

It is proposed that a draft SOP detailing the timeline for issuance of FRA, 2006 Certificate by the DCs. It is explained in the diagram below:



However, this SOP will not be in accordance with the FRA because the FRA does not prescribe any timelines. Nevertheless, the SOP draft can be pursued with the authorities who will inspect its validity.

Informed consent of Gram Sabha and protection of rights of Forest Dwellers are the two mandatory compliances required under FRA in case of diversion of forest land. The Gram Sabha is the highest authority in ascertaining whether or not rights of Forest Dwellers are being infringed upon or not in their particular jurisdiction.

If Non-Encumbrance Certificates are issuedCertificates issued after the enactment of the FRA, then future claims after issuance of certificates must be compensated. Diversion of forest lands can take place only after rights of Forest Dwellers have been recognised and settled.

With regards to the issue that states with more forest cover are less 'developed' or industrialised than states with less forest cover, it is important to realise the importance of forest cover and the rights of Forest Dwellers as prescribed under FRA, 2006. The Act allows for smaller projects such as schools, anganwadi centres and hospitals but not for larger projects that do not comply with its rules.

Presently, there is no option of any kind of exemption for any category of project with respect to FRA compliance. It is recommended that the MoTA should issue guidelines with respect to FRA compliance because FRA comes under MoTA, not MoEF&CC.

It was suggested that the following general procedural changes be made to expedite FC processes:

- To facilitate parallel submission/ receipt of the proposal to the DFO concerned as well as Nodal Officer in the online Parivesh portal. It was followed prior to implementation of the online system w.e.f 01.11.2014.
- Auto shifting of deemed approval mechanisms be developed so that the proposal automatically goes to the next level after lapse of the time limit prescribed at each level in a sequential manner, viz: Nodal Officer > DFO > CF/CCF > Nodal Officer > Dept of Env & Forests of State Govt > IRO, MoEF&CC > MoEF&CC, Delhi > IRO, MoEF&CC > Nodal Office (FCA) > PP: This long chain of approval mechanisms if not well-addressed/safeguarded with stipulated timeline-deemed approval mechanisms, issues cannot be resolved and it will take 3-4 years minimum for getting Stage-I FC, since the FC approval process includes two another crucial components viz: obtaining certificate from the concerned DCs in compliance to FRA, 2006 and identifying CA land.

It was suggested that the following general procedural changes be made to arrest delays in the office of the Nodal Officer (FCA):

- Nodal Officer (FCA) should be allowed to raise EDS query once for all against a single proposal

within 10 days stipulated timeline and not repeated queries one after another
- Timeline to be stipulated for acceptance of the FC application by the Nodal Officer (FCA)
- Online proposals are to be processed instantly without waiting for the hard copy from PP; currently online proposals are not being processed till hard copies are received
- Nodal Officer must not only approve the proposal of FC but also update the same in online portal and NIC Division as HQ also doesn't have authority to override/rectify the same at later stage in the online system

It was suggested that the following general procedural changes be made to arrest delays in completing field level formalities at the DFOs:
- Timeline to be stipulated for completion of Joint Site Inspection with the PP and demarcation at site.
- Survey through drone or accepting the available Forest density data of FSI, Dehradun, or similar methodologies to be adopted for carrying out field level formalities such as tree counting and numbering, remuneration calculation/NPV, CA calculation based on type of forests, forest density and identifying type of forest products for NPV calculation. Accordingly, Part-II of FC application of Form- A or Form-B also needs to be amended.
- PP has to assist DFO for preparation of a 1:50,000 scale map, which needs to be signed jointly with the operator.
- DFOs to be given access to DSS Map of FSI, DDN

Identification of CA land for FC takes years together in the North-East and even when identified, the allotted land is found to be "Inviolate".

It was suggested that the following general procedural changes be made to resolve issues of time and space in CA Land allotment:
- IROs and the MoEFF&CC must consider CA land allotment under the Government of India's 'Sustainable Land Management Program' and Forest & Tree Cover (FTC) Program planned till 2030. Under this, the Government of India has planned to retrieve 26 million hectares of degraded land by 2030 for creating an additional carbon sink of 2.5-3.0 billion tons by 2030.
- There must be provisions to arrange for CA land from other State/UTs having poor forest cover over the States with forest density more than 75% of its total geographical area.
- Criteria for obtaining NOC from DC with regards to non-availability of the CA land need to be relaxed.

The following are a few FC-related issues that require the consideration of the MoEF&CC:
- CPC-Green proposed by MoEF&CC should accommodate FC proposals for the Oil & Gas sector in a different manner instead of treating these as on par with mining activities carried out under the purview of MMDR Act, 1957.
- Digitized Geo-referenced based Forest & PA Maps to be prepared based on latest satellite imagery

indicating physical boundaries of Forest/Wildlife/ National Park etc for the respective State/UTs with up-to-date revenue land records to ensure consistency of the data is the need of the hour.
- FC Exemption for ERD proposals at 3-4 km below the forest surface without any activity over the forest surface or diversion of forest lands must be considered.

The following are a few requirements for the E&P sector with respect to the Forest (Conservation) Amendment Bill, 2021:

- That Section 2(iii) of FCA, 1980 is not revoked and clubbed with sec 2(ii)- because this will bring in the requirement of CA land even though UAs will only use 2% of allotted area for drilling activity. This amendment will grossly affect the Oil & Gas PML blocks.
- That NPV is not applicable while allotting Petroleum Mining Leases (PMLs) for Oil & Gas E&P activities. Same should be collected only during actual forest land diversion as only 2-3 % of the allotted area is used for Oil & Gas E&P activities unlike other mining activities and grant of PML only gives the operator access right/ preferential over the area and not the right to operate/start drilling activities etc.
- That exemption from applicability of FCA, 1980 is allowed for the 18.2 mtr width 1,157 km long Petroleum Pipeline ROW of Oil India Limited acquired in 1960

The following are a few considerations that simplify the processing of Wildlife Clearances for Oil & Gas upstream sector:

- Approval from Standing Committee of National Board for Wildlife not required for projects in ESZ area if the project doesn't attract Environment Clearance (EC) under purview of EIA Notification, 2006 (viz: laying of Oil & Gas Pipelines) It is clarified vide MoEF&CC's
- OMs dated 6th September, 2018 followed with OM dated 16th July, 2020.
- It is requested that the Nodal Officer (FCA) does not insist on Wildlife Clearances for the Projects in ESZ area which does not attract EC under purview of EIA Notification, 2006.
- It is requested that the reinstate Wildlife Division's guideline dated 26.09.2014 be reinstated. It permitted UAs to apply directly to Centre for ESZ area proposals requiring EC for its approval from SC-NBWL. It was withdrawn on 01.05.2015.

It is suggested that oil & gas seismic surveys be permitted inside Protected Areas rather than prohibiting the same.

It is suggested that the CEC's report dated 20th September, 2012 be implemented because it recommends distance from the ESZ area (100 m to 2 km) in 4 categories depending upon the size of the PAs against the current standard of 10 km.

It is suggested that a separate form to prescribe for

SC-NBWL approval for projects in the ESZ area be considered.

It is suggested that site specific ESZ notifications that currently 'Prohibit' E&P activities need to be permitted as 'Regulated' activity.

It is recommended that a SC-SBWL at State level in line be developed in line with SC-NBWL at Centre because it takes 3-4 years of processing at all levels right from DFO since hardly one meeting of the SBWL takes place in a year.

Prevailing OMR-2017 Regulations and general observations on lapses by the various Operators since after its implementation in 2017

Mr. Ramavatar Meena, Director of Mines Safety, Surat Region

Under the Constitution of India, the Safety, Health and Welfare of workers employed in mines are the concern of the Central Government. The objectives are regulated by the Mines Act, 1952 and the Rules and Regulations framed thereunder. These are administered by the Directorate General of Mines Safety (DGMS) under the Union Ministry of Labour & Employment

The objectives of Safety, Health & Welfare is enforced by the DGMS through the following legislations:

1. The Mines Act, 1952 & Rules & Regulations framed under the Act.

- Coal Mines Regulations, 2017
- Metalliferous Mines Regulations, 1961
- Oil Mines Regulations, 2017
- Mines Rules, 1955- Welfare amenities
- Mines Vocational Training Rules, 1966
- Mines Rescue Rules, 1985 applicable for underground mines
- Mines Creche Rules, 1966

2. Indian Electricity Act, 2003

- Central Electricity Authority Regulations, 2010

3. Allied Legislations

- Factories Act, 1948 - Chapter III & IV
- Explosives Rules 2008 & Ammonium Nitrate Rules, 2012
- Manufacture, storage & import of Hazardous Chemicals Rules,1989 under Environmental (Protection) Act, 1986

A "Mine" is defined as any means of operation for the purpose of searching for or obtaining minerals has been or is being carried on and includes:

- All borings bore holes, oil wells and accessory crude conditioning plants, the pipe conveying mineral oil within the oilfields and gas wells and all the machinery as well as protective works being carried out in or adjacent to a mine.
- All workshop stores situated within the precincts of a mine and the same management and used

primarily for the purpose connected with that mine or a number of mines under the same management.
- All power stations, transformer substations etc
- Any premises used for depositing material for use in a mine
- Well stimulation operations, and well workover operations.

The powers of the Inspector of Mines under Sector 7 of the Mines Act, 1972 are listed below:
- The Chief Inspector of Mines (CIM) and any Inspector may enter, inspect & examine any mine at any time by day or night and make such examination and inquiry, as he thinks fit, in order to ascertain whether the provisions of this act and of regulations, rules and bye-laws and of any orders made are observed.
- The CIM may examine and make inquiry respecting, the state and condition of any mine, or any part thereof, the sufficiency of the bye-laws and all matters and things connected with or relating to the health, safety and welfare of the persons employed in the mine.
- CIM and any Inspector may search any place and take possession of any material of any plan, section, register or other record appertaining to the mine, and the provisions of the Code of Criminal Procedure,1973, shall apply to any search or seizure under this act as they apply to any search or seizure made under the authority of a warrant issued under section 94 of that Code.
- If the owner, agent or manager fails to comply with provisions of the Act, the Chief Inspector may give notice in writing requiring the same to be complied with within specified time.
- Where the owner, agent or manager fails to comply with the terms of a notice given within the specified period, the Chief Inspector may, by order in writing, prohibit the employment in or about the mine or any part thereof of any person whose employment is not necessary for securing compliance with the terms of the notice.
- If the Chief Inspector, or an Inspector is of opinion that there is urgent and immediate danger to the life or safety of any person employed in any mine or part thereof, he may, by order in writing prohibit the employment in or about the mine or any part thereof of any person whose employment is not necessary for the purpose of removing the danger.

The Duties and Responsibilities of Owner, Agent and Manager of the Mine (under Section 18 of the Mines Act, 1952) are as follows:
- The Owner and Agent shall each be responsible for making financial and other provisions of this Act and the regulations, rules, bye-laws and orders made thereunder.
- The Owner, Agent and Manager shall each be responsible to see that all operations carried on in connection with the mine are conducted in accordance with the provisions of this Act and of the regulations, rules, and orders made thereunder.

With respect to the appointment of Competent Persons under Regulation 21, the owner, agent or manager shall appoint such number of competent persons including officials, sufficient to secure, during each of the working shift,

- adequate inspection of the installation and the equipment
- a thorough supervision of all operations at the installation
- installation, running & maintenance, in safe working order, of machinery
- enforcement of requirements of the Act and these regulations.

In many cases particularly in Chartered Hire Rigs, Competent persons & Officials were not appointed thus resulting in unsafe conditions.

The duties of the Installation Manager under Regulation 29 are listed below as follows:

- Installation Manager shall have charge and control of the installation and shall carry out assigned duties.
- The IM will ensure that all work, related to installation, maintenance, operation or examination of machinery and equipment are carried out in accordance with the provisions of the statute.
- The IM SHALL visit and examine the installation on every working day to see that safety in every respect is ensured.
- The IM shall ensure that when any drilling rig, work-over rig and associated equipment or pipeline is shifted or newly installed, a trial-run is given under their supervision
- The IM shall ensure that all persons are thoroughly instructed and familiar with the provisions of the SOP, COP and EMP particularly relating to prevention of blowout and fire.

The other Statutory provisions of the OMR 2017 further elaborate the functions of the IM as listed below:

- During inspection if the IM or any other person finds any defect or weakness which may endanger the safety of workers, the casing line shall not be used until such weakness or defect is remedied.
- The slip and cut operation shall be carried out under the supervision of the IM.
- Rigging equipment and crane for material handling shall be inspected by a competent person in accordance with the procedure as laid down by the IM and shall be recorded.
- SOP for rigging-up and dismantling is framed and implemented and kept updated by IM.
- The IM shall conduct a pre-work-over meeting to examine and ensure safety of operation of drilling or work-over activities, and maintain the record signed by the members, before commencement of drilling or work-over operation.
- The IM or an official shall perform well testing and activation under their direct supervision and ensure that:
  > flow-lines are firmly anchored to the ground
  > the separator safety valve is in good working order

> hydro tested separator is used
> adequate fire-fighting equipment is available
> an adequate facility is provided to safely collect the well products in tanks.

- The IM shall ensure that well control procedure is made available to every person and has been understood by the same.
- No welding or cutting work in any hazardous area shall be undertaken unless a specified written "hot work permit" is issued by the Manager, Deputy Manager or IM and such copies are maintained at the installation.
- Prior written permission of the manager, Deputy manager or IM is taken while use of a hot-tapping machine on a running pipeline. In case of pipeline containing flammable fluid, it shall be disconnected or blinded, positively isolated, drained or purged with inert gas or water before hot work is undertaken and precaution taken against build-up of pressure in the line.
- The record of every hydro-test shall be countersigned and dated by the manager, Deputy manager or IM.
- Every person in charge of a machinery, apparatus or appliance shall, before commencing work ensure that it is in proper working order and if they observe any defect therein, shall immediately report the fact to the IM or competent person.

The SOP for work-over operations, well stimulation operations and blowout prevention equipment systems shall be in accordance with the OISD-GDN-18 and OISD-RP– 174.

In well control equipment and operations, it must be ensured that:
well control fluid and equipment are available, installed and used;

- The well is full of well fluid of adequate specific gravity to overbalance bottom hole pressure and
- Casing is hermetically tested before workover operation
- During tripping operation, any signs of kick in the well must be closely watched and annulus is kept full
- Full opening Safety Valve (FOSP) with connection for circulation and operating key are readily available and kept in open position on the derrick floor
- BOP and related equipment like choke and kill manifold, control panel and accumulator are available, maintained and tested regularly. BOP must be function-tested and pressure-tested and Pit & BOP drills are carried out regularly.

The following is a list of provisions related to the periodic inspection and maintenance of well control equipment and control system for BOP:
The owner, agent or manager shall ensure that all pressure gauges, flow meters, etc, on the BOP and chock & kill manifold system are installed, maintained & calibrated once every 6 months.
All ram preventers have locking mechanism and instructions for operating the controls are posted

All controls of power operated BOPs are located within easy reach of the driller on the derrick floor
A remote-control panel for the BOP is installed at ground floor level at a safe distance from derrick floor
BOPs are connected to an accumulator system which shall be capable of providing fluid of sufficient volume to close all the BOPs in the stack and open hydraulically operated valves.

The following is a list of provisions related to precautions against fire:
No Dead leaves or dry vegetation be allowed to accumulate or remain within 15m from the oil well or fuel tank storage area.
All plant, machinery and derricks be earthed for dissipation of static electric charge
Adequate precaution shall be taken to prevent accumulation of flammable vapour near the internal combustion engine.
Fire-fighting equipment shall be in accordance with the provisions listed in OISD-STD-116, 117 and 189.

The following firefighting arrangements & equipment shall be provided:
Adequate water storage tank, pumping facility, hose and nozzle
Adequate number of portable fire extinguishers at the derrick floor, main engine area, electrical machinery, mud tank area, diesel storage area and other places.

Defects in machinery can lead to severe consequences for safety of persons and machinery deployed in mine.

When flammable materials get drawn into the air intake system of the engine resulting in ungovernable fuel supply into it, it leads to a condition known as an engine runaway that results that can range from fire, catastrophic explosions to complete engine damage.

In order to reduce the risk of engine runaway, there must be a provision of Air Supply Shut off Valve or ESD (Emergency Shut off Valves) on diesel engines.

The discharge of hydrocarbon gas in the atmosphere must be prevented by providing suitable gas separators/degasser and / or surge tank to separate gases if any including dissolved gases and system for safe flaring of gas, if any produced from well.

General contraventions observed include the absence of gas separator and surge tank during workover operations to separate the dissolved gases. Instead gases are discharged into the atmosphere without flaring them.

Similarly, the air supply shut off valve had not been provided even with the main rig engine & mud pump engine.

Another observed risk is flammable material or spilled over diesel & oil coming in contact with hot engine components.

The main control measures to mitigate this risk involves shielding of hot engine components like

exhaust manifold, turbocharger and insulation of exhaust muffler & silencer body using suitable material. Provision of spark arrestor with all IC engines must be deployed in mines.

General contraventions observed include the absence of spark arrestors that were with many IC engines and if provided were not regularly cleaned and no records thus maintained.

AFDSS with IC engines and insulation/shield were either not provided or not maintained.

Another observed risk is the leakage and bursting of pressure vessels.

With respect to the maintenance of Draw Works &Emergency Escape Device, suitable crown –o-matic & floor-o-matic device and shall always be kept in working order.

The brakes, & its linkages shall be examined by a competent person once in twenty-four hours to ensure safe working order.

In –situ examination of emergency escape device & its vital components & wire rope for NDT shall be conducted once in a year by the test house as per provisions of DGMS legislation.

The general contravention observed is that the NDT of vital components has not been carried out for escape devices.

Another risk is the failure of the draw work pneumatic brake system due to non- functioning/failure of air supply.

The OMR, 2017 provides a number of OISD standards that must be complied with by operators during the construction, operation and maintenance of mines for the purpose of oil & gas activities.

Day 5

May 7, 2021

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Interactive Discussion with DCs/ DMs About Their Role in Oil & Gas E&P Activities vis-a-vis Development of the Region

Moderator Mr. J. Lahiri, CGM (Env), DGH

Seismic Survey to decide where to drill is the first step in initiating E&P activities in a block after the grant of PEL/PML.

Once crude oil is discovered, it is subject to fractional distillation in refineries to produce many types of products and by-products of the petroleum industry.

In the vast compliance universe of India, there are a total of 1536 Acts, 69,233 compliances and 6,618 filings at State and Central levels.

70% of blocks allotted by the Government of India were relinquished by contractors during the Production Sharing Contract (PSC) regime and 5% more are under the process of relinquishment.

The main causes of such relinquishment are abnormal delay in obtaining multiple statutory clearances, approvals, NOCs, certificates, licenses, leases and permissions from various ministries at central level as well as compliance of various regulatory bodies of the states/UTs.

80% of Category -1 basins have untapped hydrocarbon potential.

In its efforts towards Ease of Doing Business for Oil & Gas E&P activities in Indian basins, the Government of India has taken the following steps:

- Its vision to reducing oil import by 10% by 2022
- Hydrocarbon Vision 2030 for North-East India launched in 2016
- Constitution of "Empowered Coordination Committee" to resolve issues of pending clearance/approvals for upstream E&P activities.

So far, three meetings of the ECC have taken place with the last meeting having taken place on 14th September, 2020.

The involvement and support of the DC/DM is required during the of Execution Phase of oil & gas E&P projects:

1. Grant of PEL/PML

2. Land acquisition under rules of Rehabilitation and Resettlement Act, 2013.
3. Organising Public Hearings for "A" category EC.
4. Issuance of FRA, 2006 Compliance certificate
5. CA land identification and allotment
6. Issuance of NOC TO PSU/private operator if CA land is not available in the district.
7. Approval of plan/drawings in connection with obtaining approval/license from Petroleum and Explosive Safety Organisation (PESO)
8. NOC from Town Planning Officer for Green Belt.

The involvement and support of the DC/DM is required during the of Production Phase of oil & gas E&P projects:

1. Approval of Offsite Disaster Management Plan under provisions of Disaster Management Act, 2005.
2. Organising periodic onshore Coordination Committee meetings
3. Eviction of encroachments on ROW/ROU pipeline which is a serious threat to public life.
4. Ensuring no pilferages from operating pipelines.
5. Land Bank creation in connection with allotted CA land.
6. Sensitive Oil & Gas installations to be declared as Prohibited Area
7. Industrial Estate/Area/Park declaration in applicable cases.
8. Assisting in periodic offsite mock fire drills.
9. Granting permission for tree cutting on premises.
10. Acting as chairperson of the District Disaster Management Authority
11. Acting on issues of law & order and security for workers and machines
12. Periodic awareness campaigns from time to time

Eleven critical issues related to Oil & Gas E&P activities that require cooperation from the DC/DM/Collectors are as follows:

1. Early grant of PML/PEL after allotment of block by the Government of India
2. Land acquisition for drilling location/other purposes
3. Completing Public Hearing within 45 days for "A" category EC
4. Issuance of FRA,2006 Compliance certificate for FC
5. Allotment of degraded CA land to private operator for grant of FC
6. Issuance of NOC if CA land is not available within the district in connection with FC
7. Timely issuance of NOC/Approval of drawings in connection with PESO
8. Arresting pilferages in operating pipelines to

avoid disasters

9. Eviction of encroachments on ROW/ROU pipeline which is a serious threat to public life.
10. After Stage-I FC approval and payment of NPV/CA land, encroachers in forest land do not permit to work and do not accept compensation offered as per norms.
11. Issues of law & order and security for workers and machines

A major source of delay is Public Hearings which are organized by the State PCB in consultation with the DM/DC/Collector.

When the stipulated time for Public Hearing in 45 days, it takes 358 days on an average as revealed in an analysis of 11 pipeline projects in Assam. This tends to happen quite often because dates get postponed by two months at a time when the authorities responsible (DM/ADM) are not present or are not intimated.

Another source of delay is obtaining the FRA, 2006 Compliance certificate for grant of Stage-I FC under Section 2(ii) of FCA, 1980. It takes a minimum of 1.5 years on an average.

A draft SOP for Issuance of FRA, 2006 Certificate within 6 months was prepared by the DGH and shared with other stakeholders. To this end, it was suggested that during the time of the application, the concerned DC be requested via written communication by the Secretary of the State for a tentative timeline, be it FRA or land acquisition etc. Based on the time commitment given by the DC, delays can be flagged and escalated.

A third source of delay is the identification and allotment of "Degraded Revenue Land" for CA purpose for private operators in connection with FC clearance. (For PSU operators, CA land is arranged for by the Forest Department).

Undertaking of Oil & Gas E&P activities in the North East is particularly challenging because most of the projects here require an FC d approval from SC-NBWL due to consideration of 10 km ESZ from PAs.

In some cases, CA land could not be arranged for more than 3 years. In some cases allotted CA land is found to be "Inviolate".

It was suggested that degraded revenue land banks are created in districts for the purpose of allotment to private operators.

A fourth source of delay are issues related to land

acquisition that can be summed up as follows:

- In the North-east, it takes approximately 70 months (6 years) to complete the whole process of land acquisition under the provision of RFCTLARR Act, 2013.
- With respect to land revenue records, there have been discrepancies and non-availability of records in most cases
- No clear guidelines for identification of and obtaining consent from "Affected Family" causes difficulties in implementing provisions under Rehabilitation and Resettlement Act 2013. For private firms, consent from 80% personnel is required while for PPP it is 70%.
- Even after land acquisition, land demarcation work is obstructed by locals. For example, this was experienced by Cairn Oil & Gas (Vedanta Ltd) in North West Rajasthan under districts of Barmer, Sanchore, Jalore and Jaisalmer.

It was suggested that provisions for Temporary Occupation of land for a maximum of 3 years be extended to 6 years for Oil & Gas activities because it takes 6 years on an average to acquire land.

It was suggested that the Social Impact Assessment study under the provisions of the RFCTLARR Act should be undertaken when land under acquisition is more than 10 hectares and not in all cases.

It was suggested that option of land leasing may be considered in line with the system brought out by the Rajasthan government which had notified new rules accepting land leasing options for Oil & Gas industries the inclusion of clause 6(D).

It was also suggested that there be a dedicated Land Acquisition Officer for the entire Pipeline which passes through a particular state. This way, the officer would have to focus on land acquisition issues pertaining to that pipeline of that project only instead of overburdening the office of the SDMs.

It was suggested that a Single Point of Contact (SPOC) be created led by an officer not below the rank of Commissioner/Jr. Secretary.

With respect to concerns of safety, it was suggested that banning of habitation10 metres from either side of the pipeline ROW and 50m from Oil & Gas installations be considered in line with the State government of Rajasthan.

With respect to pilferages and miscreant activity, it was suggested that such activities are considered as "cognizable and non-bailable offense" under the purview of the PMP Act, 1962.

The following suggestions were made to facilitate the Ease of Doing Business for carrying out Oil & Gas activities in the E&P sector:

- Early grant of PEL/PML
- CA Land allotment on a priority basis for FCs.
- Eviction of encroachments over Pipeline ROW/ROU
- Declaration of Prohibited Areas under the provisions of the Official Secret Act, 2013 (Sensitive Oil & Gas installations)
- Monthly review meetings with UAs on a fixed day
- Designated Nodal Officer for facilitating timely issuance of NOC/Approval of drawings in connection with PESO Approvals.

PEL-PML grant for Oil Blocks and the prevailing online system available in DGH

The Exploration phase of Oil & Gas E&P activities takes place under the Petroleum Exploration License (PEL) that is valid for 4 years.

The Development or Production phase of Oil & Gas E&P activities takes place under the Petroleum Mining License (PML) that is valid for 20 years.

Prevailing Act and Regulations for granting PEL and PML for Oil & Gas E&P activities and Mining activities are conducted under the MMDR Act, 1957.

Onshore blocks are granted PEL and PML by the State government under Section 5 (ii) of PNG Rules, 1959.

Offshore blocks are granted licenses by the Central government under Section 5 (i) of PNG Rules, 1959.

For the PML block of private operators containing forest lands, approval is required from the Central government under Section 2 (iii) of the FCA, 2006.

For the PML block of PSU/Government organisations containing forest lands, approval is not required from the Central government under Section 2 (iii) of the FCA, 2006.

For PEL blocks containing forest lands, approval is not required from the Central government under Section 2 (iii) of the FCA, 2006.

2% NPV is payable for forest land in PML block for grant of PML.

With the grant of PML, except Seismic Survey, no other activities can be started without obtaining EC and CTE. Therefore, grant of PML only gives Access Right/Preferential Right over the area and not the right to start operations without obtaining clearances and approvals.

Grant of PEL/PML is the prerequisite for applying for EC, CTE etc because the PML allotment letter suffices as the Land Document.

EC is not required for granting PEL/PML.

Public Hearing is not required for granting PEL/PML.

Before the start of E&P activities in a block, local stakeholders are taken onboard from Day-1.

No work on forest land can be started after grant of PEL/PML without obtaining FC under Section 2 (iii) of FCA, 2006.

FC is granted in the name of the lessee to whom the PEL/PML is allotted to and not to the Operator for JVCs.

FCs are coterminous with the validity period of the PML.

Commercial production is not permitted under the PEL phase of operation. It has to be converted to PML in order to allow for commercial production.

Surface encroachment can co-exist over the PML and need not be "encroachment-free".

The PML block is not fenced like other Mining Leases executed under MMDR Act, 1957.

PMLs are granted afresh and are not renewed or regranted.

PEL/PML can be transferred/assigned to other parties under the provisions of Section (17) of P&NG Rules 1959.

Oil & Gas activities do not adversely impact the environment because they only take up 2% of the block allotted and do not cause "Land Subsidence Effect".

The State Departments of Geology & Mining, Energy and Petrochemicals in the states of Assam, Arunachal Pradesh, Nagaland, Tripura, Andhra Pradesh, Rajasthan, Gujarat and Tamil Nadu were requested to:

- Expedite the grant of PEL/PML in 62 cases of pendency.
- Integrate DGH's PEL/PML online portal with the state's online approval mechanisms for faster processing.

PEL-PML grant for Oil Blocks and the prevailing online system available in DGH

Ms. Chhaya Rana, IT Department, DGH

The online PEL/PML Application System was licensed in and has gone live since October, 2019.

It is a user access-based application display designed to facilitate Operators and Officials at different levels such as DGH officials, stakeholders and the MoP&NG.

Till now a total of 67 applications have been received through the online PEL/PML system of which 25 were for grant of PEL while 42 were for grant of PML-42.

19 of the applications were for offshore blocks and 48 were for onshore blocks.

So far, the following 10 states have registered on the system: Assam, Tripura, Arunachal Pradesh, Chhattisgarh, Orissa, Himachal Pradesh, Rajasthan, Gujarat, Madhya Pradesh, West Bengal.

Tamil Nadu and Andhra Pradesh are not onboard the online system yet.

The key features of the online PEL/PML Application System are:

- The system is highly secure as strong encryption and CSRF have been used.
- In this system, users have a single shared session across the application process.
- PEL/PML System has interactive dashboards by which users can view all their applications.
- Users can have access to specific applications based on user profile.

The online PEL/PML Application System is useful in offsetting delays at the following levels:

- Delays in submission by operators leading to delay in approvals ultimately delaying the exploration & production related activities in the field
- Delays in approvals from the governments at the centre and the state.
- Lack of robust file tracking & monitoring systems.
- Absence of standard process of approvals.
- Lack of coordination between operators & regulators.

When an operator submits an application for PEL/PML, the application goes to the DGH as well as to a Nodal Officer at the State level (if the state has registered itself on the system).

The State view of the online portal has three branches – State Nodal, State Technical and State District.

The State Nodal functions as a common point and has the power to forward applications to the State

Technical and State District as well as raise queries to the DGH. The State Nodal can also reject the applications received.

Each district of every state is also registered on the portal.

At the MoP&NG level, the application is either accepted or rejected by the Joint Secretary.

The query system allows Operators to add documents that have not been furnished.

The advantages of the online PEL/PML Application System can be summed as follows:

- It is a unified application form
- It functions as a single source of information
- It allows for the parallel processing of file at Centre and State
- It facilitates defined timelines for application processing
- It provides a single interactive user interface for Operators

Oil & Gas E&P Activities vis-a-vis Development of the region in various Districts- Role of DCs in encouraging E&P activities in their respective districts

Ms. Sutirtha Paul, State Geologist, Directorate of Industry & Commerce, Govt of Tripura

The state of Tripura is well-known for its Natural Gas reserves.

Tripura has a total area of 10492 km2 out of which 2386.55 km2 of PEL area and 3323 km2 of PML area. Therefore 50% of the state has been leased out to hydrocarbon exploration.

The ONGC & JOGPL have identified 24 structures of which 18 are exposed and 6 are concealed. These are some of the oldest Natural Gas reserves in the state.

The 18 structures that have been probed include those in Agartala,Dome, Baramura, Konaban, Manikyanagar, Kunjaban, Sonamura, Sundalbari, Gojalia, Khubal, Tichna, Tulamura, Bamutia, Harargaj, Rajnagar, Khowai-Kalyanpur, Barjala, Langtarai, and Pathalia

The structures that are yet to be probed are located in Atharamura, Batchia, Jampai, Langai, Machhlithum

and Sakhan.

Most of the nominated blocks are being operated by the ONGC over an area of 4035 km2.
6 blocks in the state have been recently given to Oil India Ltd, ONGC, Vedanta Ltd and JOGPL.

It has been observed in the state of Tripura that the gas produced during the production phase contains 95% methane which implies a high calorific value. The success ratio for ONGC is 2:1 i.e. 1 unit of profitable gas well for every 2 wells drilled. Well completion is done by placing slotted casings. The zones are so well inter-connected with natural pores so that no artificial fracking is required to pass the gas and a free-flowing gas is obtained.

In keeping with the Hydrocarbon Vision 2030, the following points have been drawn up with respect to E&P activities in Tripura:

- To develop Tripura as a dominant hub at the forefront of India's energy map
- To double the production of Oil and or Natural Gas by 2030
- To provide access to clean fuel (LPG/PNG) to 100% households in the region.
- To bolster development through creation of service provider hubs.
- To develop the Natural Gas grid, CGD networks & CNG Highways.
- To generate employment opportunities through industrial & skill development.
- To promote the manufacturing industry related to Oil & Gas in the region.
- To promote trade between North East Region of India & Neighbouring SAARC countries through the Chittagong Port.

Day 6

May 21, 2021

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Policy Changes Made or Under Process at MoEF&CC for Various Environmental Regulations Related to Oil & Gas E&P sector And Single window clearance Parivesh Portal

Mr. Sharath Palleria, Director (CPC), MoEF&CC

In order to ease out processing of clearances/ approvals for E&P operations in the Oil & Gas sector, the following changes in policy have been made at the MoEF&CC:

- Recategorization of exploration of oil and gas as Cat-B2.
- Separate EAC for Oil & Gas sector
- End-to-End automation of the process of PARIVESH/CPC
- EAC meetings once every fortnight
- Zeroing of the pandemic period
- 3-tier monitoring mechanism.

The objectives of the Draft EIA notification 2020 can be summed up as follows:

- Comprehensive Notification X
- Rationalization of categorization of projects
- Fast tracking of ECs for small projects
- Encouraging modernization
- Strengthening of monitoring mechanisms
- Automation and Standard Operating procedures
- Validity of EC at one go
- Bringing of defaulters into regulatory regime

PARIVESH (an integrated Single Window platform) was launched by Hon'ble PM in August 2018 'Digital India Mission' and to achieve 'Minimum Government & Maximum Governance'.

Online receiving of applications for EC /FC /WL - started from June, 2014 (Central level); from June, 2015 (State Level).

PARIVESH is an "Environmental Single window Hub" developed for the ease of doing business for Environment Clearance, Forest Clearance and Wildlife Clearance. It is a monolithic Workflow System developed for online submission, processing and approval of all clearance processes.

A complaint module has been developed and launched to file the grievances and to track and close the issues. The module is now open for all the users in the PARIVESH portal including line ministries.

A few challenges faced in the PARIVESH portal can be summed up as follows:

- Multiple applications for EC, FC, WL, CRZ, CTE/CTO.
- Limited validation including missing linkage with GIS
- Limited Web-based services
- Limited features to adopt emerging technology like AI, IOT & Data Analytics.
- Limited compliance & monitoring elements

The Centralised Processing Centre (CPC) – Green was put in place with the intention to centralise and automate all processes connected with clearances and approvals. The idea is to integrate all types of clearances (WL, CRZ, CTE/CTO etc) and licenses (import and export), authorizations and permissions in a single platform.

The key objectives of the CPC-Green are to enhance responsiveness through workflow automation, enhance efficiency, transparency & accountability, standardize processes, reduce turnaround time and enable real-time monitoring of compliance.

The advantages and benefits envisaged by the CPC Green are as follows:

- Simplification & automation of manual processes
- Ease of Doing Business with the integration with DPIIT, States, CTE/CTO
- Enhanced entity verification and KYC process – PAN, CIN, AADHAR
- GIS-Based Decision Support – System generated checklists for clearances
- Efficient governance, administration & monitoring
- Ease of securing clearances and compliances
- Integrated access to existing approvals and compliance reviews
- Generate more value through the efficient utilization of resources
- Entity-based approach to clearances and compliance
- Reduced turn-around time for applicants
- Leveraging state of art technology interventions

The Technology Component of the CPC Green consists of a parameterized system, mobile app, helpdesk, reporting, GIS, IoT and BI.

It is deployed as a secured cloud environment ensuring business continuity.

The outcome is a robust system with a long-term roadmap, standard operating procedures, with a simplified, integrated fully automated process.

The building blocks of the CPC Green are elaborated in the table below as follows:

Stakeholder	Building Blocks of CPC-Green					
	User Registration	Know Your Approval	Clearance	Integration	Compliance	Backoffice
Project Proponents / Consultant/ Auditor	PP/ Consultant/ Auditor	KYA based on location / project data	Common Application Form	DPIIT-National Single Window	Conditions Catalogue	Application Scrutiny by CPC
MoEFCC/ SEIAA/ SCZMA/ Other State Authorities			Field validation/ System generated Agenda/ MoM	National Entity Ledger through CTE/ CTO Integration	Compliance by PP	Process Tracking
SPCB / CPCB / IRO / PCCF /CWLW	Entity Validation/ User Authentication	DSS- GIS Map Layer	End to end online process	Digital Payment	Compliance Reports basis conditions	Helpdesk/ Call Centre
EAC/ SEAC / FAC/ NBWL		Proximity/ Other Fields	Validation and Clearance	e-Office, PAN, CIN, Aadhaar	Red Flagging of Non-Compliances	Grievance Redressal
Line Ministries/ States/ Ext Org	KYC for Existing Users				Location / Density / Type of Industry	MIS Reporting
Others		Guidance on clearance Type	Issuance of Clearance Letter/ Tracking	MoC/ MoP/ MoS/MoM/MoP NG/MoJS/ etc.	Monitoring Stations/ Ministries	Follow-up with PP

The Implementation Timeline for CPC- Green is envisaged at 64 Weeks with a total of 15 modules having been identified based on their functionalities & features. 126 functionalities/ features have been classified out of the 15 modules.

The envisaged system will be built in Agile methodology.

Modules have been placed in waves & subsequent tracks based on the dependency & complexity factors.

Discussion Post the Presentation

The present status of the Draft Amendment to the EIA Notification, 2006 is still unclear since it is under scrutiny in multiple High Courts across the country. Nevertheless, multiple OMs are being issued and circulated to bring awareness about the changes being proposed in the draft.

The abolition of Corporate Environment Responsibility (CER) by MoEF&CC will be applicable to prospective ECs post 25.02.2021 and not retrospectively.

No action will be initiated by the MoEF&CC to make the validity of the EC coterminous with the validity of the PML.

It was requested that a separate set of conditions be prescribed for ECs for Offshore blocks within 12 NM.

It was requested that other states and UTs also adopt the SOP for B2 Category EC with a timeline for 45 days as was introduced in Assam.

Given that it takes a minimum of 3-4 years to get FC,

it was requested that the timeline for FC submission be extended to 5 years so that the application does not get automatically delisted.

It was requested that the MoEF&CC publish guidelines with respect to the following situations:

- Omission of Form 2 for B2 Category license
- Re-listing of EC proposal by PP themselves without any approval by the MoEF&CC
- Validity of Public Hearing proceedings and EIA report data
- Timeline for uploading PH minutes
- Timeline for EC Compliance Certificate for Expansion Project

Do's and Don'ts for Offshore E&P Activities to Safeguard the Environment

Mr. Vikas Kumar Sharma, Director (E&P), OISD

The OISD (Oil Industry Safety Directorate) is a technical directorate under the Ministry of Petroleum and Natural Gas that formulates and coordinates the implementation of a series of self-regulatory measures aimed at enhancing the safety in the oil & gas industry in India.

The activities of the OISD include but are not limited to:

- Development of safety standards
- Conducting periodic safety audits
- Monitoring implementation of OISD recommendations on quarterly basis
- Root Cause Analysis & remedial action of incidents/accidents
- Evaluation of safety performance for Oil Industry Safety Awards
- Accord consent to Operate for E&P Offshore Operations under the Petroleum & Natural Gas (Safety in Offshore Operations) Rules, 2008.
- Accord Consent to Decommissioning for E&P Offshore Operations under the P&NG (Safety in Offshore Operations) Rules, 2008 & SRG guidelines

The OISD participates in oil spill audits along with the coast guard.

The OISD is the nodal agency for disaster management in the case of private oil & gas companies.

Approximately 99% compliance of Safety Audit recommendations (Audits more than two years old) of all OISD audits result in enhanced safety at locations.

OISD carries out Pre-commissioning Safety Audits of newly built-up locations and addition/ modifications of facilities in existing locations to ensure ab-initio compliance of such facilities to OISD standards.

The OISD participates in capability building of internal auditors.

It is responsible for dissemination of sector specific knowledge through case studies, safety alerts, seminars, workshops and in-house newsletters.

The OISD has developed the ESA checklist for fixed installations as well as mobile installations for both offshore and onshore blocks. This list is being reviewed each year based on audits and investigations and review of standards.

As per the provisions of the Petroleum & Natural Gas (Safety in Offshore Operations) Rules. 2008" framed under the Oilfields (regulation and development) Act,1948, the OISD has been notified as the competent authority to exercise the powers and functions as stipulated in the rules.

These rules cover all phases of petroleum activities and apply to all agencies participating in petroleum activities like operators, contractors and service providers.

These rules do not supplant rules /guidelines/ clearances of other Government departments / ministries

The P&NG Rules 2008 has 20 Chapters, 174 rules, & 433 sub rules, 6 Schedules and 3 forms.

The rules prescribe what is to be achieved rather than provide concrete solutions. The operator must identify the risks associated with all operations and work out solutions. In certain cases, the rules require that the operator shall define requirements and specifications for his activities in order to comply with the rules

The regulatory framework with respect to Offshore installation consists of the following components:

- Intimation concerning offshore installation at commencement and cessation of operations in Form-1 (Rule 9)
- Design Intimation for fixed offshore installation only (Schedule- I)- Rule 13
- Consent to operate for new fixed offshore installation (Schedule II)- Rule 14
- Consent to operate for existing fixed offshore installation (Schedule–III)- Rule 15
- Consent to operate for mobile offshore installation (Schedule IV)- Rule 16
- Consent to operate for already operating mobile offshore installation (Schedule–V)- Rule 17

The particulars that must be included in the application For CTO are as follows:

- Confirmation that all the relevant provisions mentioned in the rules have been complied with.
- Particulars of the types of operation including activities which the installation is capable of performing.
- Copy of Safety Management System document.
- Detailed Updated Emergency Response Manual

- Arrangement for control of well operations (including pressure control and prevention of uncontrolled release)
- Incoming and outgoing pipelines from the installations.
- Hazardous area classification

The 'Fit-for-purpose Status' evidence in the form of valid certificate must be furnished by a reputed third party every five years, also after major modification, accident or change of use.

The Decommissioning Plan (Rule 12) includes regulation that requires the removal of abandoned or disused offshore installation in accordance with generally accepted international standards. Accordingly, a Decommissioning Plan was approved by the OISD.

The OISD lays down guidelines for Risk Assessment, Risk Identification and Risk Management.

The OISD mandates the establishment of "Safety Zones", "Emergency Response Systems" and physical barriers in facilities for passive and active fire protection.

Applicable PNGRB Regulations for Upstream Oil & Gas E&P activities, Near Miss Reporting, 3rdParty certified ERDMP

Mr. S.C Gupta, Joint Advisor, (Auth & Tech), PNGRB

The Petroleum and Natural Gas Regulatory Board Act came into power in 2006 and was established and started functioning from 1/10/2007.

The PNGRB has no direct linkage with any ministry but instead is accountable to the Parliament of India. This ensures a consistency in policy irrespective of governments in power.

The aim of the PNGRB is to regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum products and natural gas so as to protect the interests of consumers and entities engaged in specified activities related to P&NG products.

The PNGRB regulates the downstream and midstream petroleum sector with respect to activities related to P&NG products, having the power to:

Legislate
Adjudicate
Authorise
Investigate (and penalise)

Therefore, the PNGRB functions as a quasi-judicial body.

The functions and powers of the board can be summed up as follows:

- Register entities to market notified petroleum & petroleum products and natural gas.
- Register entities to:
  > Establish and operate LNG terminals
  > Establish storage facilities for notified petroleum & petroleum products and natural gas.
- Authorize entities to lay, build, operate or expand a common Contract Carrier pipeline or a CGD network.
- Declare pipelines as a Common Carrier or a Contract Carrier.

The PNGRB (Codes of Practices for Emergency Response and Disaster Management [ERDMP] Plan) Regulations, 2010 is applicable to specific (not all) upstream Oil & Gas E&P activities such as:

- Hydrocarbons processing installations (refinery, gas processing, LNG, Re-gasification installations
- Pipelines such as natural gas, propane, butane and hydrocarbons which remain in gaseous state in NTP.
- Petroleum & Petroleum products pipeline.

The ERDMP regulations allow operators to identify risk of emergencies, mitigate risks, prepare for disasters, mobilize necessary emergency measures and chalk out a post-disaster recovery plan.

The ERDMP is designed to be integrated with the National Disaster Management Plan (NDMP)

The ERDMP plan must be concise and informative.

"Incident Reported" is another crucial aspect covered under the ERDMP regulations. An incident shall be treated as "Major" if any of the following occurs:

- Fire for more than 15 minutes
- Explosion/blowout
- Fatal incident
- Loss above 20 lakh
- Cumulative loss of over 500 man hours
- Plant shutdown/outage due to the incident

"Major Incidents" shall be reported to the PNGRB through telephone, email or SMS immediately not later than 4 hours. Subsequent details must be submitted within 48 hours and a final investigative report must be submitted to the PNGRB within 30 days.

All "Major Incidents" shall be investigated by an internal enquiry committee to identify the lapses, shortcomings, establish the causes for failure and suggest remedial measures to prevent the recurrence of the incident in a report that is submitted within 30 days of the incident.

Summary of the Interactive Discussion Session

In-spite of the COVID-19 pandemic, the Indian Oil & Gas industry has not stopped its operations and some important projects such as the East Coast Project has been commissioned. A project commissioned by a private operator has helped augment production from 78 MMSCMD (pre-COVID) to 98 MMSCMD (post-COVID).

The Government of India is giving the Oil & Gas industry a thrust because it wants to make India a gas-based economy by 2030.

The issue of too many regulatory bodies (PNGRB, OISD etc) is being taken up at the Cabinet Secretary level wherein there was a proposal for integrating all these bodies so that there is only one regulator for the Oil & Gas sector. However, OISD, being under the MoP&NG does not regulate private operators – it primarily regulates PSUs. PNGRB is ready to merge some of its functions with other regulatory bodies to reduce the multiplicity of regulatory bodies.

Whether it is a Common Carrier pipeline or a Dedicated Pipeline, entities must bring it to the notice of the PNGRB not only for authorization but also for safety purposes.

The standards of PNGRB and the OISD are almost at par; if an entity is conforming to the standards of the PNGRB, they are automatically complying with OISD standards and vice versa.

Parting Notes of the 6-Day Workshop Series

Mr. J. Lahiri, CGM (Env), DGH

Summary of Sessions on Day-1 – 9th April, 2021

There was an elaborate explanation on "Types of Various Clearances/approvals Required during the Entire Life Cycle of a Block" along with 51 important Oms and circulars.

The talk on "Guidance on Obtaining Prior EC under EIA Notification, 2006" by Dr RB Lal, MoEFF&CC added a lot of value.

There was a joint presentation on "SOP Introduced in the State of Assam w.e.f January 2021 for Grant of B2 Category EC within 45 days" by Mr PK Choudhury and Mr Swapan Seal Sharma, the Chairmen of SEIAA and SEAC, Assam respectively.

Summary of Sessions on Day-2 – 16th April, 2021

There were talks by the officials from the State PCBs of Tripura (Mr. Bishu Karmakar), Rajasthan (Mr Neeraj Mathur), Gujarat (Mr NM Tabhani) and Telangana (Mr Bhadra Girish) on the topic "Prevailing Procedures available in granting CTE, CTO, Haz Waste Authorization etc by State/UT PCBs for Oil & Gas E&P operators".

Dr. Dinabandhu Gauda, Addl Director, CPCB, delivered a talk on "CPCB Central Rules/ Regulations and various Amendments from time to time in the Oil & Gas sector"

Summary of Sessions on Day-3 – 23rd April, 2021

A talk on "Prevailing FC regulations for Oil & Gas sector and general lapses observed in the FC proposals for Oil sector at the central level" was delivered by Mr Sandeep Sharma, AIG from FC Division of MoEF&CC.

A presentation on "Lapses in FC Proposals observed at IROs of MoEF&CC and suggestions to expedite Faster processing of FC Proposals" was given by Mr. W.I Yatbon, Dy. IG of Forests (C), IRO MoEF&CC, Shillong.

There was an elaborate explanation on "Prevailing regulations for Wildlife Clearance by SC-NBWL for Oil & Gas sector."

Summary of Sessions on Day-4 – 30th April, 2021

There were talks by officials from the Ministry of Tribal Affairs on "Compliance of FRA, 2006 for Diversion of Forest Land for Non-Forestry Purposes" by Ms. Priya Tayde, UNDP Official, MoTA.

An interactive discussion session was held among the operators and regulatory authorities on the modifications required in FC approval process and the way forward for expediting FC and Wildlife Clearance proposals and the role of Nodal Officer (FCA), DFOs and IROs of MoEF&CC in the entire approval process.

Summary of Sessions on Day-5 – 7th May, 2021

An interactive discussion session was held with DC/DM and Collectors of districts regarding Oil & Gas E&P Activities vis-a-vis development of the region in various districts and the role of DCs in encouraging E&P activities in their respective districts in attendance with 14 DC/DM/Collectors or their representatives from the following districts:
a. Assam: Tinsukia, Dibrugarh
b. Arunachal Pradesh: Changland, Namsai
c. Gujarat: Vadodara, Surat, Tapi, Gandhinagar
d. Rajasthan: Barmer
e. Tripura: Sepahijala, North Tripura, Khowal, Dhalai.

There were talks by State Geologist, Tripura (Ms. Sutirtha Paul) and Member from IT Dept, DGH (Ms. Chaya Rani) on "PEL-PML grant for Oil Blocks and the prevailing online system available in DGH"

Summary of Sessions on Day-6 – 8th May, 2021

There was a talk on the "Policy changes made or under process at MoEF&CC's end related to various environmental regulations related to Oil & Gas E&P sector and Single window clearance Parivesh Portal of MoEF&CC" by Mr. Sharath Palleria, Director (CPC), MoEF&CC.

Vikas Kumar Sharma, Director (E&P), OISD delivered an elaborate talk on the "Do's and Don'ts for Offshore E&P activities to safeguard the environment".

Mr. S.C Gupta, Joint Adviser, (Auth & Tech), PNGRB delivered a detailed presentation on the "Applicable PNGRB Regulations for Upstream Oil & Gas E&P activities, Near Miss Reporting, 3rdParty certified ERDMP, etc."

DGH Stakeholder Sensitization Workshop Summaries

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