Report on

Amrit Internship Programme

in Offices of

National Productivity Council (NPC)

and

Indian Potash Limited (IPL)

Background

Indian Potash Limited (IPL) was established under the Indian Companies Act with the primary objective of import-handling, promotion, and marketing of potash throughout India. IPL is a significant player in various value chains and inputs, contributing to agricultural growth and the prosperity of farmers in India. IPL's field work has led to the acceptance of potash among Indian farmers, which was previously unknown to them.

As part of its Corporate Social Responsibility, IPL has gradually included activities focused on strategic spending and shared values. IPL strives to strike a balance between long-term social programs such as rural outreach, health improvement, and literacy initiatives, and areas like sustainability, productivity, and climate change.

The National Productivity Council of India (NPC), established in 1958, is an autonomous organization under the Department for Promotion of Industry & Internal Trade, Ministry of Commerce and Industry, Government of India. NPC conducts research in the field of productivity and provides consultancy and training services in various sectors, including industrial engineering, agri-business, economic services, quality management, human resources management, information technology, technology management, energy management, and environmental management.

IPL Centre for Rural Outreach (ICRO): ICRO was established by IPL as part of its Corporate Social Responsibility on March 17, 2022. NPC serves as the service provider for ICRO, assisting in the execution of projects.

About the Amrit Internship Program: The Amrit Internship Program is designed to provide hands-on experience to interns, exposing them to the real challenges faced in agriculture and rural development. It allows interns to apply their academic learning in real-life contexts, gain experience in their field, and acquire skills that will be valuable in their professional lives.

The objectives of the ICRO Amrit Internship Program are as follows:

- Promote productivity-related employment-enhancing vocational skills among youth and rural people.
- Create awareness about enhancing agriculture productivity.
- Create a network of youth entrepreneurs with skills to work in rural settings.
- Work towards improving knowledge resources on youth interface.
- Ensure environmental sustainability and conservation of natural resources.

The eligibility criteria for selecting interns include being a citizen of India with an Aadhar card, being at least 18 years old and not exceeding 40 years old, and having completed Class 12th, a diploma, or graduation. Preference is given to candidates with qualifications in agriculture or related sectors. The duration of the internship is three months.

To facilitate the program, an online application portal (www.icroamrit.npcindia.gov.in) has been developed and hosted on the NPC website. The program brochure was prepared and circulated to various stakeholders, industry partners, and educational institutions. E-learning modules for interns have been developed and hosted on the internship portal by NPC. The interns are required to go through these modules and complete an assessment questionnaire. The internship program combines e-learning with field-level exposure through NPC regional offices and IPL facilities across the country.

This program aims to equip interns with valuable skills and experiences, making them more employable and promoting entrepreneurial ideas and opportunities. The interns' contributions during the program will provide valuable insights into practical field issues and the local agro-climatic scenario.

Amrit Internship Programme in office of NPC/IPL.

In the 1st Meeting of Selection Committee for Amrit Internship programme it was decided that ICRO takes 50 interns for internship in the offices of NPC and IPL. The interns have been posted in the Environment and Climate Change Group and HRM Group of NPC, IPL Corporate Office in Delhi and Regional Offices of NPC in Gandhinagar. 43 interns completed their internship as detailed at **Annex-A**.

Two orientation programmes were organised for interns posted in NPC, HO and IPL, Corporate Office on 30.06.2022 and 19.07.2022 at Manthan Hall, NPC. During the feedback session, the Amrit interns were grateful for the exposure and practical learning experience. The interns mentioned that they gained useful insights about the importance of team work, work place culture, environment compliances and non-compliance in various industrial sectors and report writing. They were grateful for the e-learning module on agriculture. Although the interns did not have a background of agriculture, they studied the e-learning module and some have cleared the assessment test with marks ranging from 80% - 90%.

Participation of interns in the programme was monitored on regular basis by the departments concerned. Programme report and feedback from interns in a prescribed format has been submitted through to Group Head in NPC / IPL. The Certificate of Completion was distributed to the interns after intern completes the internship period, and attempts the Assessment Questionnaire in the e-learning module. A snapshot of the work done by the interns during their internship period in NPC/IPL is given at **Annex-B.**

Orientation Programme for Amrit Interns on 19 July 2022

Interns receiving the Certificate of Completion

Annex -A

LIST OF AMRIT INTERNS FOR OFFICE INTERNSHIP AT IPL/ NPC

Sr No	Application ID	Name	Interns location allotted	Date of Joining	Date of Completion
1	20220500017	Anoushka Gupta	NPC HQ	03.06.2022	02.08.2022
2	20220500020	Nandita Pawar	NPC HQ	06.06.2022	05.07.2022
3	20220500029	Ankita	NPC HQ	14.06.2022	13.07.2022
4	20220500030	Priyanka Negi	NPC HQ	06.06.2022	05.07.2022
5	20220500032	Kritika Bisht	NPC HQ	06.06.2022	05.08.2022
6	20220500046	Anil Bohra	NPC HQ	06.06.2022	05.07.2022
7	20220600001	Manivannan	NPC HQ	16.06.2022	15.09.2022
8	20220600010	J.C. Zolientluong	NPC HQ	06.06.2022	05.07.2022
9	20220600011	Divya Aggarwal	NPC HQ	06.06.2022	05.07.2022
10	20220600012	Mahima rawat	NPC HQ	14.06.2022	13.07.2022
11	20220600013	Shubhi Singh	NPC HQ	06.06.2022	05.07.2022
12	20220600014	Maneet S Khurana	NPC HQ	06.06.2022	05.07.2022
13	20220600015	Sanju Rajak	NPC HQ	06.06.2022	05.07.2022
14	20220600016	Kaushki Pandey	NPC HQ	06.06.2022	05.07.2022
15	20220600017	Krishna Pratap Singh	NPC HQ	06.06.2022	05.07.2022
16	20220600002	Abhishek Dubey	NPC HQ	06.06.2022	05.08.2022
17	20220600003	Atul kumar sharma	NPC HQ	13.06.2022	12.08.2022
18	20220600029	Anant Rao	NPC HQ	16.06.2022	15.09.2022
19	20220600053	Premanshu Pandey	NPC HQ	14.06.2022	13.07.2022
20	20220600059	Sneha Porwal	NPC, Gandhinagar	27.06.2022	26.07.2022
21	20220600037	Anush	NPC HQ	20.06.2022	19.09.2022
22	20220600071	Ipsa Khanna	IPL New Delhi	23.06.2022	22.07.2022
23	20220600089	Kratika Mundra	NPC, Gandhinagar	27.06.2022	26.07.2022
24	20220600083	Zhovei R Pouhaina	NPC HQ	06.07.2022	05.08.2022
25	20220600084	Sakshi Pathak	NPC HQ	06.07.2022	05.08.2022
26	20220600085	Pranav Krishnan	NPC HQ	06.07.2022	05.08.2022
27	20220600093	Shikha Poswal	NPC HQ	06.07.2022	05.08.2022
28	20220600074	Shivangi sharma	NPC HQ	06.07.2022	05.08.2022
29	20220500037	Archana yadav	NPC HQ	06.07.2022	05.08.2022
30	20220600075	Irene Minz	NPC HQ	06.07.2022	05.08.2022
31	20220600077	Shreya Kiran	NPC HQ	06.07.2022	05.08.2022
32	20220500036	Arghadeep Bag	NPC HQ	06.07.2022	05.08.2022
33	20220500025	Nishchaya N Singh	NPC HQ	06.07.2022	05.08.2022
34	20220600080	N Jessica Howladar	NPC HQ	06.07.2022	05.08.2022
35	20220600081	Sourav Ranjan	NPC HQ	06.07.2022	05.08.2022
36	20220700003	Pratham Asopa	NPC HQ	05.07.2022	04.08.2022
37	20220600078	Surender soni	NPC HQ	06.07.2022	05.08.2022
38	20220600068	Apurva Chaudhary	NPC HQ	27.07.2022	26.09.2022
39	20220600105	Shabnam	NPC HQ	27.07.2022	26.09.2022
40	20220700001	Jyoti Yadav	NPC HQ	27.07.2022	26.09.2022
41	20220700002	Isha	NPC HQ	27.07.2022	26.09.2022
42	20220700031	Robin Khan	NPC HQ	05.08.2022	04.09.2022
43	20220700017	Ashutosh Behuria	NPC Bhubaneswar	01.08.2022	31.08.2022

Annex-B

Amrit Internship programme- Technical report on work done by the Interns who have completed their internship

A. At National Productivity Council

1. Introduction

1.1. Environment and Climate Action Group of NPC Delhi is currently working for Ministry of Environment, Forest & Climate Change towards developing a robust, transparent system for monitoring of compliances of environmental conditions imposed on Project Proponents of different categories such as Mining, Thermal Power plants, Infrastructure, Highway, Cement, Chemical Industries, River valley projects, etc. In India, lots of non-compliances of several environmental conditions have been observed leading to environmental damage. Towards this NPC is developing e guide for supporting project proponents in self compliances in different categories of projects requiring environmental clearances. In line with this, interns from Delhi University, Delhi Technological University, etc were engaged under the IPL-CSR program.

1.2. The interns downloaded monitoring reports from PARIVESH Portal which is a MOEF&CC website for online submission and monitoring of environmental clearances. These reports of Ministry Officials were downloaded for different projects /state wise. Non-compliances were identified and categorised in Excel. This was followed by deliberations with the Officer in the environment group. Based on her inputs, further deliberations were done, and additional resources were explored- sustainability reports, annual reports etc of leading companies were analyzed. Literature review of various sustainability reports of leading companies, relevant journals etc were also studied to identify best practices and solutions for the non-compliances.

2. The objective is to develop E-guides for the following sectors-
   i. Infrastructure Sector
   ii. Thermal Sector
   iii. River Valley Sector
   iv. Steel
   v. Coal Mining
   vi. Non-coal mining
   vii. Petroleum Refining/ Petrochemical

2.1. Infrastructure Sector:

Over 60 monitoring reports were studied by the interns for the infrastructure and miscellaneous sector, across various regions like Gujarat, West Bengal, Rajasthan, Chhattisgarh, Andhra Pradesh, Maharashtra, Jharkhand, Jammu, Telangana, Meghalaya, Uttar Pradesh, Tamil Nadu, Uttarakhand, Assam, Karnataka, Madhya Pradesh, Bhubaneswar, Chandigarh. The sectors were classified on the type of infrastructure projects.

Infrastructure Sector	Non-Compliances observed
Airport	Testing of water quality as per CPCB guidelines not done, noise control and mitigation measures not adhered to stipulated standards, regular noise monitoring not done, solid waste management at the Airport, details regarding expenditure on environmental safeguards not given, regular submission of monitoring reports, green belt construction
Townships	CPCB guidelines on treated wastewater not followed, testing of soil and water for contamination.
Resorts and Hotels	Sewage treatment, ground water withdrawal within 500 mtr of HTL, green belt development, safe disposal of muck during construction, safe disposal of construction spoils including bituminous material and other hazardous material not adhered to. Provision of housing and other facilities for construction labour not adhered to, submission of monthly compliance reports.
Building and construction	Safe and adequate waste disposal to prevent contamination of groundwater, discharge of treated sewage not in adherence to SPCB guidelines, reports on energy conservation measures according to BEE norms not submitted, submission of monthly compliance reports.
Port and shipping	Water quality, sanitation of, safe disposal of dredged material, setting up of separate environment management cell, well-laid out environment policy for the company, recommendations of EIA/EMP and risk assessment and disaster management not adhered to. Recommendations and conditions stipulated by State Coastal Zone Management Authority not adhered to in Tamil Nadu.

In the infrastructure sector, mangrove restoration, green belt development, and wastewater treatment were observed to be the most common non-compliance, where most companies failed to follow the environmental conditions. Other non-compliances were related to CRZ norms. Sustainability reports of various companies like ITC Hotels, Indian Hotel's Company Limited (IHCL) Sustainability Reports etc were studied to find out their environmental vision and sustainable development goals targets. What steps they are taking to ensure that these compliances are met.

Literature review from various sustainability reports, annual reports, CSR reports/ ESG reports of big players in the sector was carried out to check for innovative methods of environmental compliances, and innovations towards sustainability were identified. Literature review on wastewater treatment highlighted the various successful models of treatment across the globe.

In Delhi's Neela Hauz Biodiversity Park, which was earlier a place for wastewater dumping, was restored using Constructed wetland System by using various native aquatic plants due to which the health of waterbody improved, and quality of wastewater treated. By this principle, various pilot projects are running to treat wastewater in University Campuses. MEERI has developed a technology based on this principle, Phytroid Technology, for treating sewage treatment in a minimum area of 35m2 which uses minimum cost and efficiency.

2.2 Thermal Sector

Over 96 monitoring reports related to thermal sector were studied by the interns across various states like Maharashtra, Tamil Nadu, West Bengal, Odisha, Chhattisgarh, Rajasthan, Delhi, Jharkhand, Bihar etc. The common non-compliance observed in the thermal sector pertains to air pollution control norms, water contamination, and green belt. The height of stack should be in range of 70-275m and flue gas velocity should not be less than 22m/s equipped with online monitoring system, however this was not followed. The sulphur and ash content in coal has exceeded the prescribed limit of 0.8-15.30% percent respectively. Groundwater levels and water quality in existing wells were not monitored regularly. Sewage treatment plants are not installed. Green belts consisting of 3 tiers of plantation of native species were not adhered to.

Many project proponents are unaware of the correct procedures for creating development, and the native species which are to be planted. Literature review of various journals and sustainability reports was carried out to study best practices for the creation of green belts, the study of native species which can be planted as well as their pollution tolerant index. On this basis, a mapping of ideal native species for a particular region were also carried out. Literature review of best practices for further use of fly ash utilisation- as a germination medium, biological reclamation of degraded lands, and fly ash dykes, low grade zeolites. Mitigation techniques for the non-compliances- solutions/ policy recommendations were made on the same. Studied the sustainability reports of TATA power company and Limited Integrated Annual Report 2020-21.

2.3 River Valley Sector

Over 50 monitoring reports were studied to observe the non-compliances in the river valley and hydroelectric projects. Wildlife management plans were also studied. Literature review of various comprehensive compliance reports was undertaken. The major non-compliances were studied and the best practices to avoid the same were researched and compiled. The major non-compliances observed were related to groundwater monitoring, mitigative impact on soil and water, compensatory afforestation, labour welfare conditions, submission of six-monthly compliance reports etc.

Additionally, an assessment was done for the major wildlife in different study areas as the hydropower projects are located in forested areas/ eco sensitive zones. Important species located close to the projects were also identified and mapped. Literature review of sustainability development reports was done to find out mitigation strategies applied by various industries for that non-compliance.

2.4 Steel Sector

Over 134 monitoring reports were studied in depth by the interns. Non compliances were mapped. The common noncompliance observed in the steel sector pertains to air pollution control norms, water contamination, non-adherence to regulations under Factories Act and green belt development. The area of 33% for green belt was not developed around plant. In addition, the working condition for the workers in plant were not satisfactory and violates Factories Act. The water consumption was recorded more than CREP standard and the permission for drawl of ground water was not taken from central ground water authority and the noise pollution level in and around plant were higher than prescribed limit of 85dBA also prior approval of ministry was not taken during Expansions and modifications.

2.5 Coal Mining Sector

Over 10 monitoring reports were studied, and non-compliances were observed in the following - plantation coverage, and development of green belt. Groundwater quality maintenance, not applying water harvesting methods, monitoring of air quality, monitoring of heavy metals in water and air, permission from competent authorities, following various water conservation methods, restoration of topsoil, installation of sewage treatment plants, efficient use of funds, remote sensing techniques monitoring were also studied.

2.6 Non-Coal Mining Sector

Over 45 monitoring reports for non-coal mining were studied, and non-compliances observed till now were complied. The common noncompliance observed in the mining sector pertains to air pollution control norms, water contamination and factories act. The working conditions for the workers in plant were not satisfactory and violates factories act. The permission for drawl of ground water was not taken from central ground water authority. The air quality monitoring stations were not established in zones also the air quality parameter was not satisfactory. The paths of natural water bodies were obstructed due to any mining operations.

2.7 Chemical Industry

Over 45 monitoring reports were studied for the chemical industry compilation of non-compliances observed in Chemical Industry- Gujarat, Maharashtra, Tamil Nadu, West Bengal, Andhra Pradesh, Himachal Pradesh and Jammu and Kashmir.

2.8 Petroleum Refining Industry

Over 13 monitoring reports were studied for the petroleum refining and petrochemical industry. The common noncompliance observed in the petroleum sector pertains to air pollution control norms, water contamination, and noise pollution. The permission for drawl of ground water was not taken from central ground water authority and the noise pollution level in and around plant were higher than prescribed limit of 75dBA. Effluent treatment plants also do not follow norms of water conservation. air quality monitoring system were not setup in the refinery area for measurement of SO2, NOx, CO and O2.the recyclable waste & spent oil was not disposed to the authorized recyclers which can lead to serious consequences.

3. Categorisation of Projects under Category A and B

In India the projects which require environment clearance are given by MoEF&CC. Under the Environmental Impact Assessment Guidelines, there are two categories of projects- Category A and B. Projects which have a higher impact on the environment are monitored and placed under Category A. The consent for these projects must be obtained from the ministry directly. Projects which have a lesser burden on the environment are placed under Category B and are monitored by SEIAA (State Environment Impact Assessment Authority)

Approximately there are around 70,000 projects which have been given clearance between 2006-2013. Out of this maximum is from category B projects. There is a requirement of transparent monitoring of these projects, and they need to be digitised and uploaded on the updated PARIVESH portal. NPC is in the process of classifying the projects across sectors given by SEIAA. In this respect, interns were engaged to classify these projects into category A & B along with their EIA sector codes.

4. Conclusion

This internship gave the interns an exposure to live projects and helped them to gain practical insights into how environmental clearances are given, the process of EIA, the impacts the projects have on biodiversity and sustainable development in the region. The role played by various rules and regulations, and the process of research and deliberations in policy were understood well by the interns.

The feedback given by the interns demonstrates that working on the project has helped them to understand the practical aspects of policymaking and environmental clearances. Their theoretical knowledge was complemented by the practical insights they got from working on these live projects. They understood their interest areas, became more solution oriented and learned about the challenges in ensuring environmental compliances, why companies face difficulty to meet the requirements etc.

B. At Indian Potash Limited

The intern posted at IPL was assigned a project – Current Status and Future Prospects of Prawn Culture in Northern India. Based on extensive research, data collection and examining published reports and research papers, the intern submitted the report. The report covered the background of the shrimp industry and varieties of Shrimp; shrimp production in coastal states of India; shrimp exports – marketwise (globally); total area in northern states (district wise and block wise; accessing water quality and parameters requirements for the shrimp cultivation; identifying parameters of salinity; states and districts affected by groundwater salinity with special reference to northern states and identified and reached out to the major government authorities and research institutes which are working towards the aquaculture.

The report submitted was found to be useful to IPL.