

Minutes of virtual meeting to review two GEF projects held on September 11, 2020

A review meeting of two GEF funded projects viz. “Development and promotion of non-POPs Alternative to DDT” and “Environmentally Sound Management and Final disposal of PCBs in India” was organised through a virtual meeting set up on September 11, 2020 under the chairpersonship of Ms. Geeta Menon, Joint Secretary, MoEF&CC. The list of participants is annexed.

2. Ms. Geeta Menon, Joint Secretary welcomed all the participants of the meeting. She highlighted that both projects are important in order to fulfil the commitments under the Stockholm Convention on POPs.

3. Mr. Satyendra Kumar, Deputy Secretary stated that the DDT alternative project had recently been extended until December 31, 2022 in the month of June 2020 on the request of UNIDO and UNEP. He requested Dr. Rene Van Berkel, UNIDO Representative to brief regarding the progress of the activities related to the project “Development and promotion of non-POPs alternative to DDT” on the components being implemented by UNIDO. This was followed through brief by UNEP on the components assigned to them.

4. Dr. Rene Van Berkel, UNIDO Representative, highlighted that the overall objective of the project was to introduce bio- and botanical pesticides and other locally appropriate cost-effective and sustainable alternatives to DDT as first step for reduction and eventual elimination of dependency on DDT, ensuring food safety, enhancing livelihood and protecting human health and the environment. He said that India is the only country that remained to continue producing and using DDT in large volumes in its public health programme. Through the present project attempts have been made to combat the mosquitoes with environment friendly biodegradable pest control agents other than persistent DDT pesticide at different weak points of its life cycle through the introduction of neem-based botanical pesticides, *Bacillus thuringiensis* Bt-based biopesticides and further reinforcing with Long Lasting Insecticidal Net (LLIN) impregnated with synthetic pyrethroids as the barrier.

5. He further stated that through this three pronged approach, the mosquitoes in its young stage i.e. larvae would be controlled through application of Bt based biopesticides which are very effective to larvae but safe to other aquatic animals and human beings. Any escape of larvae from the Bt attacked resulting in becoming adult would be checked through the use of LLIN barrier which are impregnated with synthetic pyrethroid chemical pesticide. This application would be synerzied with the use of neem based pesticides against adults and other stages of the mosquitoes life cycle as neem is found effective as adulticide, larvicide, growth regulator resulting in long lasting effect on the mosquitoes population.

6. The commercial facility for the production of LLIN has been established and commissioned by the executuing partnerning institution namely HIL(India)Ltd. to prodcue master batch for the production of 5 million nets per annum. Since the

demand of the LLIN is much higher, the capacity of the plant would be doubled (10 million LLIN per annum) and for this UNIDO is extending additional financial support. He also mentioned that the technology for LLIN had been developed indigenously by the Central Institute for Plastic Engineering and Training (CIPET) and transferred to HIL(India) Ltd. under the project.

7. Also, biopesticides and botanical pesticides are entirely biodegradable and environmentally friendly. The impregnated bed nets with synthetic pyrethroids are considered as green chemicals due to their very limited toxicity and high biodegradability. Its benefits include the low price of bio-, botanical pesticides, very low or lack of toxicity to non-target organisms, the biodegradability of alternatives to DDT, and take back arrangements with LLIN vendors.

8. He mentioned that the GEF grant was used primarily for the procurement of the new technologies and strengthening the existing infrastructure base available on the ground. It is used for developing capacities to master newly procured technology. Besides technical capacities of producing quality alternatives, there is a component of human resource development through providing training and awareness including Integrated Vector Management (IVM) throughout the process of execution of the project.

9. The neem-based products developed and scaled up by the executing partnering agency viz. Institute of Pesticide Formulation Technology (IPFT) include repellents like cream and smoke coils, larvicides like self-spreading, floating tablets and suspension concentrate formulations, adulticide such as residual spray formulations to control of adult mosquito. These products would be commercially produced through transfer of technology to HIL (India) Ltd. after establishing sound business models. Neem with early maturity and higher limonoids, identified and established by National Botanical Research Institute (NBRI-CSIR) are being promoted through large scale cultivation/propagation using tissue culture and clonal propagation techniques established under the project.

10. UNIDO has been working in close coordination with UNEP and in the process provided all available information on the new alternative products developed under UNIDO components for developing training modules by UNEP.

11. UNEP informed that on its request, Ministry nominated CPCB as national executing agency for the project which had in turn engaged CSIR-NEERI to support the project particularly for Components IV and V.

12. UNEP informed that it was in the process of preparing- (i) The Gap Analysis report which will map the existing legislative and institutional framework relating to alternatives to DDT, (ii) The Action Plan which will provide proposed measures to be taken to address any gaps identified, as needed.

13. UNEP mentioned that it was in the process of engaging one of the non-for-profit organization as per the work plan to prepare the guidance documents for producers, registration holders and users on the legal requirements for alternatives to DDT.

14. It was informed CPCB had entrusted CSIR-NEERI to prepare specific training modules for promoting IVPM at local level. The modules are under revision in consultation with National Vector Borne Disease Control Programme (NVBDCP) and it is expected to be finalized and submitted to NVBDCP in coming weeks. Pilot testing of modules would be initiated in selected states once they are finalized. The modules would be translated in identified local languages. Training of stakeholders in selected states would be initiated after the modules and training materials are finalized. CSIR-NEERI is also developing awareness material with respect to IVPM and malaria control to support the project.

15. UNEP informed that based on the extension, a revised work plan was under finalization and would be submitted. UNEP also informed that much of the progress of UNEP activities was dependent on the progress of development of alternatives and data sharing by UNIDO and that both the agencies were working in coordination to achieve the objectives of the project.

16. Dr. Rene highlighted about the delay in the transfer of technology for *Bt* from Wuhan P R China due to COVID-19. He also highlighted about the long process of over 2 years for getting the CIB registration of new alternatives. He also mentioned that as per the requirement of the GEF, the mid-term review of the project was also due and proposed to conduct this sometime early 2021.

17. Dr. Ramdev informed that though LLIN was produced indigenously by HIL and had CIB registration, HIL's bidding for the supply of LLIN to Ministry of Health and Family Welfare was not accepted on the pretext that HIL had not got the WHOPES registration. He stressed that MoEF&CC might request Health Ministry to waive the condition for WHOPES registration for indigenously made LLIN (made for the first time by HIL with CIB registration of the Government of India). This local production with indigenous technology is a set example of Make in India initiative of HIL under this project of DDT alternative.

18. The second GEF funded project regarding the 'Environmentally sound management and disposal of PCBs in India' was also reviewed. Dr Rene highlighted that the overall objective of the project was to reduce and eliminate the use and releases of PCBs to the environment through promotion of measures to minimize exposures and risks by introducing environmentally sound management and disposal of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes aiming at the final disposal and complete elimination of entire PCBs inventory in India by 2025 and 2028, respectively. He further mentioned that the project is aimed to (i) Strengthen the legal and regulatory framework for environmentally sound management (ESM) and disposal of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes; (ii) Improve institutional capacity at all levels of PCBs' disposal management; (iii) Removal of 7,700 tonnes of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes from targeted sites and transport them to disposal unit; and (iv) Disposal of 7,700 tones PCBs, PCB-

containing equipment and PCB-containing mineral oils and wastes in an environmentally sound manner.

19. The objectives are being achieved through a combination of strategies, including legislative and regulatory assessment, capacity building, public education, technology transfer, technology dissemination, technical training and technical support. He further explained that the project was aimed to establish four facilities viz. dechlorination, plasma-based destruction, indirect thermal desorption and mobile dechlorination facility. He added that the Bhilai Steel Plant (BSP) has provided financial support of approximately USD 32 million for establishment of disposal facilities. The mobile dechlorination facility, hosted by Central Power Research Institute (CPRI), is fully commissioned and operationalised. The facility is being utilised for onsite treatment of the low-level PCBs at owner's premises. He further added that CPRI has so far treated nearly 200 MT out of committed 750 MT of PCB contaminated oil using the mobile dechlorination facility. The other three facilities at Bhilai Steel Plant of the Steel Authority of India Limited (SAIL) are at advanced stage of commissioning at Bhilai, Chhattisgarh.

20. With regard to the Gazette notification on PCBs issued by MoEF&CC of the Government of India, he expressed that it was quite useful to convince the PCBs owners to come forward for treatment of their stocks of PCBs contaminated oil. However, it may be strengthened with some advancement of timelines for the disposal of PCBs so that PCB owners could stick to the timelines for safe disposal of PCBs.

21. He also explained the delays in implementation of the project activities. The major implication of the COVID-19 pandemic was the complete halt of the activities both at installation/commissioning of the static plant at Bhilai Steel Plant and operation of the mobile dechlorination plant for treatment of low-level PCBs at owners' sites. Also, there has been delay in implementation of the project activities due to:

- i. Prolonged delays in getting approval of Town & Country Planning. Approval is now expected by the middle of September 2020.
- ii. Subject to the above approval, there remains the need to get approval of Bhilai Nagar Nigam (Corporation) for building permission. Approval is expected by Mid-November 2020.
- iii. Subject to the above approval, permission is needed from the district authority for overhead tank construction. Permission is expected by 1st week of January 2021.
- iv. Subject to the above approval, construction of overhead tank is due. Expected completion date of tank is April 2021.
- v. Delays in the erection of the Plascon system by an expert engineer from vendor in Australia as all commercial international flights are

cancelled due to COVID 19 pandemic. Installation is expected to be completed by February/March 2021.

22. Activities which are yet to be completed include the following with their target date of completion:

- i. Civil Building and infrastructure work for overhead tank (estimated time: 3 months (from January 2021(expected) receipt of permission from district authority to April 2021).
- ii. Commissioning of the static facility by M/s Ramky Enviro Engineers Limited (estimated time: January -September 2021).
- iii. Fully functional and operational static facility at SAIL/BSP (estimated completion time: September 2021)
- iv. Undertaking of disposal of 1700 Tonnes of pure PCBs
- v. Undertaking of treatment of low-level PCBs, equipment and wastes – 3400 Tonnes
- vi. Treatment of remaining 550 Tonnes of low conc. PCBs contaminated mineral oil using mobile system.

23. He said that it was estimated that facility development and commissioning would take additional 9 months beyond 31 December 2020 i.e. up to 30 September 2021. Thereafter, the plant would start operating to destroy pure PCBs and decontaminate equipment and wastes of the targeted inventory of 7700 tonnes and this would take 4 years or so. It would be essential to operate the plants for minimum of 3 months i.e. up to 31 December 2021 to systematize the plant to achieve the target of treating PCBs in the long run. It was also expected that by December 2021, the targeted 750 tonnes of low-level PCB would be treated using mobile facility.

24. Dr. Ramdev mentioned that India ratified first 12 POPs chemicals during the signing of the convention following which UNIDO implemented Pre-enabling activities project and the Enabling activities project and as a result National Implementation Plan (NIP) for India was developed and submitted to the Stockholm Convention on POPs by the Government of India. As prioritised in the NIP, Government of India through UNIDO developed three post NIP projects namely i. “Environmentally Sound Management and Final disposal of PCBs in India”; ii. Environmentally Sound management of Medical wastes in India and iii. Development and Promotion of non-POPs alternatives to DDT” which were currently under implementation by UNIDO through various executing partners in India. Now that the more chemicals have been added to the list of POPs (28 chemicals currently), it is essential that NIP update activities be initiated in order to include new POPs chemicals. It is required, as per the Stockholm Convention requirement, that Government of India ratifies new POPs to qualify for GEF funds to undertake NIP update project activities.

25. It was highlighted that the approval of the Cabinet was under process for the ratification of seven new POPs in the list under Stockholm Convention.

26. After detailed deliberations, the following decisions were made.

- I. MoEF&CC to write to Ministry of Health and Family Welfare to examine the request to waive the condition for WHOPES registration for indigenously made LLIN (made for the first time by HIL with CIB registration of the Government of India).
- II. UNIDO to submit inputs regarding the status of use of DDT as on date and the work plan regarding its phase out in a time bound manner indicating the role and engagement of all the stakeholder Ministries/Departments/Organisations.
- III. UNIDO to submit the proposal for the extension of the project, at no additional cost, for one year up to December 31st, 2021 beyond 31st December 2020.
- IV. UNIDO to submit the inputs regarding the need to prepone the timeline for PCBs owners regarding the disposal of PCBs.
- V. UNIDO to prepare and submit the action plan with regard to the environmentally sound management and disposal of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes aiming at the final disposal and complete elimination of entire PCBs inventory in India by 2025 and 2028, respectively indicating the roles and responsibilities of all concerned Ministries/Departments/Organisations.
- VI. UNIDO may consider preparing individual interactive real time information sharing amongst all stakeholders of each project to ensure greater integration and participation of all the stakeholders even after the completion of the projects and many facilities created under the project would remain operational for several years.

The meeting ended with a vote of thanks to the Chair and the participants.

List of participants:

MOEF&CC

1. Ms. Geeta Menon, Joint Secretary, MoEF&CC
2. Shri Satyendra Kumar, Deputy Secretary, MoEF&CC

UNIDO

3. Dr. Rene Van Berkel, UNIDO Representative, India
4. Dr. S.P. Dhua, Regional Co-ordinator, UNIDO, India
5. Dr. Y.P. Ramdev, National Technical Adviser, UNIDO, India

UNEP

6. Mr. Atul Bagai, Head UNEP, India
7. Ms. Aphrodite Smagadi, UNEP, Nairobi
8. Ms Divya Datta, UNEP, India
9. Dr. Jitendra Sharma, UNEP, India