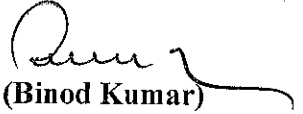


No: - EDA/2016-17/717/NMCG-EC Meeting
Ministry of Jal Shakti
Department of Water Resources, River Development
& Ganga Rejuvenation
National Mission for Clean Ganga

1st Floor,
Major Dhyan Chand National Stadium,
India Gate, New Delhi- 110001
Dated: -16th November, 2021

Subject: Minutes of 38th Meeting of the Executive Committee (EC) of National Mission for Clean Ganga held on 28th October, 2021.

Please find enclosed the minutes of 38th Meeting of the Executive Committee (EC) of National Mission for Clean Ganga held on 28th October, 2021 at 11.00 AM through Video Conferencing for information and necessary action.


(Binod Kumar)
Director (Coordination)

To

1. Joint Secretary (PFC-I/PF-States), Department of Expenditure, Ministry of Finance, North Block, New Delhi-110001
2. JS & FA, MoJS, Shram Shakti Bhawan, New Delhi-110001.
3. Shri Avinash Mishra, Adviser (WR&LR), NITI Aayog, Yojana Bhawan, Sansad Marg, New Delhi-110001
4. Secretary, Department of Drinking Water & Sanitation, Uttarakhand, 43/6 Mata Mandir Road, Dharmapur, Dehradun, Uttarkhand-248001.
5. Principal Secretary (UD), Urban Development Department (UDD), 834, Bapu Bhawan, Lucknow- 226001.
6. Principal Secretary (UD&Housing), Urban Development and Housing Department (UDHD), Vikas Bhawan, Bailey Road, Patna, Bihar-800015.
7. Principal Secretary (UD), Urban Development Department (UDD), 4th Floor, Project Building, Dhurwa, Ranchi- 834004.
8. Principal Secretary (UD), Department of Municipal Affairs (DMA), Nagarayan, Sector-I, Block-DF-8, Bidhan Nagar, Kolkata-700064.
9. All EDs of NMCG

Copy to :

1. Project Director, SPMG Group 117, Indira Nagar, Dehradun-248001, Uttarakhand.
2. Project Director, SPMG, Plot No. 18, Sector-7, Gomti Nagar, Lucknow-226010.
3. Project Director, SPMG Group (Secretary Urban Development), Government of Bihar, Vikash Bhawan, Bailey Road, Patna, Bihar – 800001.
4. Project Director, SPMG Group Urban Development & Housing Department, Room no. 403, 4th Floor, Project Bhawan, Dhurwa, Ranchi, Jharkhand-834004.
5. Project Director, SPMG Group Unnayan Bhawan', 3rd Floor, DJ-11, Sector-II, Block-A, KMDA, Kolkata- 700091.
6. PS to DG, NMCG- for his information

Minutes of 38th meeting of the Executive Committee (EC) of National Mission for Clean Ganga (NMCG) held on 28th October, 2021 at NMCG Office, Delhi

The 38th meeting of the Executive Committee (EC) of National Mission for Clean Ganga (NMCG) was held on 28th October, 2021, at 11.00 AM through Video Conferencing under the Chairmanship of Director General (DG), NMCG.

Director General, NMCG welcomed the members of EC to the meeting. Thereafter, the agenda items were taken up for discussion.

Agenda Item No. 38.1- NMCG-TERI Centre of Excellence on Water Reuse

Implementing Agency: The Energy and Resources Institute (TERI)

Total Cost: Rs. 3,13,10,000 (Rupees Three Crore Thirteen lakh and Ten Thousand) plus applicable GST, if any

Duration: 5 years

Project Components:

1. Reuse of wastewater had been mandated in the cabinet note for setting up of institutional mechanism and financial model for undertaking HAM projects under Namami Gange programme. In the recent past NMCG has undertaken some projects and initiatives wastewater reuse. But it has been observed that cost of treatment is comparatively higher for tertiary treatment. Hence there is a need to foster innovative and cost-effective technologies for tertiary treatment. TERI has already developed a new technology (TADOX) that can be integrated with the secondary treatment but to achieve better water quality. Such new technologies need to be supported during its initial phase of development and till commercialization.
2. The objective is to setup a Centre of Excellence (CoE), jointly by NMCG, TERI and Industrial Partner(s), for reuse of treated wastewater. The current proposal is for the funding component from NMCG to the COE as per the details mentioned below:

<i>Head</i>	<i>Budget (in INR Lakhs) (without applicable GST)</i>
<i>Manpower</i>	<i>200.00</i>
<i>Events</i>	<i>45.02</i>
<i>Travel Expenditure</i>	<i>4.50</i>
<i>Knowledge Dissemination</i>	<i>34.00</i>
<i>Institution Overheads payable to TERI</i>	<i>29.58</i>
<i>Total NMCG Costs</i>	<i>313.10</i>

3. The proposed COE is set up with the support of multiple partners. Hence by providing a seed fund to cover the manpower and related costs, NMCG can get the benefit of a fully funded center that can not only further the objectives of GKC, but also the knowledge developed with the support of other partners.

4. The CoE will emerge as a centre to benefit various stakeholders such as industries and industrial clusters, universities involved in R&D programs in the areas of Wastewater Treatment and Reuse, and will provide technical, advisory, policy, advocacy, consultancy, outreach, awareness, training and capacity building support to Central Government, State Governments, ULBs, and Industries in Water Reuse.

DECISION/ RESOLUTION

1. *After detailed deliberations on the subject matter EC gave approval for allocation of funds for the “NMCG- TERI Centre of Excellence on Water Reuse” at the cost of Rs. 3,13,10,000 (Rupees Three Crore Thirteen lakh and Ten Thousand) plus applicable GST, (if any). The funding is to be met under NGP component of Namami Gange program.*
2. *The above-mentioned costs will be paid on annual basis for 5 years. GST will be paid as per actuals if applicable. The travel cost component will be payable as per the rates approved for Class A officers of NMCG*
3. *NMCG and TERI will form a steering committee to guide the functioning of the COE. Representatives from NITI Aayog and MoHUA will be part of the steering committee*
4. *CoE once established may plan for revenue generation for making the future functioning of COE self-sustainable. CoE may also engage with industry partners from the beginning for this purpose.*
5. *The COE shall be part of the activities covered under Ganga Knowledge Centre.*

Agenda Item No. 38.2- Development of Mata Balkumari Bathing Ghat and Crematorium at Village Ajeetpur, Haridwar, Uttarakhand

- DPR appraised by IIT-Roorkee
- Project Cost- **3.70 Crores** (including 6 months O&M by WAPCOS)
- New Ghats construction – 1 no (Mata Balkumari Temple Ghat- 50m x 26m)
- New Improved Wood Cremation (IWC) type pyre
- Completion time- 15 months
- Financial Effect- 100% central funding through NGP head of NMCG
- Land to be provided by State Government

DECISION/ RESOLUTION

Based upon the discussions on the above, the proposal was recommended by Executive Committee of NMCG for according of Administrative Approval & Expenditure Sanction (AA&ES) by the competent authority at an estimated cost of Rs. 3.70 Cr. (including O&M period of 6 months i.e., till the completion of defect liability period) along with the compliance with the observations of NMCG and TPA that would be ensured by the CPSU & State Govt. at the time of finalization of Bid Document with the following conditions:

- (i) *Construction of new Ghat- 50m x 26m*

- (ii) *Provide embankment protection, toilet block (1 no.), change room (1 no.), dustbins and solar lights poles (6 nos.) on the ghats.*
- (iii) *EC observed that the 1km access road to ghat is kaccha, which may be an obstacle to pilgrims visiting the Ghat. PD SPMG has however assured that a pacca metalled road shall be constructed with the State funding. Thus, EC directed that the work on Ghat shall only be taken with the construction of 'pucca' road through State funding. Also, the entry to Ghat shall have direct access through this State Road.*
- (iv) *Suitable plantation and landscaping work should be undertaken on the ghats and surrounding areas. More green area to be incorporated in the ghat area.*
- (v) *Proper signage mentioning depth and danger levels, exit plan, washrooms etc. need to be included in every Ghat. NMCG logo and name to be inscribed at strategic locations.*
- (vi) *O&M during 6 months' period is included in the sanctioned project scope.*
- (vii) *Improved Wood Cremation system shall be installed at appropriate location away from the bathing ghat.*
- (viii) *Post completion of O&M period by executing agency, ULB should engage revenue generation mechanism in place for sustaining the O&M activities.*
- (ix) *Issues pertaining to land, consultations with local authorities and observations from the State need to be addressed & resolved before tendering with necessary evidence of such consultations.*
- (x) *Safety of pilgrims who will use the proposed ghats for bathing to be ensured with inclusion of safety chain and a warning mark indicating the depth of river beyond the safe bathing point. A handicap access to be proposed along with railing at the bathing ghat.*
- (xi) *The drawings need to be vetted by NMCG before issuance of Tender drawings and approval should be taken. NMCG should revert back with its observation within 10 days of receipt of the drawings else submitted drawings shall be deemed as approved.*
- (xii) *Executing Agency shall obtain NMCG approval before making any changes in the sanctioned scope.*

Agenda Item No. 38.3- "Interception and Diversion and STP works at Dehri-on-Sone, Bihar"

- DPR appraised by IIT-Roorkee
- Project Cost: **Rs 63.89 Cr.** including O & M for 15 years
- Land: to be provided by State Government
- Project Components:
 - Development of a 3 STPs including necessary ancillary infrastructures, SCADA and online monitoring system:
 - One 11 MLD STP for sewage load of 6 drains namely 1, 2, 3, 4, 5 and 7
 - One 7 MLD STP for sewage load from Drain no. 6
 - One 3 MLD STP for 3 drains namely drain no. 8, 9 and 10
 - 6 no. I&D structures for the drains

- 4 no. Intermediate Pumping Stations
- 1850 m of Gravity Sewer line;
- 1010 m of rising main
- 15 year's Operation & Maintenance
- Effluent Channel
- Environment plan during construction and operation phase
- Operation & maintenance for 15 years
- Completion Time: 24 Months including bidding period
- Financial Effect: 100% Central Sector
- Bidding Process: DBOT Mode

DECISION/ RESOLUTION

After detailed discussions with the State govt., TPA (IIT-Roorkee), Executive Committee (EC) resolved to approve the proposal for according administrative approval and expenditure sanction (AA&ES) for Interception, Diversion (I&D) and Sewage Treatment Plant (STP) works for Abatement of Pollution of River Sone at Dehri-On-Sone town (Bihar) under Namami Gange Program at an estimated amount of Rs 63.89 Crores (including cost of O & M for 15 years – Rs 27.96 Crores) to be implemented on DBOT mode. GST as applicable is to be paid extra. It was also resolved that the observations of NMCG, TPA should be complied by the State Government/ Executing Agency at the time of finalization of bid document/ at the time of execution and during O & M period. O & M of the project assets, post-commissioning for 15 years has been included in the project scope. O & M beyond project scope i.e. after 15 years shall be the responsibility of State Government/ ULB at its own cost. SPMG confirmed that after implementing of this project, no untreated drains will fall in the river Damodar from the town etc.

It was also decided that state government will pari-pasu implement the project for utilization of treated wastewater from the project for irrigation, industrial purpose as per its policy.

EC decided that installation of trash arresting rack and its regular O&M at the mouth of all drains and adequate provision for co-treatment of septage in the STP facility may also be made part of project proposal for implementation.

In addition, it was also directed by EC that the latest effluent standard as per the NGT order shall be followed.

The project has been considered to be funded under Component B – New Initiatives of Namami Gange Program. The State Government should ensure the availability of land, wherever needed, in their possession before awarding the works. State needs to submit a revised DPR, before bidding, based on Third Party Agency's recommendations complete with detailed designs and hydraulic analysis.

The project involves implementation of I&D and STP works of significantly small capacity (21 MLD) and clubbing of this work may be difficult with other towns due to fact that some big

towns with new sewerage infrastructure works to be undertaken are not located nearby or yet to be taken up. Accordingly, EC decided that the project will be executed following DBOT mode instead of Hybrid annuity-based PPP mode.

EC also directed to SPMG that the tender works may be awarded within three months from the date of issue of AA&ES.

Agenda Item No. 38.4- Engagement of Trained Eco-skilled Ganga Mitra in Public Outreach Awareness

Implementing Agency: Mahamana Malaviya Research Centre for Ganga, River Development & Water Resource Management, BHU, Varanasi.

Total Cost: Rs.88, 95,700/- (Rupees Eighty-Eight Lakhs Ninety-Five Thousand Seven Hundred only)

Completion time: 12 months

A presentation was given by Professor BD Tripathi, Chairman, Mahamana Malaviya Ganga Research Centre, BHU on the achievements of the 700 trained Ganga Mitra and their reach in the Varanasi and adjoining 7 districts from Prayagraj to Ballia. BHU outlined the proposal for taking up engagement of trained eco-skilled Ganga Mitra in public outreach awareness activities. The project and the proposed activities to be taken up involving Rs. 88, 95,700/-

The Executive Committee suggested to Professor BD Tripathi, Chairman, Mahamana Malaviya Ganga Research Centre, BHU to also engage the trained eco skilled Ganga Mitra for assessment of rural sanitation programs in 7 districts.

DECISION/ RESOLUTION

After detailed discussion, the Executive Committee (EC) approved the proposal for according administrative approval and expenditure sanction (AA&ES) for the engagement of trained Eco-skilled Ganga Mitra in public outreach awareness with a cost of Rs.88, 95,700/- (Rupees Eighty-Eight Lakhs Ninety-Five Thousand Seven Hundred only) for a period of one year.

Agenda Item No. 38.5-Revision in cost estimate, extension of project period and other issues relating to the ongoing project of 'Documentation of cultural heritage of river Ganga from Gaumukh to Gangasagar' under Namami Gange programme

Senior Consultant, NMCG briefed the Executive Committee on the background and operational issues of the project. He informed that the AA&ES for the project was issued to INTACH in October, 2018 at an estimated cost of Rs.3.2 crore (excluding GST) with a project completion period of 25 months. The cost of the project, inclusive of GST, comes to Rs.3.776 crore. Subsequently, based on request of INTACH, the project duration was extended upto 31st

December 2021, primarily due to disruptions caused by Covid-19 pandemic. Till date, 85 final Study Reports and 15 draft Study Reports (out of a total of 153 reports) have been submitted. Rs.163.47 lakhs (inclusive of GST) has been released so far to INTACH for the project, and a fund release of Rs. 15.68 lakhs is presently under processing in NMCG for sanction.

INTACH have now requested for the following:

- (i) Extension of project period by further 8 months (i.e upto 31st August, 2022)
- (ii) Escalation of project budget by 5%
- (iii) Payment for extra work being done in 3 additional districts
- (iv) Staggered payments against AV film & Publications

2. Principal Director, INTACH gave a presentation before the EC on the following issues under consideration:

- He informed that the progress of the project has been seriously hampered due to various factors, of which Covid-19 is the most significant. Several members of the team were down with Covid after field work and many offices, libraries & districts officials were inaccessible for quite some time. He requested for further extension of the project upto 31st August, 2022.
- 5% escalation in project cost was requested due to increased work period on account of disruptions due to Covid-19 and retaining of experienced specialized staff during lockdowns and work slowdown resulting in increased overhead expenditure.
- Payment for extra work done in 3 additional districts was requested. It was informed that the payment has been requested on the same average rate being paid for the work sanctioned earlier. This amounts to Rs.3 lakhs/district for the Study Reports & Rs.1 lakh/district for the GIS maps, excluding GST. The total additional financial implication in this regard would be Rs.12 lakhs+GST, or Rs. 14.16 lakhs inclusive of GST.
- As a large share of the project cost has been kept for AV film (15%) and Publications (10%) and there is no provision in the AA&ES for making payments in phases for these components, INTACH requested that payments for these activities may be released as per the following schedule to maintain supporting cash flow:
 - AV Film - On approval of concept 20%, and balance in 4 equal instalments of 20% each on successive completion of 4 films
 - Publications - On approval of concept 30%, thereafter balance in 2 equal instalments on successive delivery of 2 volumes.

3. After deliberations, it was agreed that all the work under the project, including submission of final AV documentary & Publications, should be completed by end of July, 2022. While extending the project upto 31st July 2022, DG, NMCG made it clear that no further extension will be given.

4. ED (Finance) clarified that 5% escalation proposed in the budget cannot be considered, as this is against the contract conditions. It was accordingly decided that no escalation will be provided.

5. After detailed deliberations, the payment for extra work being done in 3 additional districts and making of staggered payments against AV film & Publications, as proposed by INTACH in para (2) above, were approved by the EC.

6. DG directed that relevant experts/officers in NMCG should study the Reports and Maps submitted under the project and bring out the actionable points/findings in various districts. He

desired that initially 8-10 districts with high tourism and cultural potential should be shortlisted and actionable points should be prepared for sharing with the Ministries of Tourism as well as Culture for further necessary action.

DECISION/RESOLUTION

The Executive Committee approved the following:

- *Extension of the project period was granted upto 31st July, 2022.*
- *5% escalation sought in the project cost was not agreed.*
- *Staggered payments against AV film & Publications, as per schedule proposed by INTACH, was approved.*
- *Payment for extra work being done in 3 additional districts was approved. The financial implication in this regard would be Rs.12 lakhs+GST, or Rs. 14.16 lakhs inclusive of GST. Thus the total revised project cost comes to Rs.3.32 crore (excluding GST), or Rs.3.9176 crore including GST.*

Agenda Item No. 38.6- Monitoring and data collection from the River Ganga Basin for carbon footprint by IIT Roorkee

Project Objectives - The following are the objectives of the project:

- a. The delineate the Ganga River basin starting from its origin to the Bay of Bengal.
- b. To collect the following data related to the activities in the catchment.
 - Population data over the years
 - Land use changes data over the years
 - Growth of industrial activities
 - Growth of agricultural activities
 - Growth of commercial activities
 - Vehicle population data activities
 - Pollution load data i.e. water quality analysis data
 - Biodiversity of flora and fauna over the years.
 - Series provided by the basin
 - Power generation data via. hydropower planning
 - Measurement of GHG emissions in present time.
- c. Collection of sediment & soil data & estimation of C-stocks available.
- d. Calculation of CO₂ eq. estimated / observed i.e. the balance of carbon footprints.

- e. Calculate carbon footprint in terms of CO₂ eq. over the years & its linkage with its quality status.
- f. Compilation of the data & preparation of the report.

Project Cost: The head wise project cost is as below:

S. No.	Items	Budgets (₹ in lakh)			
		1 st yr.	2 nd yr.	3 rd yr.	Total
1.	For HRED IIT Roorkee				
A.	Salaries/ Wages	30.8	30.8	30.8	92.4
B.	Consumables	10	8.0	5.0	23.0
C.	Travel	8.0	8.0	3.0	19.0
D.	Other Costs/Contingency	5.00	4.0	1.0	10.0
E.	Equipment Gas Chromatography, UV- Visible Spectrophotometer Sediment Corer (hydraulic), Eddy Covariance (EC) Tower, Automated Soil Flux Chamber, TOC Analyzer and Gas Collector funnels	241.0	-	-	241.0
	Sub total	294.8	50.8	39.8	385.4
F.	Institutional overhead Charges @ @ 20%	58.96	10.16	7.96	77.08
	Total	353.76	60.96	47.76	462.48

Project Duration: 36 Months

DECISION/RESOLUTION

The project with aforementioned details was put up in the 38th meeting of the Executive Committee for consideration. The project was discussed in detail and following points were observed by the EC:

- *Human-impacted rivers are a substantial source of GHGs to the atmosphere. However minimal attempts have been made to measure Carbon-footprint/GHG emissions from rivers, especially in India. The work is generally centered around lakes and reservoirs, while few efforts have been made to understand the GHG dynamics of fluvial ecosystems. Moreover, concerns about environmental impacts and human health from the polluted rivers have been investigated extensively, yet little attention has been given to their implications on GHG emissions. Furthermore, only few studies have been published on GHG emissions from urban impacted riverine networks.*
- *No such study has been conducted that estimates GHG fluxes from polluted urban stretches of Ganga. Carbon footprint calculations have the potential to reduce the impact on climate change by increasing consumer awareness and fostering discussions about the environmental impacts of products. They offer valuable information for sustainable urban planning for policy makers and local municipalities.*
- *The calculation of carbon footprint and the associated emission for the Ganga River basin will be highly useful to generate accurate data for national GHG inventories of IPCC.*

- *The EC observed that the project and its objectives are in sync with the mandate of NMCG. Also, the EC recommended to reduce the institutional overhead charges to mutually acceptable levels, similar to R&D projects of DST & CWC.*
- *The Chair observed that since the project is related to delineating the Ganga River basin starting from its origin to the Bay of Bengal for data collection and the balance of carbon footprints etc., the views of MoEF&CC may be obtained. This will help in enriching the project further.*
- *The project objectives were appreciated by the EC and after detailed discussions, it was recommended by EC to take inputs from the MoEF&CC and put-up the proposal in the next meeting of the EC for consideration.*

Agenda Item No. 38.7- Selection guidelines for constructed wetland (CW) systems for treatment of sewage in India

Project Objectives:

- Collection and reviewing of the existing CWs designs
- Physical inspection and water quality data collections from the existing CW systems in India
- Collections of influent and effluent samples from existing CWs and water quality parameter (Nitrogen, Phosphorus, COD, BOD; DO, TSS, Coliform, and pH) assessment
- Data collection and review of details reading designated compositions of bed materials to be used in the CWs systems based on their designs, vegetation type, pollution levels in the sewage, and the climatic conditions
- Creating awareness about the CW technology through training programs
- Availability of guidelines for selection of suitable CW systems as per sewage treatment requirements

Project Cost: The head wise project cost is as below:

S. No	Head/items	Required budget (In Lakhs)
1	Manpower	
	(i) Project scientist/Engineering @ Rs.60000 Pm	7.2
	(ii) Project Assistant @ Rs.25000 Pm	3.0
	(iii) Professional manpower	5.0
2	Travel cost	
	(i) Travel for site visits and data collections	3
	(ii) Travel for sample collections and transportation	3
3	Water quality assessment – laboratory analyses (approx. 1000 samples @ Rs.1000 per sample for all parameters)	10
4	Contingency	2.5
5	Training program – 3 training program of 30 pax each @250000 (one at Noida, one at Patna, and one at Roorkee)	7.5
6	Printing cost for CW selection guidelines (Approx. 500 printed copies)	3
7.	Overhead/Institutional charges @20%	8.84
Total Budget (in Lacs)		53.04

Project Duration: 12 Months

DECISION/RESOLUTION

The project with aforementioned details was put up in the 38th meeting of the Executive Committee for consideration. The Chair observed that NMCG has been sanctioning capital intensive sewerage infrastructure projects for pollution abatement. These projects may not provide designed performance in many instances with lower level of pollution levels as well as may also not be operationally optimal in para-urban and rural settings (eg. Priority IV & V stretches), where CWT based sewerage projects are better suited. Also, that there is need of capacity building in the State and district administration regarding the standardization of Constructed Wetland, whose implementation often gets loaded during DPR preparation stage due to unnecessary design parameters and retention requirements.

The project objectives were appreciated by the EC and after detailed discussions, found the project to be in line with the objectives of NMCG and approved the project with following additional details:

- *IIT Roorkee must prioritize completing the project and would submit quarterly progress report of the project.*
- *Capacity Building shall also be an important component of the project.*
- *The payment schedule would be as follows:*

S. No.	Milestone	Payment
1	At the time of award of project	25%
2	After submission of first inception report based on surveying a few CWs.	30%
3	After submission of second inception report based on Water quality assessment	25%
4	After acceptance of final report by NMCG	20%

- *IITR would submit the Utilization Certificate of the previously released payment, before the release of the subsequent instalments.*
- *EC recommended to reduce the institutional overhead charges to mutually acceptable levels, similar to R&D projects of DST & CWC.*
- *A Monitoring Committee would be constituted under the Chairmanship of DG, NMCG to assess the progress of the project.*

Agenda Item No. 38.8- Identification of Critical Soil Erosion Prone Areas and Preparation of CAT Plan

Project Objectives:

- Identification of vulnerable areas in the representative catchment of Ganga River using USLE, GIS and Remote Sensing data.
- Preparation of Catchment Area Treatment (CAT) plan for recommendation soil conservation measures in the vulnerable areas of the catchment.

Project Cost: The head wise project cost is as below:

S. No.	Head	Amount (Lakh Rs.)
1.	Remuneration / Emoluments for Manpower (1 JRF+1 RA)	22.4
2.	Travel Expenditure	3.0
3.	Infrastructure /Equipment's	8.0
4.	Experimental Charges	4.0
A	Sub Total	37.40
5.	Overheads Charges@20% of A	7.48
Total=Rs. Forty Four lakhs and Eighty Eight Thousand Only		44.88

Project Duration: 24 Months

DECISION/RESOLUTION

The project with aforementioned details was put up in the 38th meeting of the Executive Committee for consideration. It was observed that as per previous studies, soil is being detached annually due to various reasons and the rate of soil erosion is considerably high. The critical soil erosion prone areas shall be identified and recommendation of best management practices shall be carried out from soil and water conservation view-point.

The project objectives were appreciated by the EC and after detailed discussions, found the project to be in line with the objectives of NMCG and approved the project with following additional details:

- *IIT Roorkee must prioritize completing the project and IITR submit quarterly progress report of the project.*
- *Capacity Building shall also be an important component of the project.*
- *The payment schedule would be as follows:*

S. No.	Milestone	Payment
1	At the time of award of project	25%
2	After submission of Ground Truth Verification report	30%
3	After submission of Catchment Area Treatment report	25%
4	After acceptance of final report by NMCG	20%

- *IITR would submit the Utilization Certificate of the previously released payment, before the release of the subsequent instalments.*
- *EC recommended to reduce the institutional overhead charges to mutually acceptable levels, similar to R&D projects of DST & CWC.*
- *A monitoring Committee would be constituted under the Chairmanship of DG, NMCG to assess the progress of the project.*

Agenda Item No. 38.9 (Table Agenda): DPR of Interception & Diversion (I&D) network for existing drains falling in river Ganges including sewage treatment plant (STP), North Barrackpore municipality, in West Bengal State, Under Namami Gange Program.

- DPR appraised by IIT Delhi
- Major components: -
 - i. Construction of STP, 30 MLD capacity - 1 no.
 - ii. Construction of STP, 8 MLD capacity - 1 no.
 - iii. Construction of MPS – 1 no.
 - iv. Construction of LS – 1 no.
 - v. Renovation of existing MPS – 2 nos. (Manirampur & Babanpur)
 - vi. Renovation of existing LS – 2 nos. (Mathpara & Surendranagar)
 - vii. I&D Network Laying – 10365 Rmt
 - viii. Rising main – 4416 Rmt
 - ix. ESMP&GAAP
 - x. Operation and Maintenance cost has been considered for 15 Years.
- Financial Effect: Central Share as 100% of project cost i.e., Rs. 214.78 Crores

DECISION/RESOLUTION

After detailed discussions Executive Committee (EC) resolved to approve the proposal for according Administrative Approval and Expenditure Sanction (AA&ES) for DPR of Interception & Diversion (I&D) network for existing drains falling in river Ganges including sewage treatment plant (STP), North Barrackpore municipality, in West Bengal under Namami Gange Program for an estimated amount of Rs 214.78 Crores (including cost of O & M for 15 years –Rs 104.17 Crores) under HAM PPP mode.

It was also resolved that the observations of NMCG, TPA should be complied by the State Government/ Executing Agency at the time of finalization of bid document/ at the time of execution and during O&M. The cost towards O&M of the project assets, post commissioning for 15 years has been included in the project scope. O&M beyond project scope i.e. after 15 years shall be the responsibility of State Government/ ULB at its own cost. The project has been considered to be funded under NGP Component – New Initiatives of Namami Gange Program. The State Government should ensure the availability of land in their possession before awarding the works. State need to submit a revised DPR, before bidding, incorporating Third Party Agency's recommendations. SPMG confirmed that after implementing of this project, no untreated drains will fall in the river Ganga from the municipality etc.

In addition, EC decided that installation of trash arresting rack and its regular O&M at the mouth of all drains and adequate provision for handling septage in the STP facility may also be made part of project proposal for implementation.

EC desired that state Government should pari-pasu implement the project for reuse of treated wastewater for agriculture & industrial purpose. For this purpose, state government should adopt a policy document and endeavour & implement scheme for reuse treated wastewater accordingly.

EC also directed to SPMG that the tender works may be awarded within six months from the date of issue of AA&ES.

Agenda Item No. 38.10 (Table Agenda): Demonstration of end-to-end treatment of Textile Wastewater using TADOX[®] Technology with an onsite 20 KLD Pilot Plant at CETP, Rooma.

Proposal Prepared by: The Energy and Resources Institute (TERI), New Delhi

Proposal appraised by: Jamia Millia Islamia University, Delhi

Project Type: Demonstration of TERI's TADOX[®] Technology with 20 KLD Pilot for handling High strength COD wastewater (improving the biodegradability of the wastewater).

Cost of the Project: Rs. 85.84 lakhs including taxes (Under GKC component of NGP)

Funding pattern: 100% Central Government assistance under NGP.

Time Duration: 9 Months

Major Components:

1. To establish, optimize and demonstrate treatment of Textile Wastewater using TADOX[®] Technology with an onsite 20 KLD Pilot Plant at CETP, Rooma Textile & Hosiery Park, Kanpur.
2. The treated water aimed to be achieving Color <50 Hazens, COD <250 mg/l, with improved biodegradability using TADOX Technology alone.

The agenda for pilot project is demonstration of end-to-end treatment of Textile Wastewater using TADOX[®] Technology with an onsite 20 KLD Pilot Plant at CETP, Rooma **as Phase I of the proposed upgradation/augmentation Plan for 1.55 MLD CETP at Rooma Textile & Hosiery Park, Kanpur** with above mentioned details was presented before the Executive Committee (EC). EC was informed that COD and color at influent of CETP Rooma is very high while BOD is comparatively too low which makes it difficult to treat the wastewater biologically and CETP becomes non-compliant many a times. Due to poor BOD:COD ratio in the wastewater, biological treatment in CETP is difficult and thus alternate solution for new technologies needs to be explored to address the issue of pollution abatement. NMCG and TERI has an MOU which provides for implementation of TADOX innovative and patented technology in actual field situations for abatement of pollution due to industrial effluents as well as domestic sewage. TERI stated that TADOX is the technology where it can reduce the COD and color in CETP with some

intervention and accordingly, a proposal was submitted by TERI, New Delhi to demonstrate a pilot at Rooma CETP. The proposal has been duly appraised and recommended by Jamia Millia Islamia University, New Delhi. A brief presentation was made on technology and implementation mechanism before the Executive Committee. The Committee was also informed that 100% of capital cost of the pilot project (Rs.85.84 Lakhs) of the proposal, as recommended by TPA, is to be funded under Namami Gange programme. The Committee was also informed that the 20 KLD pilot is part of overall project for integration of TADOX Technology to achieve ZLD in the 1.55 MLD CETP at Rooma Textile & Hosiery Park, Kanpur, which can be expanded after appraisal of results of 20 KLD pilot.

DECISION/RESOLUTION

After detailed discussions and due deliberation on all aspects EC approved the pilot project of demonstration of end-to-end treatment of Textile Wastewater using TADOX® Technology with an onsite 20 KLD Pilot Plant at CETP, Rooma at an estimated cost of Rs. 85.84 Lakhs. The EC also considered and suggested that monitoring of the Pilot Project may be carried out and if targeted parameters are achieved then the augmentation proposal with the integration of TADOX Technology to achieve ZLD in the 1.55 MLD CETP at Rooma Textile & Hosiery Park, Kanpur may be presented to the EC as phase-II of the project at the end of completion of the project.

Agenda Item No. 38.11 (Table Agenda): Proposal for Pollution prevention and effective waste management of Panipat textile cluster to optimize the trade potential of the cluster, Panipat, Haryana.

The proposal for pollution prevention and effective waste management of Panipat textile cluster was presented in 38th EC meeting held on 28th October 2021. The proposal consists of five major components viz. reduction of water consumption, reduce wastewater discharge through demonstration of green technology, promote efficient working of ETP, improve health and safety and establishment of multi-stakeholder platform with an estimated cost of Rs. 18.94 Crore to be implemented by the Solidaridad Regional Expertise Centre (SREC).

It was informed that the proposal was agreed by Government of India and Government of Netherlands as an agenda by Indo-Netherland Joint Working Group with Director General, NMCG as Chairman (India) represented by Special Envoy of International Water Affairs, Govt of Netherland. The JWG has now been elevated to the level of Hon'ble Minister for Jal Shakti from Indian side vide DoWR, RD&GR OM dated 31.8.2021 and Minister of Infrastructure & Environment of Netherlands. The project is also an agenda item for deliberations and decision of Executive Committee would be considered by the Ministerial level JWG. The funding pattern for the project is considered as, 50% of total project cost to be borne by the Government of India and remaining 50% of the project cost will be envisaged from Dutch Resources (Government of The Netherlands) and the project will lie under the ambit of India - Dutch Collaboration.

Solidaridad Regional Expertise Centre is a Charitable Trust established on 15th December 2008 vide a trust deed registered under the Indian Registration Act, 1908. The trust is a non-profit trust established for carrying out charitable activities as defined therein and is also registered under Foreign Contribution (Regulation) Act, 2010 ("FCRA"). It has also been informed that SREC has also received funds from Government of India for FPO formation and promotion work under the Central Sector Scheme.

Authority Notification'2016 mandates NMCG to render assistance or cause them to be rendered by any agency for preparation of detailed project reports or execution of projects for abatement of pollution and rejuvenation, protection and management of the River Ganga and its tributaries to the State Governments, the State Ganga Committees, District Ganga Committees or local authorities or any person or body, any authority, Board or Corporation. Accordingly, SREC is proposed as an agency to implement the activities under the subject project for which Project Implementation Board, similar to Special Purpose Vehicles (SPVs) constituted for implementation of various industrial projects in Ganga basin, with representatives from the Government (State and Central) body will remain responsible for project implementation.

It was also informed that industrial pollution abatement projects are undertaken through Special Purpose Vehicles, which essentially, are entities under Companies Act and incorporated as representatives from industry association. For the tannery sector projects involving construction of CETP at Jajmau (Kanpur), Banther, Unnao and Mathura (Textile sector), the SPV were constituted after the projects were sanctioned under Namami Gange programme with representatives from Government of India and State Government in the Board of Directors with mandate towards construction of project duly approved by Executive Committee.

It was presented that a Memorandum of Understanding (MoU) was signed between the Government of Netherlands and Government of Uttar Pradesh, India in July 2016 on several co-operation areas, including water management and cleaning up of pollution along the River Ganga Basin. SREC acted on the cooperation areas as contained in MoU and focused on the MSME sector with particular focus on the polluting industrial clusters along the River Ganga. Leather and textiles have been identified as the key polluting industries along the river basin. SREC started its thematic work on pollution prevention measures and effective waste management from the polluting sectors- leather as the most critical industry. Solidaridad Regional Expertise Centre along with National Mission for Clean Ganga translated this MoU to a flagship project in Kanpur-Unnao for Tannery sector Jajmau. It has been working on **Pollution Prevention and Efficient Waste Use in Kanpur-Unnao Leather Cluster** since 2016 funded by the Sustainable Water Fund, Ministry of Netherlands with a funding amount of 2.49 Million Euros/ INR 20 Crore. The project works towards water stewardship in 100 tanneries. The project not only aims to reduce the pollution load discharged from the tanneries but also reduce its water consumption in its operations. The project led to formation of Multi-Stake Holder Platform (NMCG, UPPCB, Dept of MSME, Embassy of Netherland, CSIR-CLRI, Council for leather exports, Stahl, UPJN, Tannery Association, PUM the Netherlands) with Executive Director NMCG as Chairman. A Center for Excellence has also been established at Banther, Unnao and is functioning. SREC has also been implementing **Pollution Prevention and Efficient Water Use in Kanpur- Unnao**

Leather Cluster phase-II supported by Government of The Netherlands and NMCG. Buoyed by the success of the above project, SREC, as a successful entity, has proposed implementation of subject project under assistance from Government of India and Government of the Netherlands. The same is accordingly under consideration as G2G project.

It was also explained that SREC has carried out several projects with their own initiative for Government of West Bengal, Tamil Nadu and Uttar-Pradesh in India and internationally with EU, the Netherlands.

ED Finance, NMCG expressed his concerns regarding the legal entity of the firm and the actual scope of work of SREC. SREC, in views, seems to be training/ capacity building organization or recruiting agency and it seems that SREC wants to improve the industries by providing trainings. Further that SREC needs to explain more in detail about its entity in India.

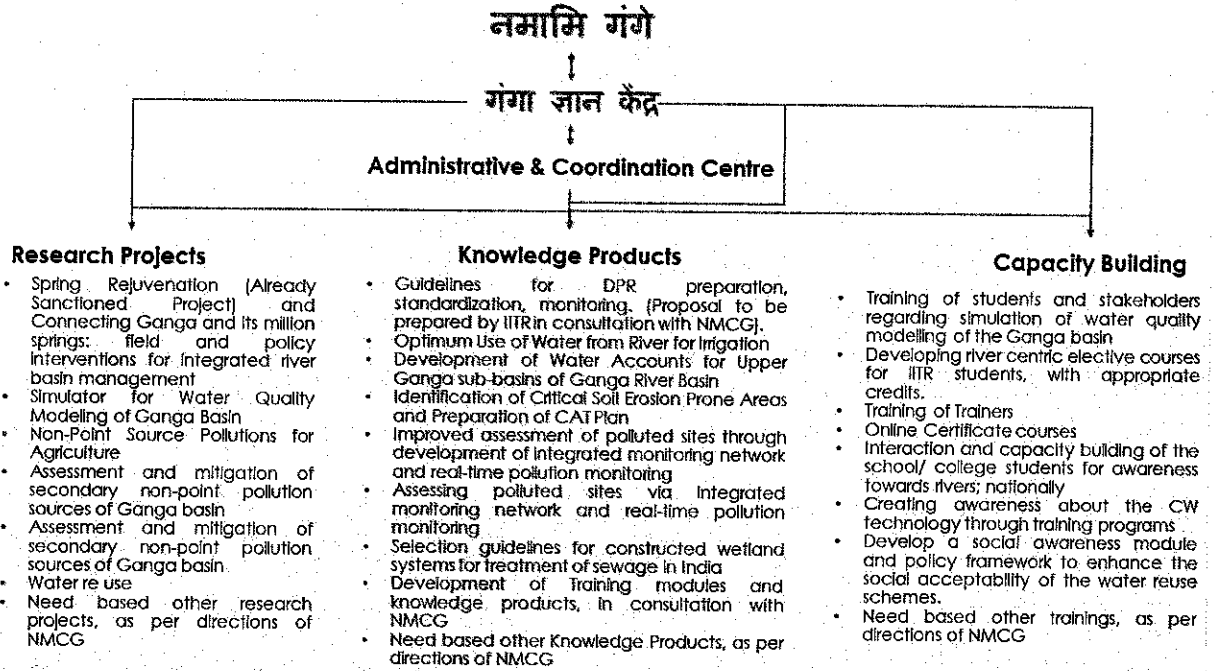
DG, NMCG stated that prime objective of NMCG is to improve the environmental aspects in such industrial clusters. NMCG has already taken initiative to improve the tannery sector and further serious efforts are planned to improve the other sector e.g. textile. Further that the technical capabilities of SREC, which has already partnered with several ministries and state government along with EU, have been well understood.

DECISION/ RESOLUTION

Based on the detailed discussions, the Committee appreciated the meaningful works carried out by SREC in tannery sector in Jajmau and Unnao area and took note of importance of proposal for improving the process technologies by engaging with textile cluster in Panipat by reducing the water, chemical consumption and waste generation as well as reusing some of the waste (e.g., sludge) and in the process improving their capacity building. EC directed that the proposal may be further examined in particular reference to identification of Solidaridad Regional Expertise Centre as implementation agency in consultation with other Stakeholders including industry partners. The proposal may thereafter be again brought before the Executive Committee with appropriate documentation.

Other discussion points:

- ED-Technical briefly appraised the EC that the proposal of R&D facility at IIT Roorkee was in-principle approved by the competent authority in NMCG. Also, the EC was appraised about the earlier discussions in Executive Committee meeting and other meetings. The original proposal of IIT Roorkee has been modified and is as below:



- EC recommended to work out the details of the project and put-up for consideration in subsequent EC meeting.

The meeting ended with vote of thanks to the chair.