PROGRESS REPORT OF POLLUTED RIVER STRETCHES FOR THE STATE OF ANDHRA PRADESH

from January 2020 to May 2020

Submitted to

Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation

सत्यमेव जयते

NATIONAL MISSION FOR CLEAN GANGA

MINISTRY OF JAL SAKTHI

NEW DELHI

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1. Introduction:

The NGT mentioned that the Central Pollution Control Board (CPCB), Delhi has identified 351 river stretches as polluted river stretches in the Country for not meeting the prescribed water quality standards. Five river stretches among them in Andhra Pradesh have been identified as polluted river stretches for exceeding prescribed standard limit of Bio-chemical Oxygen Demand (BOD), 3.0 mg/lit during the period of two years, 2016 & 2017.

The rivers have been prioritized based on the concentration of BOD in five classes from priority I to V. The criteria of each priority is elaborated indicating the concentration range of BOD in mg/l.

Details of the identified polluted river stretches in Andhra Pradesh are as follows:

S.No	River	Stretch Identified	BOD Range/ Max Value	Priority
1	Godavari	Rayanpeta to Rajahmundry	3.1	V
2	Nagavali	Along Thotapally	3.2	V
3	Krishna	Amaravati to Hamsala Deevi	3.2	V
4	Tungabhadra	Manthralayam to Bavapuram	3.2 – 6.7	IV
5	Kundu	Nandyal to Madduru	7.7	IV

- So far, 5 RRC meetings were convened with stakeholders to review the progress and submitted the revised action plans on 20.03.2020 to CPCB.
- The Government of Andhra Pradesh vide lr no.12071/1/2019-M3 dated: lr 24.02.2020 submitted performance guarantee for Rs 10 crore to CPCB
- Further, NGT vide order dt 15.05.2020 in the application no. 14 of 2016 mentioned the status report of Andhra Pradesh as following

"A**ddressed all the five action points listed in their action plan" and details activities are given below:**

The progress report of the five polluted river stretches is submitted as per the prescribed format in compliance of Hon'ble NGT order dated 06.12.2019 in O.A no. 673/2018

2. Progress report of Priority –IV for period January 2020- May 2020 for 2 rivers

BOD range criteria for Priority IV is between 6-10 mg/l.

2.1 River Tungabhadra

Progress Report of River **Tungabhadra at Kurnool** on revised action plan:

Sl No	Activity to be Monitored	Time Line	Submission of Progress by State/compliance Status
1	Ensure 100% Treatment of Sewage at least in –situ remediation	31.03.2020	• At present 2.40 MLD of sewage is being treated and 10 & 2 MLD capacities of STPs are under construction, by Public Health Engineering Department, with time line for completion by December-2020. • For the remaining 41.60 MLD, DPR prepared and the agency is attending Technical, remarks raised by SE, Public Health Engineering Department, Anantapur.
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of Sewage to the STPs must be ensured	31.03.2020	• At present, in working condition – 3 no's of STPs of 0.80 MLD capacity each • Under construction – 2 no's of 10+2 MLD • For the remaining – 10 No's of STPs for 41.60 MLD is under DPR stage.
2	Time line for completing all steps of action plans including completion of setting up STP's and their commissioning	31.03.2021	Construction of 10.0 MLD STP and 2.0 MLD STP is under progress and will be completed by 31.03.2021
5	Chief Secretaries may setup appropriate Monitoring mechanism at state level • Specific accountability of Nodal authorities not below the secretary level. • Chief Secretaries may have	22.01.2020 22.01.2020	The file is under circulation for appointment of Nodel officer

	an accountable person attached in their office for this Purpose. Monitoring at State Level must take place	Fortnightly Commencing 21.12.2019	
6.1	Progress Report may be furnished by the states/UTs to • Secretary, Ministry of Jal Shakthi Member Secretary, CPCB	Monthly (Preferably before 20th of every month)	Noted
	Progress Report may be comprised of details along with completion timelines on:		
	i) Identification of polluting sources including drains contributing to river pollution and action as per NGT Order on in-situ treatment.	• Identified 36 no's of disposal drains leading to rivers Tungabhadra and Hundri and fixed wire meshes to 32 no's out fall points.	
	ii) Status of STPs, I&D and Sewerage Networks Details of Existing Infrastructure, Gap Analysis, Proposed along with completion Time Line.	• Existing STPs - 3 no's x 0.8 MLD = 2.40 MLD • Under construction – 1 no = 10.0 MLD 1 no = 2.0 MLD by December-2020 • Gap – 41.60 MLD – DPR prepared attending technical remarks raised by SE, Public Health Engineering Department, Anantapur	
	iii) Status of CETPs Details of Existing CETP and ETP infrastructure, Gap Analysis Proposed along with completion time line, NO of Industries and complying status.	• No CETP is existing in the Jurisdiction of Kurnool. • No industry is discharging, the industrial effluents into river stretch i.e., Tungabhadra river. No non-complying units, illegal units operating in the catchment of polluted river stretch. • Only, domestic sewage is being discharged in to the River Tungabhadra • Existing STPs 3 no's x 0.8 MLD = 2.40 MLD • Under construction – 1 no = 10.0 MLD 1 no = 2.0 MLD by December-2020 • Gap – 41.60 MLD – DPR prepared and agency attending technical remarks raised by SE, Public Health Engineering Department, Anantapur.	
	iv) Status of Solid waste Management& Details of Processing Facilities Details of Existing Infrastructure,Gap Analysis,Proposed along with completion timeline	• For Material Recovery Facility – Expression of Interest (EOI) offered 2nd call invited and bid opening is on 07.07.2020 • For Wet waste processing – EOI offered and received single bidder and it is under technical evaluation stage.	

	v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	i) Latest water quality of Tungabhadra River at Bavapuram is tabulated below.

River: Tungabhadra		Station Name: Bavapuram					Year: 2020
Parameters	**Unit of measurement**	**January**	**Feb**	**Mar**	**April**	**May**	**Avg**
Biochemical Oxygen Demand	mg/l	2.3	2.5	2.5	1.7	3.0	2.4
Dissolved Oxygen (mg/L)	mg/l	5.5	5.7	5.7	6.2	5.5	5.7
PH		7.4	7.4	7.8	7.4	7.3	7.46
Fecal Coliform (MPN/100ml)	mg/l	200	300	200	100	200	200
Total Coliform (MPN/100ml)	mg/l	800	1200	800	400	600	760

The above average values, the water quality <u>is almost meeting</u> the class-B Category in terms of PH, BOD & DO Values except Total Coliform. Hence the water quality is Class – C Category and it may be utilized as drinking water source after conventional treatment and disinfection.

ii) Latest water quality of Tungabhadra River at Gondiparla & Padedampadu is tabulated below:

As per the Hon'ble NGT Order, the APPCB, Zonal Laboratory, Kurnool is collecting the samples from the following points as an extension/ expanding the NWMP sampling location from the month of **April, 2019**, in addition to the existing NWMP monitoring stations, and the details are as follows:

- River Tunghabhadra near shivalayam temple at Gondiparla (V), Kurnool (M& Dist)
- River Tunghabhadra, downstream of Kurnool town after joining city domestic sewage at Padedampadu (V), Kurnoool (M&Dist)
- At the downstream of the Kurnool town, in the river Tungabhadra sample were collected at Padidempadu, the average values indicate that the parameters are within the standards.

S.No	Parameter	Gondiparla	Padedampadu	Water quality Criteria Class of water - B	Water quality Criteria Class of water - C
1	pH	6.82	7.24	6.5 to 8.5	6 to 9
4	BOD	2.5	2.6	3 mg/l or less	3 mg/l or less

	5	DO	5.4	5.1	5 mg/l or more	4 mg/l or more
	6	Fecal Coliform (MPN/100ml)	160.0	22.0	--	--
	7	Total Coliform (MPN/100ml)	840.0	1060	Shall be 500 or less	Shall be 5000 or less
	The above average values, the water quality is almost meeting the class-B Category in terms of PH, BOD & DO Values except Total Coliform. Hence the water quality is Class – C Category and it may be utilized as drinking water source after conventional treatment and disinfection.					

	vi) Preventing dumping of waste and scientific waste management including bio-medical waste, Plastic wastes and decentralizing waste processing, including waste generated from hotels, ashrams, etc	1. Plastic waste –Entered MOU with M/s.Shrivi Green Energy and supplying to the agency to produce pyrolysis oil from waste plastic 2. MRF – EOI offered and bid will be opened on 7.07.2020. 3. Bio medical waste – All the HCFs located in the Kurnool District have tied up with CBMWTF for treatment and disposal of waste (100% achieved).. 4. Regarding bulk waste – Generation processing, EOI to be called
	5. Ground water regulation	Ground water regulation is being regularly monitored by Ground water Department.
	6. Adopting good irrigation practices	Regularly attending the maintenance works for free flow of drain water.
	7. Protection and management of flood plain zones(FPZ),	No erosion of flood plain or flood banks is observed
	8. Rain water harvesting	Constructed rain water harvesting structures in all Municipal buildings, open spaces, schools and residential apartments.
	9. Plantation on both sides of the river	Plantation was done at Tungabhadra river bank at Shankal bagh and planned to extend along the bank stretch.
	10. Setting up biodiversity parks on flood plains by removing encroachment.	Encroachments are being removed in flood plain areas.

Progress Report of **River Tungabhadra at Mantralayam** on revised action plan

SI No	Activity to be Monitored	Time Line	Submission of Progress by State/compliance Status
1	Ensure 100% Treatment of Sewage at least in –situ remediation	31.03.2020	For the construction of 4 MLD capacity STPs 2 nos – DPR was prepared and submitted to higher authority for administrative sanction.
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of Sewage to the STPs must be ensured	31.03.2020	Total sewage generation in the catchment area of polluted river stretches of the Mantralayam is joining Tungabadra River
2	Time line for completing all steps of action plans including completion of setting up STP's and their commissioning	31.03.2021	For the construction of 4 MLD capacity STPs 2 nos – DPR was prepared and submitted to higher authority for administrative sanction.
5	Chief Secretaries may setup appropriate Monitoring mechanism at state level • Specific accountability of Nodal authorities not below the secretary level. • Chief Secretaries may have an accountable person attached in their office for this Purpose. Monitoring at State Level must take place.	22.01.2020 22.01.2020 Fortnightly Commencing 21.12.2019	Under process
6	Progress Report may be furnished by the states/UTs to • Secretary, Ministry of Jal Shakthi Member Secretary, CPCB	Monthly (preferable before 20th of every month)	Noted
	Progress Report may be comprised of details along with completion timelines on:		
	i. Identification of polluting sources including drains contributing to river pollution and action as per NGT Order on in-situ treatment.	• Most of the drains carrying sewage have been identified. • 8 storm water drains have been identified and 42 wire mesh have also been installed.	
	ii. Status of STPs, I&D and Sewerage Networks Details of Existing Infrastructure, Gap Analysis, Proposed along with completion Time Line.	For the construction of 4 MLD capacity STPs 2 nos – DPR was prepared and submitted to higher authority for administrative sanction	

<table>
<tr><td></td><td>iii. Status of CETPs Details of Existing CETP and ETP infrastructure, Gap Analysis Proposed along with completion time line, NO of Industries and complying status.</td><td>• No CETP is existing in the Jurisdiction of Kurnool.
• No industry is discharging, the industrial effluents into river stretch i.e., Tungabhadra river. No non-complying units, illegal units operating in the catchment of polluted river stretch.
• Only, domestic sewage is being discharged in to the River Tungabhadra</td></tr>
<tr><td></td><td>iv. Status of Solid waste Management& Details of Processing Facilities Details of Existing Infrastructure,Gap Analysis,Proposed along with completion timeline</td><td>Solid Wealth Processing Centers (SWPC) Centre is existing with all infrastructure. At present it is not functional due to lack of man power. Efforts are going on to make it functional at the earliest.</td></tr>
<tr><td></td><td>v. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river</td><td>Latest water quality of Tungabhadra River at Mantralayam is tabulated below.</td></tr>
<tr><td></td><td colspan="2">
<table>
<tr><th colspan="2">River: Tungabhadra</th><th colspan="4">Station Name: Mantralayam</th><th colspan="2">Year: 2020</th></tr>
<tr><th>Parameters</th><th>Unit of measurement</th><th>January</th><th>Feb</th><th>Mar</th><th>April</th><th>May</th><th>Avg</th></tr>
<tr><td>Biochemical Oxygen Demand</td><td>mg/l</td><td>2.2</td><td>2.3</td><td>2.7</td><td>2.7</td><td>2.8</td><td>2.5</td></tr>
<tr><td>Dissolved Oxygen (mg/L)</td><td>mg/l</td><td>5.6</td><td>5.3</td><td>5.9</td><td>5.4</td><td>5.7</td><td>5.6</td></tr>
<tr><td>PH</td><td></td><td>7.9</td><td>7.8</td><td>7.9</td><td>7.3</td><td>7.2</td><td>7.62</td></tr>
<tr><td>Fecal Coliform (MPN/100ml)</td><td>mg/l</td><td>100</td><td>400</td><td>300</td><td>200</td><td>200</td><td>240.0</td></tr>
<tr><td>Total Coliform (MPN/100ml)</td><td>mg/l</td><td>700</td><td>1500</td><td>800</td><td>800</td><td>800</td><td>920.0</td></tr>
</table>
As seen from the above average values, the water quality is almost meeting the class-B Category in terms of PH, BOD & DO Values except Total Coliform. Hence the water quality is Class – C Category and it may be utilized as drinking water source after conventional treatment and disinfection.
</td></tr>
<tr><td></td><td>vi. Preventing dumping of waste and scientific waste</td><td>Solid Wealth Processing Center (SWPC) is existing with all infrastructure. At present it is not</td></tr>
</table>

		management including bio-medical wasted, Plastic wastes and decentralizing waste processing, including waste generated from hotels, ashrams, etc	functional due to lack of man power. Efforts are going on to make it functional at the earliest.
	vii.	Ground water regulation	Ground water regulation is being regularly monitored by Ground water Department.
	viii.	Adopting good irrigation practices	Regularly attending the maintenance works for free flow of drain water.
	ix.	Protection and management of flood plain zones(FPZ),	No erosion of flood plain is observed in the reach. The flood banks are being protected as and when found necessary
	x.	Rain water harvesting	-- | --
	xi.	Maintaining minimum environmental flow of river	In the Tungabhadra river, numbers of flood days are very meagre which will be observed in peak monsoon period only.
	xii.	Plantation on both sides of the river	The river bed plantation is proposed on both sides of the river with 10mt width.
	xiii.	Setting up biodiversity parks on flood plains by removing encroachment.	Revenue and Gram Panchayat of Mantralayam are removing the encroachments regularly. Presently No proposal for biodiversity park at flood plains.

2.2 River Kundu:

Progress Report of **River Kundu** on revised action plan

Sl No	Activity to be Monitored	Time Line	Submission of Progress by State/compliance Status
1	Ensure 100% Treatment of Sewage at least in –situ remediation	31.03.2020 The tendering work is under process	With regard to construction of 10 MLD capacity of STP – the work is taken up by the Public Health Department, Remaining capacity of required STP, DPR was prepared and submitted to Govt for sanction and it may be completed by the end of **March - 2021.**
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of Sewage to the STPs must be ensured.	31.03.2020	The tendering work is under process
2	Time line for completing all steps of action plans including completion of setting up STP's and their commissioning	31.03.2021	The tendering work is under process
5	Chief Secretaries may setup appropriate Monitoring mechanism at state level • Specific accountability of Nodal authorities not below the secretary level. • Chief Secretaries may have an accountable person attached in their office for this Purpose. Monitoring at State Level must take place.	22.01.2020 22.01.2020 Fortnightly Commencing 21.12.2019	Under process
6.	Progress Report may be furnished by the states/UTs to • Secretary, Ministry of Jal Shakthi Member Secretary, CPCB	Monthly(preferably before 20th of every month)	Noted
	Progress Report may be comprised of details along with completion timelines on:		
	xiv. Identification of polluting sources including drains	• Most of the drains carrying sewage have been identified.	

		contributing to river pollution and action as per NGT Order on in-situ treatment.	• 8 storm water drains have been identified and 42 wire mesh have also been installed.
	xv.	Status of STPs, I&D and Sewerage Networks Details of Existing Infrastructure, Gap Analysis, Proposed along with completion Time Line.	With regard to construction of 10 MLD capacity of STP – the work was taken up by the Public Health Department Remaining capacity of required STP, DPR was prepared and submitted to Govt for sanction and it may be completed by the end of **March - 2021.**
	xvi.	Status of CETPs Details of Existing CETP and ETP infrastructure, Gap Analysis Proposed along with completion time line, NO of Industries and complying status.	• No CETP is existing in the Jurisdiction of Kurnool. • No industry is discharging, the industrial effluents into river stretch i.e., Kundu river. No non-complying units, illegal units operating in the catchment of polluted river stretch • However, the Nandyal Municipality is discharging the sewage water in to the River Kundu.
	xvii.	Status of Solid waste Management& Details of Processing Facilities Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline	All Dry waste i.e., 30 TPD which is coming from the ULB is send to Material Recovery Facility, Total wet waste generated from the ULB is 60 TPD out of 60 TPD daily 30 TPD is treated by Aerobic composting method i.e., Box composting and vermi composting and Windrow composting.
	xviii.	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	Latest water quality of Kundu River at Udumulapadu, Nandyal is tabulated below.

River: Kundu **Station Name: Udumulapadu, Nandyal** **Year: 2020**

Parameters	Unit of measurement	January	Feb	Mar	April	May	Avg
Biochemical Oxygen Demand	mg/l	2.3	2.5	2.4	1.2	2.8	2.2
Dissolved Oxygen (mg/L)	mg/l	5.3	5.2	4.9	4.7	5.2	5.1
PH		7.2	7.6	7.0	6.3	5.9	6.8
Fecal Coliform (MPN/100ml)	mg/l	200	400	100	200	300	240.0

	<table><tr><td>Total Coliform (MPN/100ml)</td><td>mg/l</td><td>1100</td><td>1600</td><td>900</td><td>600</td><td>900</td><td>1020</td></tr></table> **The average values, the water quality is almost meeting the class-B Category in terms of PH, BOD & DO Values except Total Coliform. Hence the water quality is Class – C Category and it may be utilized as drinking water source after conventional treatment and disinfection.**	
	xix. Preventing dumping of waste and scientific waste management including bio-medical wasted, Plastic wastes and decentralizing waste processing, including waste generated from hotels, ashrams, etc	• Plastic waste quantity in TPD:- a) Generation:-2 MT b) Treatment:-0 c) Send to MRF • Bio medical waste – All the HCFs located in the Kurnool District have tied up with CBMWTF for treatment and disposal of waste (100% achieved).
	11. Ground water regulation	Ground water regulation is being regularly monitored by Ground water Department.
	12. Adopting good irrigation practices	Regularly attending the maintenance works for free flow of drain water.
	13. Protection and management of flood plain zones(FPZ),	No erosion of flood plain is observed in the reach. The flood banks are being protected as and when found necessary
	14. Rain water harvesting	--
	15. Maintaining minimum environmental flow of river	In the Kundu river, numbers of flood days are very meager which will be observed in peak monsoon period only.
	16. Plantation on both sides of the river	The river bed plantation is proposed on both sides of the river with 10mt width.
	17. Setting up biodiversity parks on flood plains by removing encroachment.	Revenue and Municipal Corporation of Nandyal are removing the encroachments regularly. Presently No proposal for biodiversity park at flood plains.

3. Progress report of Priority –V for period January 2020- May 2020 for 3 rivers

- BOD range criteria for Priority V is between 3-6 mg/l

3.1 River Godavari:

Sl.No.	Activity to be monitored	Timeline	Submission of Progress by State/UT-Compliance Status
1	Ensure 100% treatment of sewage at least in-situ remediation	31.03.2020	Total generation sewage in Rajamahendravaram municipal corporation 60 MLD. At present 30 MLD STP is in operation.
	commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31.03.2020	Action is being taken to construct 5 MLD STP at Dowaleswaram under AMRUTH Scheme at a cost of Rs.17.98 Crores and for balance 25 MLD STP the RMC has submitted proposals to GoI and awaiting for sanction under NRCP funds.
2	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	31.03.2021	31.03.2021
5	Chief Secretaries may set up appropriate monitoring mechanism at State level • Specifying accountability of nodal authorities not below the Secretary level • Chief Secretaries may have an accountable person attached in their office for this purpose.	22.01.2020 22.01.2020	Regular monitoring is being done Appointment of Nodal officer is under process.

	• Monitoring at State level must take place	Fortnightly Commencing 21.12.2019	Being monitored regularly
6	Progress report may be furnished by the States/UTs to • Secretary, Ministry of Jai Shakti	Monthly (preferably before 20th of every month)	Noted
6.1	Progress Report may be comprised of details along with completion timelines		

	i. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on insitu treatment.	Three drains are i.e., Nallah Channel, Ava Drain and Mallayyapeta Drains merging into River Godavari in the entire sketch of Rajamahendravaram municipal corporation. All the drains should be properly designed with the interception and diversion plan.
	ii. Status of STPs, I&D and sewerage networks Details of Existing Infrastructure, Gap Analysis, proposed along with completion timeline.	At present 30 MLD STP is in operation. Action is being taken to construct 5 MLD STP at Dowaleswaram under AMRUTH Scheme at a cost of Rs.17.98 Crores and for balance 25 MLD STP proposal submitted to GoI. and awaiting for sanction under NRCP funds. DPR proposals for laying new sewage pipelines and house connections proposals have submitted to the Government for an amount of Rs. 1273.29 Crores.
	iii. Status of CETPs Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status.	There are no CETPs existing in the catchment of River Godavari at Rajamahendravaram. One industry is located in the catchment area of River Godavari i.e., M/s. Andhra Paper Limited. The industry has adopted a unique land (natural sand bed) treatment system for its treated effluent further based on the know-how and designs proved by NEERI.

	iv. Status of Solid Waste Management & Details of Processing Facilities Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline	Total waste generation is about 210 TPD. The existing facility is vermi composting of 5 TPD & MRF Centres – 2 Tonnes. for remaining solid waste, the RMC is proposed waste to energy plant – 200 TPD and Wet Waste Management(Bio-methanization) - 25 TPD.
	v. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;	The water quality is being regularly monitored in the River Godavari, Drains and Ground Water.
	vi. Preventing dumping of waste and scientific waste management including bio-medical wastes, plastic wastes and decentralizing waste processing, including waste generated from hotels, ashrams, etc.	1. For commissioning of integrated waste management facilities work awarded for establishment Bio-methanization plant at Kondagunturu and site clearance is in progress. 2. For C&D waste processing plant work awarded for waste processing unit near quarry junction in 49 division. 3. MRF centres entrusted to NGO Asuradala, Bengalur and centres will be commenced within a week time. 4. There are about 188 no's HCF are operating in Rajamahendravaram city. It is estimated that about 400 Kgs / day Bio-waste is generated and same is disposed to Common Bio-Medical Treatment Facility i.e., M/s. EVB Technologies Ltd., Kanavaram (V), Rajanagaram (M), East Godavar District.
	vii. Ground water regulation.	Ground water regulation is being regularly monitored by Ground water Department.
	viii. Adopting good irrigation practices,	Regularly attending the maintenance works for free flow of drain water.
	ix. Protection and management of Flood Plain Zones (FPZ),	Proposed stone pitching to control the erosion of high margin lands adjoining the River Godavari. Estimates have been submitted to Government and awaited for administrative approval.
	x. Rain water harvesting,	River Godavari is major river receives heavy floods. Hence the rain harvesting ground water recharging schemes cannot be taken up.
	xi. Maintaining minimum environmental flow of river	The River Godavari received major floods from June to October in every year. The average quantum of water let into the Bay of Bengal is

		about 1500 TMC every year. To utilize this flood water Polavaram irrigation Project is proposed across river Godavari. The project is under progress. It is not possible taken up any minor projects/schemes across river Godavari.
	xii. Plantation on both sides of the river.	Adjacent to banks of River Godavari green coverage / parks wherever feasible will be developed by Andhra Pradesh Forest Department & Public Health Department.
	xiii. Setting up biodiversity parks on flood plains by removing encroachment.	Revenue and Municipal Corporation of Rajahmundry are removing the encroachments regularly. No proposal for biodiversity park at flood plains.

3.2 River Nagavali:

SL. No.	Activity to be moitored	Timeline	Submission of Progress by Status/UT Compliance Status
1	Ensure 100% treatment of sewage at least in-situ remidiation	31-03-2020	Under AMRUT programme one 10 MLD capacity STP is being constructed by the PH Engg. Dept. Sheduled to commission by March 2021. After completion we will be able to process at least 60% of the total sewage generated in the ULB.
	commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	31-03-2020	10 MLD capacity STP is being set up under AMRUT beinng executed by PH Engg. Dept.
2	Timeline for completing all steps of action plans including completion of setting up STPs and thier commissioning	31-03-2021	31-03-2021
5	Chief Secretaries may up approprite monitoring mechanisma at State level Specifying accountability of nodal authorities not below the secretaries level. Chief Secretaries may have an accountable persion attached in thie office for this purpose.	22.01.2020 22.01.2020	Regular monitoring is being done Appointment of Nodal officer under process
	Monitoring at State level must take place	Fortnightly Commencing 21.12.2019	Monitored regularly

6	Progress report may be furneshed by the State / Uts to Secretaries, Ministry of Jal Shakti Member Secretaries, CPCB	Monthly (preferably before 20th of every month)	Noted
6.1	Progress report may be comprised of details along with completion timelines on		
	(i) Identification of polluting sources inluding drains contributing to river pollution and action as per NGT order on insitutreatment	There are 24 out fall drains merging into the river Nagavali in the entire strech of ULD. Out os these 9 major drains have been provided with gates in order not to enter solid wastes into the river. Further it is proposed to provide gates for all the merging drain points.	
	(ii) Status of STPs, C&D and sewarageDetails of Existing Infrastructure, Gap Analysis, Proposed along with compltetion timeline	At present there is no infra structure available pertaining to STP, C&D and sewage systems.	
	(iii) Status of CETPs Details of Existing CETP and ETP Infrastructure , Gap Analysis, Proposed along with compltetion timeline,No. of indrustries and complying status	No CETP is existing in the Jurisdiction No industry is discharging, the industrial effluents into river stretch	
	(iv) Status of Solid Waste Management & Dedails of Processing Facilities, Details of Existing, Gap Analysis, Proposed along with compltetion timeline	At present solid waste management is being taking up with all the activities. 1. 100% source collection 2. Source segregation is being done partially 3. Home composting is being done partially 4. Generation of power through bio gas plant 5. Processing wet waste through wind row system partially.	
	(v) Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	Mentioned & uploaded in RRC website https://rrc.ap.gov.in/Views/Home.aspx	
	(vi) Preventing dumping of waste and scientific wastemanagement including bio-medical wastes, plastic waste and decentralizing waste processing Infrastructure,network sprocessing,including waste generated from hotels, ashrams,etc.	At present as per the prevailing situations the entire solid waste being generated except bio medical waste is being dumped in the yard at Thandevalasa. Proposals are being prepared for the process of legacy waste management. Bio medical waste is being collected by third party and is being processed.	
	(vii) Ground water regulation		

		Ground water regulation is being regularly monitored by Ground water Department.
	(viii) Adopting good irrigation practices	Regularly attending the maintenance works for free flow of drain water.
	(ix) Rotection and management of Flood Plain Zones (FPZ)	No erosion of flood plain or flood banks is observed
	(x) Maintaining minimum enviromental flow of river (xii) Plantation on both sides of the river	Numbers of flood days are very meagre which will be observed in peak monsoon period only.
	(xiii) Setting up biodiversity parks on flood plains by removing encroachment	The entire strech of river covered with the ULB is provided with river protection wall. There are no enchroachments.

3.3 River Krishna:

Progress Report of **River Krishna** on revised action plan

SI No	Activity to be Monitored	Time Line	Submission of Progress by State/compliance Status
1	Ensure 100% Treatment of Sewage at least in –situ remediation	31.03.2020	Civil works completed. Erection of electro-mechanical equipments and instrumentation to be taken up at Jakkampudi.
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of Sewage to the STPs must be ensured.	31.03.2020	Total sewage generation is - 150 MLD, treatment – 130 MLD, Gap of 20 MLD. Preparation of DPR for rejuvenation of existing STPs and DP stations to meet effluent parameters by NCPE Infrastructure India Pvt. Ltd., Hyderabad on 02-01-2020 which is under progress.
2	Time line for completing all steps of action plans including completion of setting up STP's and their commissioning	31.03.2021	With regard to construction of 20 MLD capacity of STP at Jakkampudi, it is under construction and mechanical works are under progress. With regard to other STPs the existing technologies were replaced with latest technologies to meet the effluent parameters is also under progress.

5	Chief Secretaries may setup appropriate Monitoring mechanism at state level • Specific accountability of Nodal authorities not below the secretary level. • Chief Secretaries may have an accountable person attached in their office for this Purpose. Monitoring at State Level must take place	22.01.2020 22.01.2020 Fortnightly commencing 21.12.2019	Appointment of Nodal officer under process.
6	Progress Report may be furnished by the states/UTs to • Secretary, Ministry of Jal Shakthi Member Secretary, CPCB	Monthly (preferably before 20th of every month)	Noted
	Progress Report may be comprised of details along with completion timelines on:		
	i. Identification of polluting sources including drains contributing to river pollution and action as per NGT Order on in-situ treatment.	Two works at an estimated costs of Rs.434.60 lakhs & Rs.500 lakhs were taken up to provide 19.70 km length UGD lines in Circle-1 area. Already 9.00 km length completed and the balance work is expected to be completed by September, 2020. Under AMRUT about sewer lines was taken up at a cost of Rs.39.88 Crores and work is nearing completion	
	ii. Status of STPs, I&D and Sewerage Networks Details of Existing Infrastructure, Gap Analysis, Proposed along with completion Time Line.	With regard to construction of 20 MLD capacity of STP at Jakkampudi, it is under construction and mechanical works are under progress. With regard to other STPs the existing technologies were replaced with latest technologies to meet the effluent parameters is also under progress.	
	iii. Status of CETPs Details of Existing CETP and ETP infrastructure, Gap Analysis Proposed along with completion time line, NO of Industries and complying status.	• No CETP is existing in the catchment area of river Krishna from Amaravathi to Hamsaladeevi stretch. • No industry is discharging, the industrial effluents into river stretch i.e., Krishna river. No non-complying units, illegal units operating in the catchment of river Krishna from Amaravathi to Hamsaladeevi stretch.	
	iv. Status of Solid waste Management& Details of Processing Facilities Details of Existing Infrastructure, Gap	VMC has allotted work to M/s. Zigma Global Environment Pvt. Ltd., for reclamation of the old dump yard at Ajith Singh Nagar in 42 acres. Approximately 2.5 lakh MT waste is already processed. Another 45918.21 MT of waste is	

		Analysis, Proposed along with completion timeline	processed from 01-02-2020 to 31-05-2020. Rs.10 crores is sanctioned to develop Park in reclaimed land.
	v.	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	Latest water quality of Krishna River is tabulated below.

NGT Order – O.A. No. 673/2018 – Compliance

S.No	Code	NWMP Station	Parameters	March	April	May	Avg.
1	25	Upstream of river Krishna at Prakasam barrage	PH	7.80	7.71	7.74	7.75
			DO (mg/L)	7.1	7.2	7.2	7.2
			BOD (mg/L)	1.2	1.0	1.6	1.3
			Fecal Coliform (MPN/100ml)	<3	<3	<3	<3
			Total Coliform (MPN/100ml)	120	150	210	160
2	1782	Puligadda aqueduct near Avanigadda (V)	PH	7.96	7.93	7.41	7.77
			DO (mg/L)	4.6	4.8	4.5	4.6
			BOD (mg/L)	2.6	2.2	2.6	2.5
			Fecal Coliform (MPN/100ml)	<3	<3	<3	<3
			Total Coliform (MPN/100ml)	75	120	120	105
3	4375	Pavitra Sangamam at Ibrahimpatnam	PH	7.72	7.67	7.79	7.73
			DO (mg/L)	7.2	7.1	7.2	7.2
			BOD (mg/L)	1.0	0.8	1.6	1.1
			Fecal Coliform (MPN/100ml)	<3	<3	<3	<3
			Total Coliform (MPN/100ml)	75	210	150	145
4	1786	Downstream of Krishna river at Vedadri	PH	7.82	7.29	7.81	7.64
			DO (mg/L)	6.8	6.8	6.9	6.8
			BOD (mg/L)	1.6	1.4	2.2	1.7
			Fecal Coliform (MPN/100ml)	<3	<3	<3	<3
			Total Coliform (MPN/100ml)	120	120	380	207

S.No	Code	NWMP Station	Parameters	March	April	May	Avg.
1	1178	Downstream of Paleru river at Jaggaiahpet	PH	--	7.67	7.67	7.67
			DO (mg/L)	--	7.6	7.4	7.5
			BOD(mg/L)	--	1.2	2.2	1.7
			Fecal Coliform (MPN/100ml)	--	<3	<3	<3
			Total Coliform (MPN/100ml)	--	120	460	290
2	1177	Downstream of Munneru River at Keesara	PH	7.70	--	--	7.70
			DO (mg/L)	6.9	--	--	6.9
			BOD(mg/L)	2.4	--	--	2.4
			Fecal Coliform (MPN/100ml)	<3	--	--	<3
			Total Coliform (MPN/100ml)	210	--	--	210

As seen from the above average values, the water quality is Class – C Category and it may be utilized as drinking water source after conventional treatment and disinfection**.**

	vi. Preventing dumping of waste and scientific waste management including bio-medical wasted, Plastic wastes and decentralizing waste processing, including waste generated from hotels, ashrams, etc	**<u>Plastic waste</u>** Generation of 285 tonnes of dry waste 5 tonnes of Plastic waste processing facility is established at MRF (Material Recovery Facility) Centre in collaboration with UNDP & Coco-Cola Company at Ajith Singh Nagar. Nearly 177 Tons of Dry waste is sent to different processing plants through the Kabadiwalas **<u>Bio medical waste</u>** – All the HCFs located in the Krishna District have tied up with CBMWTF for treatment and disposal of waste (100% achieved).
	18. Ground water regulation	Ground water regulation is being regularly monitored by Ground water Department.
	19. Adopting good irrigation practices	Regularly attending the maintenance works for free flow of drain water.
	20. Protection and management of flood plain zones(FPZ),	No erosion of flood plain or flood banks is observed in the reach from Amaravathi to Hamsala Deevi
	21. Rain water harvesting	--
	22. Maintaining minimum environmental flow of river	Though ecological flows are to be maintained year long from Prakasam Barrage into Sea, it is not

		possible during non monsoon period due to in adequate releases from Upper reservoirs.
	23. Plantation on both sides of the river	The river bed plantation is proposed on both sides of the river with 10mt width.
	24. Setting up biodiversity parks on flood plains by removing encroachment.	The entire stretch of river covered with the ULB is provided with river protection wall. There are no enchroachments.

4. Conclusion and Observations:

4.1 River Tughabhadra (Priority- V)

As per the NWMP data for the years from 2014-19, it was observed that F.Coli levels are less than 500 MPN/100 ml. The BOD levels recorded are less than 3 mg/l except in the month of April & May, 2016 and Aug, 2017. As the BOD and F. Coli levels are within the outdoor bathing standards, during the years 2018 & 2019.

4.2 River Kundu (Priority- V)

As per the NWMP data for the years from 2014-19, it was observed that F.Coli levels are less than 500 MPN/100 ml. The BOD levels recorded are less than 3 mg/l except in the month of Aug, 2017. As the BOD and F. Coli levels are within the outdoor bathing standards, during the years 2018 & 2019.

4.3 River Godavari (Priority –IV)

As per the NWMP data for the years from 2014-19, it was observed that F.Coli levels are less than 500 MPN/100 ml. The BOD levels recorded are less than 3 mg/l except in the month of May, 2016. As the BOD and F. Coli levels are within the outdoor bathing standards, during the years 2017, 2018 & 2019

4.4 River Nagavali (Priority –IV)

As per the NWMP data for the years from 2014-19, it was observed that F.Coli levels are less than 500 MPN/100 ml. The BOD levels recorded are less than 3 mg/l except in the month of June, 2016. As the BOD and F. Coli levels are within the outdoor bathing standards during the years 2017, 2018 & 2019.

4.5 River Krishna (Priority –IV)

As per the NWMP data for the years from 2014-19, it was observed that F.Coli levels are less than 500 MPN/100 ml. The BOD levels are also recorded less than 3 mg/l. As the BOD and F. Coli levels are within the outdoor bathing standards from 2014-19.

ANDHRA PRADESH POLLUTION CONTROL BOARD

Door No. 33-26-14D/2, Near Sunrise Hospital, Kasturibaipet, Vijayawada, Andhra Pradesh.

Minutes of meeting of the "River Rejuvenation Committee" (RRC) constituted by the E F S & T Department, Govt. of Andhra Pradesh, vide G.O. Rt. No.177, dated 05.12.2018 as per the directions of Hon'ble National Green Tribunal Order, dated 20.09.2018 in O. A. No. 673/2018 for the preparation of Action Plans for restoration of Water Quality of identified polluted river stretches in Andhra Pradesh convened on 05.03.2020 at 11.00 am in the premises of Office of A P Pollution Control Board, Vijayawada.

Following Officials attended the Committee meeting:

RRC Committee Members:

1. Sri B.S.S. Prasad, Chairman, A.P. Pollution Control Board, Head Office, Vijayawada.
2. Sri P.V.Chalapathi Rao, IFS, Special Secretary, EFS & T Department, A.P. Secretariat, Velagapudi, Amaravati (Leave of absence).
3. Sri V. Rama Manohara Rao, Special Secretary, Municipal Administration and Urban Development, A.P. Secretariat, Velagapudi, Amaravati.
4. Sri V. Adiseshu, Dy. Director, Representing Industries Department, Vijayawada.

Other Officials:

1. Sri V. Chandraiah, ENC (PH), Head Office, Vijayawada.
2. Sri V. Sridhar, CE/GDS, APWRD, Rajamahendravaram, Andhra Pradesh.
3. Sri P. Sampath Kumar, Managing Director, Swachh Andhra Corporation, Vijayawada.
4. Sri K. Rajendra Prasad, CE, APUFIDC, MA & UD Department, Guntur.
5. Sri P. Durga Prasad, SWM-Office of PR & RD, Head Office, Tadepalli, Guntur.
6. Dr G. Venkateswara Rao, MHO, Srikakulam, Municipal Corporation.
7. Sri K.S. Rama Murthy, SE, Vijayawada Municipal Corporation, Vijayawada.
8. Sri G. Srinivasa Rao, EE/GDS/PW, Water Resource Department, Vijayawada.
9. Sri T. Veerabhadra Rao, Dy. EE/MCR, Municipal Corporation, Rajamahendravaram.
10. Sri P. Purushottama Reddy, Director of Ground Water Department, Vijayawada.
11. Smt P. Symala, Dy. Conservator of Forest, A.P. Forest Department, Vijayawada.
12. Sri K.V.L.N.P. Chowdary, SE, Water Resource Department, Andhra Pradesh, Vijayawada.

At the outset, Sri B.S.S. Prasad, Chairman, A.P. Pollution Control Board, Head Office, Vijayawada convened the meeting and welcomed the Members of the RRC Committee and other officials from different departments and briefly explained about the five identified polluted river stretches namely, Godavari (Rayanpet via Rajahmundry), Krishna (Amaravathi to Hamsaladeevi), Tungabhadra (Mantralayam to Bhavapuram), Nagavali (along Thotapally and Srikakulam) and Kundu (Nandyal to Madduru) in the State of Andhra Pradesh. Our

polluted river stretches are in priority IV & V. Chairman briefed the directions of the Hon'ble National Green Tribunal Orders issued on various environmental issues including the polluted river stretches. Chairman also informed that NGT imposing performance guarantee and environmental compensation on various environmental violations.

The Chairman, APPCB appraised the members and other Officials that CPCB is requesting the information in prescribed format on latest water quality from rivers, tributaries, drains, groundwater characteristics in the catchment, data regarding Municipal Sewage Management, i.e., commissioning of STPs with state of Art Technologies laying of new pipelines and House connections, STP sludge management, Septage management, utilization of treated sewage, maintenance of STP & drains etc. Industrial Effluent Management, Municipal Solid Waste Management, Bio-Medical Waste Management, Hazardous Waste Management, E-Waste management, Plastic Waste Management, adoption of good irrigation practices, Flood plain zone protection and its management, Rain water harvesting/ground water recharge aspects, maintaining E-flows and watershed management, setting up of bio-diversity parks, removal of encroachments to maintain natural flow in drains, greenery or plantation on both sides of the river and capping of contaminated ground water sources-hand pumps, tube wells and alternate water supply arrangements for drinking purposes in GW affected areas so as to submit to the Hon'ble NGT. As per directions of the Hon'ble NGT, in O.A. No. 673/2018, the revised action plans shall be submitted to CPCB for approval after review and approved in the RRC meeting.

The Chairman reviewed the status of revised action plans and requested the MA & UD, concerned Municipal Commissioners and other all stakeholders shall submit the balance required information as per revised action plan formats with budgetary support to submit the same to CPCB, New Delhi. Inturn, the CPCB has to submit the approved action plans to NGT as per the directions of Hon'ble NGT before 30th March 2020.

Sri V. Rama Manohara Rao, Spl. Secretary, Municipal Administration and Urban Development (MA & UD) Department and officials from other departments i.e., Forest, Ground Water, Water Resources, Public Health etc, Municipal Corporations of Vijayawada, Kurnool, Rajamahendravaram, Srikakulam and Parvathipuram Municipalities attended the RRC Meeting and explained the various measures that are being taken up in the Urban Local Bodies (ULBs) and other areas to manage solid waste, domestic sewage and other wastes in their cities and towns and other areas to protect the river stretches free from pollution from all sources.

During the meeting, the following decisions have been taken by the Committee:

1. Stakeholders have to submit river-wise and town-wise progress reports on revised action plans. The information should include targets with budgetary support, which are quantifiable that can be monitored. Concerned RO's of APPCB to follow up with all the Stakeholder Departments.

   Action: MA&UD and concerned Municipal Commissioners & Concerned RO's of APPCB

2. Dedicated cell to be created by each stakeholder department / organization, especially, Municipal Corporations / Municipalities to look into the implementation of the actions at regular intervals.

Action: MA&UD and concerned Municipal Corporations / Municipalities

3. Nomination of Nodal Officers at District / Municipal Corporation / Municipality level for better coordination with stakeholders, particularly APPCB for effective implementation of action plans.

Action: MA & UD and concerned Municipal Commissioners

4. Standardization of protocols for the preparation of bid documents including O & M operations, DPRs for the establishment of STPs, waste energy plants, etc. in the ULBs. The protocol to be sent to APPCB to forward the same to CPCB.

Action: MA&UD and APFIUDC

5. Stakeholders, particularly the ULBs have to prepare action plans with proper budget estimates and approvals for execution of action plans.

Action: MA&UD and concerned Municipal Commissioners

6. District Magistrates and Collectors to convene meetings with the stakeholders at regular intervals to review the progress of the implementation of action plans.

Action: All District Collectors and Regional Officers of APPCB.

7. Execution of action plans to bring down the BOD & Fecal Coliform levels so as to meet the water quality of the polluted river stretches to at least bathing standards as directed by the Central Pollution Control Board.

Action: MA&UD and concerned Municipal Corporations / Municipalities & Concerned RO's of APPCB

8. Greenery or plantation on both side of the river, Area covered under plantation along the river stretch, setting up of bio-diversity parks.

Action: Forest Department

9. Capping of contaminated Ground water sources – Hand pumps, Tube wells and alternate water supply arrangements for drinking purpose in GW affected areas

Action: RWS & S and Public Health Department

10. Bioremediation of Drains, Restoration of natural storm water drains for ensuring natural flow, adoption of Good Irrigation Practices, Flood Plain Zone Protection and its management, Rain water harvesting/ground water recharge aspects, Maintaining E-flows and watershed management, Removal of encroachments to maintain natural flow in drains.

Action: Water Resource & Irrigation Department

MA & UD and concerned Municipal Commissioners, Swachh Andhra Corporation, Water Resources Department, Ground Water, Public Health and Forest Departments RWS & S Departments are requested to take the lead in taking this task forward and provide leadership taking along all stakeholder departments including APPCB and bring about a perceptible change in the water quality of polluted river stretches. The concerned RO's of APPCB shall coordinate with municipal authorities and other departments and submit the information immediately so as to submit approved revised action plans in RRC meeting to CPCB within the stipulate time.

The revised action plans so far prepared for five polluted river stretches based on the information furnished by the concerned departments to are submitted to the CPCB as per the directions. The CPCB is requested to approve the revised action plans for the five polluted river stretches in Andhra Pradesh.

Sri V. Adiseshu,
Dy. Director,
O/o Commissioner Industries Department

Sri V. Rama Manohara Rao,
Special Secretary,
MA & UD, A.P. Secretariat, Amaravati.

L.A
Sri P.V. Chalapathi Rao, IFS,
Special Secretary,
EFS & T Department.

Sri B.S.S. Prasad,
Chairman,
A.P. Pollution Control Board,
Vijayawada.

ANDHRA PRADESH POLLUTION CONTROL BOARD

Door No. 33-26-14D/2, Near Sunrise Hospital, Kasturibaipet, Vijayawada, Andhra Pradesh.

Minutes of meeting of the "River Rejuvenation Committee" (RRC) constituted by the E F S & T Department, Govt. of Andhra Pradesh, vide G.O. Rt. No.177, dated 05.12.2018 as per the directions of Hon'ble National Green Tribunal Order, dated 20.09.2018 in O. A. No. 673/2018 for the preparation of Action Plans for restoration of Water Quality of identified polluted river stretches in Andhra Pradesh convened on 26.11.2019 at 11.00 am in the premises of Office of A P Pollution Control Board, Vijayawada.

Following Officials attended the Committee meeting:

1. Sri P.V.Chalapathi Rao, IFS, Special Secretary, EFS & T Department, A.P. Secretariat, Velagapudi, Amaravati.
2. Sri A.Ramchand, Chief Environmental Engineer, APPCB, Head Office, Vijayawada.
3. Sri P.Poornachandra Rao, Joint Director, Representing Municipal Administration Department, Guntur.
4. Sri V. Adiseshu, Dy. Director, Representing Industries Department, Vijayawada.
5. Sri B.Harinath Reddy, Asst. Director, Representing Industries Department, Vijayawada.
6. Dr. K.Madhusudhana Prasad, I/C CMHO, Representing Vijayawada Municipal Corporation.
7. Dr. B.Sridevi, MHO, Representing Guntur Municipal Corporation.
8. Sri V.Chandra Sekhar, Executive Engineer, Representing Vijayawada Municipal Corporation.
9. Sri P.Venkata Rao, Executive Engineer, Representing Greater Visakhapatnam Municipal Corporation (GVMC).
10. Sri. M.Pavan Kumar, Asst. Engineer, Representing, Guntur Municipal Corporation.
11. Sri J.Govardhana Rao, Town Planning Section, Representing Municipal Administration, Vijayawada.

At the outset, Sri A. Ramchand, Chief Environmental Engineer, on behalf of the Member Secretary Convener, convened the meeting and welcomed the Members of the RRC Committee and briefly explained about the five identified polluted river stretches namely, Godavari (Rayanpet via Rajahmundry to Narsapur), Krishna (Amaravathi to Hamsaladeevi), Tungabhadra (Mantralayam to Bhavapuram), Nagavali (along Thotaplly and Srikakulam) and Kundu (Nandyal to Madduru) in the State of Andhra Pradesh. Chief Environmental Engineer briefed the directions of the Hon'ble National Green Tribunal Orders issued on various environmental issues including on the polluted river stretches.

The Chief Environmental Engineer, APPCB appraised the members and other Officials that CPCB is requesting the information in prescribed format on latest water quality from rivers, tributaries, drains and groundwater characteristics in the catchment data regarding Municipal Sewage Management, Industrial Effluent Management, Municipal Solid Waste Management, Bio-Medical Waste Management, Hazardous Waste Management, E-Waste, Plastic Waste Management, Adoption of good irrigation practices, Flood plain zone protection and its management, Rain water harvesting/ground water recharge aspects, Maintaining E-flows and watershed management, Setting up of bio-diversity parks, Removal of encroachments to maintain natural flow in drains, Greenery or plantation on both sides of the river and capping of contaminated ground water sources-hand pumps, tube wells and alternate water supply arrangements for drinking purposes in GW affected areas so as to submit the Hon'ble NGT. As directed by the Hon'ble NGT, the Government of Andhra Pradesh has to submit under O.A. No. 606/2019 the progress report on quarterly basis on the above mentioned subjects. 1st & 2nd such report already furnished on 30.07.2019 & 30.10.2019.

The Chief Environmental Engineer also requested the MA & UD, concerned Municipal Commissioners and all stakeholders to submit the status in new revised prescribed format Circulated to them.

Sri P.Poornachandra Rao, Joint Director, representing Municipal Administration Department and various officials of Municipal Corporations of Vijayawada, Visakhapatnam and Guntur attended the RRC Meeting have explained various activities that are being taken up to Urban Local Bodies (ULBs) to manage solid waste, domestic sewage and other wastes in their cities and towns.

During the meeting, the following decisions have been taken by the Committee:

1. Stakeholders have to submit river-wise and town-wise progress report on the implementation of action plans to APPCB by 15.12.2019 in the CPCB format circulated to them, so as to prepare a consolidated report for submission to Hon'ble NGT. It should include targets, which are quantifiable that can be monitored. Respective RO's of APPCB to follow up with all the Stakeholder Departments.

   Action: MA&UD and concerned Municipal Commissioners & Concerned RO's of APPCB

2. Dedicated cell to be created by each stakeholder department / organization, especially, Municipal Corporations / Municipalities to look into the implementation of the actions at regular intervals.

   Action: MA&UD and concerned Municipal Corporations / Municipalities

3. Nomination of Nodal Officers at District / Municipal Corporation / Municipality level for better coordination with stakeholders, particularly APPCB for effective implementation of action plans.

Action: MA & UD and concerned Municipal Commissioners

4. Standardization of protocols for the preparation of bid documents including O & M operations, DPRs for the establishment of STPs, waste energy plants, etc. in the ULBs. The protocol to be sent to APPCB for forward the same to CPCB.

Action: MA&UD and APFIUDC

5. Stakeholders, particularly the ULBs to prepare action plans with proper budget estimates and approvals for execution of action plans.

Action: MA&UD and concerned Municipal Commissioners

6. District Magistrates and Collectors to convene meetings with the stakeholders at regular intervals to review the progress of the implementation of action plans.

Action: All District Collectors and Regional Officers of APPCB.

7. Execution of action plans to bring down the BOD & Fecal Coliform levels so as to meet the water quality of the polluted river stretches to at least bathing standards within two years time w.e.f. 01.04.2019 as directed by the Central Pollution Control Board.

Action: MA&UD and concerned Municipal Corporations / Municipalities & Concerned RO's of APPCB

8. Budget at Municipality may be earmarked to achieve the targets.

Action: MA&UD and concerned Municipal Corporations / Municipalities

9. Execution of performance bank guarantee of Rs. 10.00 Crs shall be submitted to CPCB as per the directions of the Hon'ble NGT. APPCB addressed letters to MA&UD. Government of Andhra Pradesh has submitted in the 1st quarterly report to NGT, on 29.07.2019 informed that execution of performance bank guarantee is in the process in compliance of the Hon'ble NGT Order dated. 08.04.2019 in O.A. No. 673 of 2018.

Action: MA&UD

MA & UD and concerned Municipal Commissioners are requested to take the lead in taking this task forward and provide leadership taking along all stakeholder departments including APPCB and bring about a perceptible change in the water quality of polluted river stretches. The concerned RO's of APPCB shall coordinate with municipal authorities and other departments and submit the information on or before 15.12.2019 so as to submit consolidated revised action plans to CPCB.

Sri V. Adiseshu,
Dy. Director,
O/o Commissioner Industries Department

Sri A. Ramchand,
Chief Environmental Engineer,
O/o Member Secretary,
A P Pollution Control Board

Sri P. Poornachandra Rao,
Joint Director, O/o Commissioner,
Municipal Administration, Vijayawada.

Sri P.V. Chalapathi Rao, IFS,
Special Secretary,
EFS & T Department

ANDHRA PRADESH POLLUTION CONTROL BOARD
D. No. 33-26-14D/2, Near Sunrise Hospital, Chalamalavari street, Kasturibai pet, Vijayawada - 520010.

Minutes of meeting of the "River Rejuvenation Committee" constituted by the E F S & T Department, Govt. of Andhra Pradesh, vide G.O. Rt. No.177, dated 05.12.2018 as per the directions of Hon'ble National Green Tribunal Order, dated 20.09.2018 in O. A. No. 673/2018 for the preparation of Action Plans for restoration of Water Quality of identified polluted river stretches in Andhra Pradesh convened on 11.07.2019 at 10.00 am in the premises of Office of A P Pollution Control Board, Vijayawada.

Following Officials attended the Committee meeting:

1. Sri Siddharth Jain, IAS, Commissioner, Industries Department – Chairman, AQMC.
2. Sri Vivek Yadav, IAS, Member Secretary, A P Pollution Control Board – Member Convener.
3. Sri Sumeeth Kumar Gandhi, IAS, Commissioner, Municipal Corporation, Rajahmundry – Attended through video conference.
4. Sri R. Sreeramulu Naidu, Commissioner, Municipality, Srikakulam – Attended through video conference.
5. Sri K. Narayana Murthy, Executive Engineer, I/C – Representative, Vijayawada Municipal Corporation.
6. Sri M. Venkateswarlu, Commissioner, O/o Director, Municipal Administration, Vijayawada – Representing MA&UD.

At the outset, Sri Vivek Yadav, Member Secretary & Convenor of the Committee welcomed the Chairman & other Members of the Committee and briefly explained about the five identified polluted river stretches namely, Godavari (Rayanpet to Rajahmundry), Krishna (Amaravathi to Hamsaladeevi), Tungabhadra (Mantralayam to Bhavapuram), Nagavali (along Thotaplly) and Kundu (Nandyal to Madduru) in the State of Andhra Pradesh. Member Secretary also detailed the directions of the Hon'ble National Green Tribunal Orders issued on various environmental issues including in the polluted river stretches.

Sri Siddhartha Jain, Commissioner, Industries Department chaired the meeting. The Chairman has taken note of the absence of the member of the Committee, i.e. Special Secretary, EFS&T Department.

Member Secretary, APPCB informed the members and other Officials that in the Hon'ble National Green Tribunal Order in O. A. No. 606/2018, the Chief Secretary, Government of Andhra Pradesh along with the Special Chief Secretary, MA&UD, Chairman,

APPCB, Principal Secretary, EFS&T Dept. have appeared before the Hon'ble NGT, New Delhi on 26.04.2019 to appraise of implementation status of action plans submitted in respect of various orders on solid waste management, plastic waste management, bio-medical waste, polluted river stretches, air quality management in non-attainment cities, industrial clusters, ETP, CETP and STPs. As directed by the Hon'ble NGT, the Government of Andhra Pradesh has to submit the progress report on quarterly basis on the above mentioned subjects. First such report has to be furnished by 30.07.2019.

The Municipal Commissioners, attended through video conference have explained various activities that are being taken up to manage solid waste and domestic sewage in their cities and towns.

During the meeting, the following decisions have been taken by the Committee:

1. Stakeholders have to submit river-wise and town-wise progress report on the implementation of action plans to APPCB by 15.07.2019 so as to prepare a consolidated report for submission to Hon'ble NGT by 30.07.2019. It should include targets, which are quantifiable and can be monitored. In the next meeting, the Committee will be reviewing these monitorable targets.

Action: MA&UD and Municipal Commissioners

2. Dedicated cell may be created by each stakeholder department / organization, especially, Municipal Corporations / Municipalities to look into the ongoing activities and implementation of the actions at regular intervals.

Action: MA&UD, APPCB and Municipal Corporations / Municipalities

3. Nomination of Nodal Officers at District / Municipal Corporation / Municipality level for better coordination with stakeholders, particularly APPCB for effective implementation of

   action plans.

Action: Municipal Commissioners

4. Standardization of protocols for the preparation of bid documents including O&M operations, DPRs for the establishment of STPs, waste energy plants, etc. in the ULBs.

Action: MA&UD and APFIUDC

5. Stakeholders, particularly the ULBs to prepare action plans with proper budget estimates and approvals either from Central Government, State Government or its own resources for execution of action plans.

Action: MA&UD

6. Collectors to convene meetings with the stakeholders at regular intervals to review the progress of the implementation of action plans.

Action: All District Collectors

7. Execution of action plans to bring down the BOD & Fecal Coliform levels so as to meet the water quality of the polluted river stretches to at least bathing standards within two years time w.e.f. 01.04.2019 as directed by the Central Pollution Control Board.

Action: MA&UD, APPCB, Municipal Corporations / Municipalities

8. Budget at Municipality may be earmarked to achieve the targets.

Action: MA&UD and Municipal Corporations / Municipalities

Municipal Commissioners are requested to take the lead in taking this task forward and provide leadership taking along all stakeholder departments including APPCB and bring about a perceptible change in the water quality of polluted river stretches.

SIDDHARTH JAIN
COMMISSIONER

Signature valid

Digitally signed by SIDDHARTH JAIN FOUZDAR
Date: 2019.07.12 14:09:47 IST
Reason: Approved

ANDHRA PRADESH POLLUTION CONTROL BOARD

D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
Phone. No.0866-2436217, Website : www.appcb.ap.nic.in

Minutes of the meeting of the "River Rejuvenation Committee" constituted by the E F S & T Department, Govt. of Andhra Pradesh, vide G.O. Rt. No.177, dated 05.12.2018 as per the directions of Hon'ble National Green Tribunal Order dated 20.09.2018 in O A No. 673/2018 convened by the Principal Secretary, EFS&T Department for the review of progress of implementation of Action Plans for restoration of Water Quality of identified polluted river stretches in Andhra Pradesh on 03.04.2019 at 11.30 am in the Conference hall at 04th Block, A P Secretariat, Velagapudi, Amaravathi.

Following Officials attended the Committee meeting:

1. Sri G. Anantha Ramu, IAS, Principal Secretary, EFS&T Department.
2. Sri Siddharth Jain, IAS, Commissioner, Industries Department – Chairman, RRC.
3. Sri A. Janardhan Babu, Special Secretary, EFS&T Department – Member, RRC.
4. Sri B. S. S. Prasad, Chairman, Andhra Pradesh Pollution Control Board.
5. Sri P. Poornachandra Rao, Joint Director, representing MA&UD – member, RRC.

The Principal Secretary, EFS&T Department, Govt. of Andhra Pradesh chaired the meeting. He welcomed the River Rejuvenation Committee (RRC) Members attended and briefed the need for convening the meeting that the Chief Secretary, Govt. of Andhra Pradesh will be appearing personally before the Hon'ble NGT, Delhi on 26.04.2019 for presenting the status reports on implementation of directions issued under various orders including on polluted river stretches, and a progress report in this regard shall be prepared and submitted.

Chairman, APPCB briefed the members about the Hon'ble National Green Tribunal directions in respect of polluted river stretches and the actions initiated. He informed the members that APPCB has submitted the RRC approved action plans to Hon'ble NGT on 17.01.2019 and Central Pollution Control Board, Delhi on 25.01.2019 for approval. He also informed that these action plans have been communicated to the concerned stakeholders on 31.01.2019 and 01.02.2019 for implementation.

Polluted river stretches of Andhra Pradesh being fallen under priority IV & V, does not require approval of action plans by CPCB, as per the information received from CPCB. Hence, the concerned stakeholders have to implement the action plans with time and spirit.

The action plan points to be implemented have been displayed to the Members through power point presentation department wise. During the discussions, the Committee has taken the following decisions:

1. Requested the stakeholders to submit the progress reports on the implementation of the action plans, river wise on or before 15.04.2019, positively.

Action: All stakeholders.

2. Dedicated cell may be created by the each stakeholder department / organization to look into the ongoing activities and implementation of the action plans at regular intervals.

Action: All stakeholders.

3. MA & UD to submit river and town specific action plans for the financial year 2019-20 with budget allocation having statutory binding. Municipal Commissioners to review the progress of implementation of the action plans once in 15 days.

Action: MA&UD.

4. To invite the Municipal Commissioners along with Engineer-in-Chief / Superintendent of the concerned Urban Local Bodies, Srikakulam, Parvathipuram, Rajamahendravaram, Vijayawada, Tadepalli, Nandyala, Kurnool and Mantralayam for the next RRC meetings with progress reports on the implementation of the action plans.

Action: APPCB.

5. To arrange a meeting of the concerned Municipal Commissioners with the Chairman, RRC after 11.04.2019 for review of progress of the implementation of the action plans.

Action: APPCB.

The meeting ended with vote of thanks by the Chairman, APPCB.

Sri A. Janardhan Babu,
Special Secretary, EFS&T Dept.

Sri B.S.S. Prasad, IFS,
Chairman, APPCB.

Sri Siddharth Jain, IAS,
Commissioner, Industries.

Sri G. Anantha Ramu, IAS,
Principal Secretary, EFS&T Dept.

ANDHRA PRADESH POLLUTION CONTROL BOARD

Door No. 33-26-14D/2, Near Sunrise Hospital, Kasturibaipet, Vijayawada, Andhra Pradesh.

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The following Members have attended the Committee meeting:

1. Sri Siddartha Jain, IAS, Commissioner, Industries Department.
2. Sri A. Janardhan Babu, Special Secretary, EFS&T Department.
3. Sri Vivek Yadav, IAS, Member Secretary, A P Pollution Control Board.

At the outset, Sri Vivek Yadav, Member Secretary & Convenor of the Committee welcomed the Chairman & other Members of the Committee and briefly explained about the five identified polluted river stretches namely, Godavari (Rayanpet to Rajahmundry), Krishna (Amaravathi to Hamsaladeevi), Tungabhadra (Mantralayam to Bhavapuram), Nagavali (along Thotaplly) and Kundu (Nandyal to Madduru) in the State of Andhra Pradesh. Member Secretary also detailed the salient features of the directions of the Order of Hon'ble National Green Tribunal, dated 20.09.2018 through power point presentation to the Committee Members.

Sri Siddartha Jain, Commissioner of Industries Department chaired the meeting. The Chairman has taken note of the absence of member of the Committee, i.e. Commissioner and Director, MA & UD. Member Secretary, APPCB is asked to remind and ensure that an officer not below the rank of Additional Director from Directorate, MA & UD attend the Committee meeting. The draft Action Plans prepared by A P Pollution Control Board (APPCB) for the restoration of water quality of the five identified polluted river stretches in Andhra Pradesh have been circulated to the Members for their inputs and suggestions concerning to their Departments.

Chairman, during the meeting stressed the need to adopt best national and international practices to improve water quality in the polluted river stretches, networking of monitoring stations with involvement of local authorities, identification of top five action points by all stake holder departments, development of green performance index, preparation of green budget and allocation of funds for implementation of action plan, nomination of nodal officers by stake holder departments, designating one senior engineer as environmental engineer by municipal corporations to oversee the implementation of action plan and active involvement of public.

The Committee, after detailed discussion on the APPCB proposed draft Action Plans has taken the following decisions:

1. The Committee has finalized and approved the Action Plans with the modifications as suggested by the Committee Members for the restoration of water quality of five identified polluted river stretches in the State of Andhra Pradesh. The Committee noted that the action plans are dynamic in nature and periodical refinement. The Committee requested EFS & T Department to immediately submit finalised action plans to Central Pollution Control Board for approval.

2. The Committee requested the EFS & T Department to convene meeting with Secretaries of stakeholder departments under the Chairmanship of Chief Secretary to issue necessary instructions and orders for effective and timely implementation of the action plans.

3. The Committee requested the EFS & T Department to amend the constitution of the committee by permitting members to depute senior officer of the department for committee meetings and also associating commissioners of polluted river stretches to attend the Committee meetings on rotation basis. The Committee also requested the EFS & T Department to constitute Technical Sub Committee under the Chairmanship of the Member Secretary, APPCB to assist the River Rejuvenation Committee.

4. To include the Irrigation Department and Industries Department Officials as a special invitees in the "Special Environment Surveillance Taskforce" that will be constituted for ensuring no illegal mining in the river beds of the polluted river stretches. This Taskforce shall meet once in three months for review of the progress and implementation of the Action Plan points.

5. Municipal Corporations and Municipalities lying on the polluted river stretches shall name one senior engineer of the corporation as an Environmental Engineer to oversee the implementation of the action plan.

6. APPCB shall take initiation for study of best international practices adopted by fast developing countries like China, Brazil and South Africa in tackling urban water pollution.

7. All Stakeholder Departments, Agencies and Municipal Corporations shall allocate separate green budget for effective and timely implementation of the action plans.

8. APPCB shall develop Green Performance Index to compare the performance of Urban Local Bodies in the green front.

9. All stakeholder departments shall take measures for public awareness and active involvement of public in the implementation of action plans.

10. Characterization and quantification of the industrial effluents and the domestic sewage joining the rivers so as to derive suitable Action Plans by the concerned to control river water pollution.

11. All Stakeholder departments shall identify and nominate one senior Officer from their department as Nodal Officer for coordination and effective implementation of Action Plans.

12. To identify the pollution potential sources within the vicinity of the polluted river stretches that may pose threat to the water quality of the rivers in the future days to come and to include in the Action Plans to be submitted to the CPCB and Hon'ble NGT.

A. Janardhan Babu,
Special Secretary,
EFS&T Dept.

Vivek Yadav, IAS,
Member Secretary,
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Siddartha Jain, IAS,
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SIDDHARTH JAIN

COMMISSIONER

Signature valid

Digitally signed by SIDDHARTH JAIN FOUZDAR
Date: 2019.01.18 [illegible]:29:55 IST
Reason: Approved