HEAD OFFICE
CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

PARYAWAS BHAWAN, SECTOR- 19
NAVA RAIPUR ATAL NAGAR, RAIPUR (C.G.)
Email - hocecb@gmail.com

No.6471 / TECH / H.O. / CECB / 2020 Raipur, Dated:21/10/2020

To,

Secretary,
Government of India,
Ministry of Jal Shakti,
Department of Water Resources,
River Development & Ganga Rejuvenation,
Shram Shakti Bhawan, Rafi Marg,
New Delhi - 110 001

Sub. : - Submission of information by the states in the matter of Hon'ble NGT O.A. No. 673/2018.

Ref. : - 1. Minuts of the 1st meeting of Central Monitoring Committee held on 08/01/2020.

2. Your letter no. D.O. No.Legal/OA/673/2018/NMCG/2019 Dated 22/01/2020.

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With reference to your letter on the above subject, the compliance report of action plan prepared in the matter of Hon'ble NGT O.A. No. 673/2018 in prescribed format for the month of September, 2020 is enclosed with this letter for your information and necessary action please.

Enclosed :- As above.

O/C

Member Secretary
Chhattisgarh Environment Conservation Board
Nava Raipur Atal Nagar, Raipur (C.G.)

Endt. No.6472/ TECH / H.O. / CECB / 2020 Raipur, Dated:21/10/2020

Copy to :-

1. Special Secretary (Independent Charge), Govt. of Chhattisgarh, Housing and Environment Department, Mantralaya, Mahanadi Bhawan, Nava Raipur Atal Nagar for information please.

2. Member Secretary, Central Pollution Control Board, 'Parivesh Bhawan' C.B.D.Cum-Office Complex, East Arjun Nagar, Shahdara, Delhi for information please.

O/C

Member Secretary
Chhattisgarh Environment Conservation Board
Nava Raipur Atal Nagar, Raipur (C.G.)

Monthly Progress Report by State of Chhattisgarh for the month of September, 2020
(In the matter of Hon'ble NGT OA No. 673/2018 order dated 06/12/2019)

S. No.	Activity to be monitored	Timelines	Submission of Progress by State of Chhattisgarh Compliance Status
1.	Ensure 100% treatment of sewage at-least in-situ remediation	31/03/2020	All the households in the urban local bodies situated in the polluted river stretches have onsite sanitation system (OSS) either twin pits or septic tanks.
	Commencement of setting up of STPs and connecting all the drains and other sources of generation of sewage to the STPs must be ensured	30/06/2021	Installation of STPs has been commenced and connecting all the drains and other sources of generation of sewage to the STPs will be ensured after installation of STPs.
2.	Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning	30/06/2021	Will be complied.
3.	Chief Secretaries may set up appropriate monitoring mechanism at State level :- Specifying accountability of nodal authorities not below the secretary level	22/01/2020	Chief Secretary takes review meeting of the secretaries of the concerned department from time to time. The following Secretaries are responsible for the compliance of order dated 06/12/2019 in the matter of Hon'ble NGT 673/2018. 1. Secretary, Agriculture Department 2. Secretary, Urban Administration and Development 3. Secretary, Department of Forest 4. Secretary, Department of Water Resource 5. Secretary, Department of Housing and Environment 6. Secretary, Department of Home (Transport) 7. Member Secretary, Chhattisgarh Environment Conservation Board.

	Chief Secretaries may have an accountable person attached in their office for this purpose	22/01/2020	Chief Secretary has formed Implementation Cell in their office vide order dated 25/05/2019 for implementation of orders and action plans prepared.
	Monitoring at state level must take place	Fortnightly Commencing 21/12/2019	Monitoring of progress is being done regularly at the State level by the Chief Secretary, State of Chhattisgarh.
4.	Progress report may be furnished by the Status/UTs to :- • Secretary, Ministry of Jal Shakti • Member Secretary, CPCB	Monthly (Preferably before 20th of every month)	Complied.
4.1	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	Continuous	• Industries situated in the polluted river stretches maintain zero discharge outside the industrial premises. Industries are reusing their treated effluent within their plant premises either in process or in plantation and other uses. Details regarding management of effluent generated from the industries situated in the polluted river stretches are as per **Annexure - 1**. • Major drains of the ULBs in the polluted river stretches have been cleaned before monsoon and screens were installed at strategic locations to check the solid waste entering the rivers regularly.
(ii)	**Status of STPs, I&D and sewerage networks** Details of Existing Infrastructure, Gap Analysis, Proposed along with completion timeline	30/06/2021	Details of status of installation of STPs are enclosed as **Annexure – A**. All the cities under polluted river stretches are under the 100% septage management scheme. Hence no future plans for Sewage network and house connections. **FSTP DETAILS** **ULB** | **FSTP Location with Model** | **Current FSTP Capacity (KLD)**

<table>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Raipur</td><td>Co-treatment with NRDA STP</td><td>276</td></tr>
<tr><td>Dhamtari</td><td>Danitola Trenching Ground Dhamtari</td><td>08</td></tr>
<tr><td>Raigarh</td><td>Low-Cost gravity Phytorid treatment plant at Transport Nagar, Raigarh</td><td>80</td></tr>
<tr><td>Korba</td><td>Co-treatment with Balco STP and 08 KLD Low-Cost gravity Phytorid treatment plant.</td><td>115</td></tr>
<tr><td>Kanker</td><td>Low-Cost gravity Phytorid treatment plant at Albelapara, Kanker</td><td>08</td></tr>
<tr><td>Navapara</td><td>Low-Cost gravity Phytorid treatment plant near Tarrigram, Gobra Navapara</td><td>05</td></tr>
<tr><td>Rajim</td><td>Low-Cost gravity Phytorid treatment plant at Ward No. 01, Rajim</td><td>03</td></tr>
<tr><td>Simga</td><td>Low-Cost gravity Phytorid treatment plant at Ward No. 10, Ekta Nagar, Simga</td><td>05</td></tr>
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Details of Septage management in the ULBs covering catchment of polluted river stretches are given in Annexure – 2.
</td></tr>
<tr><td>(iii)</td><td><u>Status of CETPs</u>
Details of Existing CETP and ETP Infrastructure, Gap Analysis, Proposed along with completion timeline, No. of industries and complying status</td><td>Continuous</td><td>• Presently there is no CETP in the State of Chhattisgarh.
• Industries situated in the polluted river stretches are up-grading their existing captive ETPs and constructing new ETPs as and when required.
• CECB is regularly indentifying the non-complying as well as illegal units and regularly taking action against the</td></tr>
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			industries which are illegal and non-complying. • Water polluting industries near the polluted river stretches have installed the OCEMS and also they have connectivity with CECB. • Presently there are 1008 no. of industries which require ETP. Out of which 899 no. of industries have installed ETPs. Remaining 109 no. of industries which does not have ETPs have been issued closure direction by CECB.
(iv)	**Status of Solid Waste Management & Details of processing Facilities** Details of Existing Infrastructure, Gap Analysis Proposed along with completion timeline	Continuous	Under Mission Clean City (MCC), 166 ULBs in the State are collecting segregated waste separately and transport the same on daily basis in compartmentalized tricycles and mini tippers. The dry fraction is being segregated at SLRM centres into various usable fractions and sold to waste recyclers. The wet fraction is being converted in compost. Details regarding generation of solid waste in the catchment of polluted river stretches are as per **Annexure-3.** Additionally, Urban local bodies are levying fine in case of found the disposal of municipal solid waste and plastic waste in river as well as in municipal drains.
(v)	Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	Continuous	Latest water quality of polluted river stretches is enclosed as **Annexure – 4**.
(vi)	Preventing dumping of waste and scientific waste management including bio-medical wastes, plastic wastes and decentralizing waste processing, including waste generated from	Continuous	• Urban local bodies are regularly registering the cases and collecting the fines in case disposal of municipal solid waste and plastic waste in river as well as in municipal drains. Details of case registered and Amount of fines collected are as follows:-

	hotels, ashrams, etc		**Details of case registered and Amount of fines collected for dumping of waste** **Name of ULB** / **No. of cases registered** / **Amount of fines collected (INR)** Raipur: 1093 / 3,13,040 Dhamtari: 215 / 70,900 Raigarh: 2239 / 4,05,130 Korba: 182 / 2,37,900 Kanker: 326 / 89,505 Gobra Navapara: 82 / 82,320 Rajim: 41 / 15,290 Simga: 06 / 1,400 **Total: 4184 / 12,15,485** **Status of Solid Waste Management** • Establishment of Integrated Solid Waste Processing facility with Sanitary Landfill is completed in Raipur and CECB has issued Consent to Operate on 11/06/2020 for the same and plant is commissioned on 24/06/2020. Under Mission Clean City Mission, other ULBs are collecting segregated waste separately and transport the same on daily basis in compartmentalized tricycles and mini tippers. The dry fraction is being segregated at SLRM centres into various usable fractions and sold to waste recyclers. The wet fraction is being converted in compost. • For Bio-mining and capping of existing dump sites, the DPRs based on Bio mining technology have been prepared for the remediation of existing dumpsites at Raipur, Korba, Raigarh, Dhamtari. However, dumpsites in other ULBs have been remediated. The leachate management is also included in the DPRs prepared for the remediation of existing dumpsite. **Status of Bio-Medical Waste Management** • At present, HCFs at Bastar and

			Ambikapur, (Sarguja Division) dispose off their wastes through deep burial within in premises. However, process of setting-up CBWTFs at Kondagaon (Bastar Division) and at Ambikapur (Sarguja Division) in progress. Land allocation has already been made to the operators of these facilities. EC has been granted to selected bidder at Kondagaon for Bastar Division. Further, TOR has been issued to CBWTF for Ambikapur (Kondagaon) by SEAC, Chhattisgarh for the grant of Environmental Clearance. RFP has also been issued for installation of incinerator facility at CBWTF at Korba and Raigarh by CECB on 18/07/2019. After technical evaluation of the bids as per RPF, financial bids of selected bidders have been sent to Divisional Monitoring Committee, Bilaspur for further action on 01/10/2019. The Divisional Monitoring Committee, Bilaspur has finalized dated 25/11/2019, VM Technosoft Pvt. Ltd. Has been awarded the work of establishment of CBWTF at Korba and Raigarh based on incineration.
(vii)	Ground water regulation	Work is in progress	State Government has adopted a unique scheme Narwa, Garuwa, Ghuruwa and Badi in which under the Narwa component Water Resource Department has proposed various structures on small and big nallahs of all the 146 blocks of the state for recharging ground water.
(viii)	Adopting good irrigation practices	Continue process. No time target can be fixed. Work is done as per allocation.	• Water Resource Department is encouraging practices for optimum utilization of irrigation water and adopting micro irrigation schemes which results in more crop per drop as per available resources. • An action plan has been prepared with the help of Agricultural Scientists. The use of water per hectare will be reduced

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<tr><td></td><td></td><td></td><td>by installation of drip in 1606 hectare area and sprinkler in 3800 hectare area in selected river stretches. Presently, 66.30 hectare area is covered by drip and 257.21 hectare area is covered by sprinkler system for different crops.</td></tr>
<tr><td>(ix)</td><td>Protection and management of flood plain zones (FPZ)</td><td>Next monsoon season</td><td>Identification of flood prone zones has been done by urban local bodies and plantation has also been done in co-ordination with forest department as per the direction of district administration. Details of identified flood zones and plantation in these zones are enclosed as Annexure – 5.</td></tr>
<tr><td>(x)</td><td>Rain water harvesting</td><td>-</td><td>Installation of rain water harvesting structure is under progress. Status of installation is as follows:-
By industries: CECB has imposed condition regarding rain water harvesting by industries within their premises and the same is being followed by the concerned industries. Regular monitoring is being carried out for verification of the same. As per information available with CECB rain water harvesting system has been installed 425 large/medium industries and 1420 small scale industries. In addition, it has been decided to keep space (5% of total areas / minimum 05 plots) for rain water harvesting in future industrial areas.
By other establishments:
<table>
<tr><th colspan="5">Progress by UAD</th><th></th></tr>
<tr><th>ULB Name</th><th>Target</th><th>Completed</th><th>In progress</th><th>Time line</th></tr>
<tr><td>Raipur</td><td>9586</td><td>4636</td><td>4950</td><td>Dec-21</td></tr>
<tr><td>Korba</td><td>1535</td><td>919</td><td>616</td><td>Mar-21</td></tr>
<tr><td>Raigarh</td><td>579</td><td>563</td><td>16</td><td>Mar-21</td></tr>
<tr><td>Dhamtari</td><td>1104</td><td>1022</td><td>82</td><td>Mar-21</td></tr>
<tr><td>Kanker</td><td>108</td><td>91</td><td>17</td><td>Mar-21</td></tr>
<tr><td>Simga</td><td>142</td><td>81</td><td>61</td><td>Mar-21</td></tr>
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<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Rajim</td><td>148</td><td>116</td><td>32</td><td>Mar-21</td></tr>
<tr><td>Gobra Navapara</td><td>98</td><td>78</td><td>20</td><td>Mar-21</td></tr>
<tr><td>Total</td><td>13300</td><td>7506</td><td>5794</td><td></td></tr>
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</td></tr>
<tr><td>(xi)</td><td>Maintaining minimum environment flow of river</td><td>Continuous</td><td>There is no mandatory law specifying the level of e-flow to be maintained in the river. Water resource department is maintaining e-flow depending on the availability of water in the structure and conditional requirement. Also Water Resource Department had prepared standard operating procedures (SOP) for the five rivers Seonath, Mahanadi, Kharun, Kelo and Hasdeo for maintaining e-flow in the rivers and the same is being followed.</td></tr>
<tr><td>(xii)</td><td>Plantation on both sides of the river</td><td>Next monsoon season</td><td>Plantation in 03 out of 05 stretches have been completed. Plantation in the remaining 02 stretches i.e. Sihawa to Aarang and Bemta to Simga will be done in next monsoon. The present status of plantation is as follows :-
<u>Hasdeo</u>: 6.50 hectare (7150 no. of plants) has been covered with plantation in Korba to Urga river Stretch of Hasdeo.
Kharun: 141.160 hectare (248602 no. of plants) has been covered with plantation in Kharun river stretches.
<u>Mahanadi</u>: 13 hectare (14300 no. of plants) has been covered with plantation in Sihawa to Aarang river stretch.
<u>Kelo</u>: 8.50 hectare (16388 no. of plants) has been covered with plantation in Raigarh to Kankatora river Stretch.
<u>Seonath</u>: Area not available for plantation between Bemta to Simga river stretch of Seonath.</td></tr>
<tr><td>(xiii)</td><td>Setting up biodiversity parks on flood plains by removing encroachment</td><td>Timeline for complete identification of encroachment 31/03/2020</td><td>• Status of Identification and removal of encroachment from banks of the river is as follows :-
Status of identification of encroachments
<table>
<tr><th>Area</th><th>Encroachment identified</th></tr>
<tr><td>Korba</td><td>08</td></tr>
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		Timeline for removal of complete encroachment 31/03/2021	Raipur: Nil Dhamtari: Nil Kanker: 01 Nawapara: Nil Rajim: Nil Simga: 04 Raigarh: 14 **Total: 27** **Status of removal of encroachments** **Area** / **Encroachment removed** Korba: 03 Raipur: Nil Dhamtari: Nil Kanker: 01 Nawapara: Nil Rajim: Nil Simga: 04 Raigarh: 07 **Total: 15** • After removal of all encroachments the plantation shall be done along the banks of the river.

Annexure-A

Status of STP's in the State of Chhattisgarh						
Sr No.	**No of STPs**	**Location**		**Capacity**	**Status of STP's**	**Project Cost**
1	**Opearational STP (3 Nos.)**					
	2 No.s	Chilhati (Bilaspur)		17 MLD	Completed and Operational	
		Domuhani (Bilaspur)		54 MLD		
	1 No.s	Mini Mata Chowk (Kawardha)		2.1 MLD		
2	**STP's under construction / construction to be started (8 Nos.)**					
	(Completion date of the STPs is 30.06.2021)					
	4 No.s	Bhatagaon (Raipur)	72% completed	06 MLD	Construction is in progress	5.93 Cr.
		Chandandih (Raipur)	45% completed	75 MLD	Construction is in progress for these ongoing STPs under AMRUT mission	235 Cr.
		Kara (Raipur)	45% completed	35 MLD		
		Nimora (Raipur)	45% completed	90 MLD		
	2 No.s	Bade Atarmoda (Raigarh)	15% completed	25 MLD		57.53 Cr.
		Banjipali (Raigarh)	02% completed	07 MLD		
3	**Number of STP for which DPR is prepared (6 Nos.)**					
	(Completion date of the STPs is 31.03.2021)					
	1 No.s	Kanker		7.8 MLD	Included in State Budget	19.88 Cr.
	1 No.s	Dhamtari		19.6MLD	Included in State Budget	29.78 Cr.
	1 No.s	Nawapara		7.5 MLD	Approved from State Finance Department	13.87 Cr.
	1 No.s	Rajim		2.8 MLD	Approved from State Finance Department	12.37 Cr.
	1 No.s	Simga		2.8 MLD	Included in State Budget	10.20 Cr.
	1 No.s	Korba		35 MLD	PPP Mode. DPR Prepared but approval is pending with NTPC, Korba	150 Cr.
Total 87 No.s of STPs are proposed in 80 ULBs						

Annexure – 1

Details regarding management of effluent generated from the industries situated in the polluted river stretch

Sl. No.	Name of the River Stretch	No. of Water Polluting Industries	Generated Effluent (in MLD)		Processed/ Treated Effluent (in MLD)	Gap
			Industrial	Domestic		
1.	River Hasdeo (Korba to Urga)	09	36.67	35.17	71.84	Nil
2.	River Kharoon (Bhatagaon to Bendri)	26	0.09	0.03	0.12	Nil
3.	River Mahanadi (Sihawa to Arrang)	131	0.96	0.53	1.49	Nil
4.	River Seonath (Bemta to Simga)	There is no water polluting industries in this stretch				
5.	River Kelo (Raigarh to Kanaktora)	12	52.37	6.60	58.97	Nil

Annexure – 2

Details of Septage management in the ULBs covering catchment of polluted river stretches

Sl. No.	Name of the River Stretch	Current Fecal Sludge Generation (KLD)	Projected Fecal Sludge Generation (at least for a period of 15 years) (KLD)	Current FSTP capacity as per DPR (KLD)	GAP	Model/ Mode of treatment
1.	River Hasdeo (Korba to Urga)	104	120	115	Nil	Co-treatment with STP and Low-cost gravity based Phytorid treatment plant (FSTP)
2.	River Kharoon (Bhatagaon to Bendri)	236.71	273	284	Nil	Co-treatment with STP and Low-cost gravity based Phytorid treatment plant (FSTP)
3.	River Mahanadi (Sihawa to Arrang)	20.3	24	23	Nil	Low-cost gravity based Phytorid treatment plant (FSTP)
4.	River Seonath (Bemta to Simga)	4.6	5	5	Nil	Low-cost gravity based Phytorid treatment plant (FSTP)
5.	River Kelo (Raigarh to Kanaktora)	47.5	55	80	Nil	Co-treatment with STP and Low-cost gravity based Phytorid treatment plant (FSTP)

Annexure – 3

Details regarding generation of various waste in the catchment of polluted river stretches

Municipal Solid Waste

Sl. No.	Name of the River Stretch	Generated Municipal Solid Waste	Processed/ Treated MSW	Gap	Waste Management Model
1.	River Hasdeo (Korba to Urga)	100 TPD	100 TPD	Nil	Ambikapur (Mission Clean City) Model
2.	River Kharoon (Bhatagaon to Bendri)	470 TPD	470 TPD	Nil	Integrated Solid Waste Management Model
3.	River Mahanadi (Sihawa to Arrang)	15 TPD	15 TPD	Nil	Ambikapur (Mission Clean City) Model
4.	River Seonath (Bemta to Simga)	3 TPD	3 TPD	Nil	Ambikapur (Mission Clean City) Model
5.	River Kelo (Raigarh to Kanaktora)	58 TPD	58 TPD	Nil	Ambikapur (Mission Clean City) Model

Construction and Demolition Waste

Sl. No.	Name of the River Stretch	C&D Waste Generated	Collected/ Primary Processed	Gap
1.	River Hasdeo (Korba to Urga)	9.8 TPD	9.8 TPD	Nil
2.	River Kharoon (Bhatagaon to Bendri)	77.5TPD	77.5 TPD	Nil
3.	River Mahanadi (Sihawa to Arrang)	2 TPD	2 TPD	Nil
4.	River Seonath (Bemta to Simga)	0.3 TPD	0.3 TPD	Nil
5.	River Kelo (Raigarh to Kanaktora)	8.7 TPD	8.7 TPD	Nil

Domestic Hazardous Waste

Sl. No.	Name of the River Stretch	Domestic Hazardous waste generated	Domestic Hazardous waste collected	Gap
1.	River Hasdeo (Korba to Urga)	200 kg/day	200 kg/day	Nil
2.	River Kharoon (Bhatagaon to Bendri)	335 kg/day	335 kg/day	Nil
3.	River Mahanadi (Sihawa to Arrang)	12 kg/day	12 kg/day	Nil
4.	River Seonath (Bemta to Simga)	5 kg/day	5 kg/day	Nil
5.	River Kelo (Raigarh to Kanaktora)	35 kg/day	35 kg/day	Nil

Annexure – 4

Latest water quality of polluted river stretches

Polluted River Stretch (Range in Year 2019)

River Hasdeo (Korba to Urga) – P – IV

Monitoring Location		Hasdeo Barrage Darri Korba	Downstream near Village Urga, Korba
BOD (mg/l)	Min	0.6	1.0
	Max	1.8	2.0
Fecal Coliform (MPN/100ml)	Min	4	1.8
	Max	110	22.0

River Kharoon (Bhatagaon to Bendri) – P – IV

Monitoring Location		Near water supply intake well Bhatagaon	Near water supply intake well Bendri
BOD (mg/l)	Min	2.1	2.8
	Max	8.6	6.8
Fecal Coliform (MPN/100ml)	Min	<2	<2
	Max	84	94

River Mahanadi (Sihawa to Arrang) – P – IV

Monitoring Location		Origin of Mahanadi, Sihawa	Near Gandhi Bridge, Arrang
BOD (mg/l)	Min	2.2	3.0
	Max	4.0	4.2
Fecal Coliform (MPN/100ml)	Min	14	10
	Max	170	120

River Seonath (Bemta to Simga) – P – IV

Monitoring Location		Road Bridge Bemetara Simga
BOD (mg/l)	Min	2.33
	Max	3.8
Fecal Coliform (MPN/100ml)	Min	2
	Max	17

River Kelo (Raigarh to Kanaktora) – P – V

Monitoring Location		Upstream Raigarh City	Near Kayaghat, Downstream, Raigarh
BOD (mg/l)	Min	1.7	2.1
	Max	3.3	3.9
Fecal Coliform (MPN/100ml)	Min	30.0	230.0
	Max	210.0	460.0

Indian Standard 2296 :

- BOD (3 days 27 degree celsius) – 03 Milligram per liters
- Fecal Coliform (MPN/100ml) – 500

Annexure – 5

Identified flood zones and plantation in these zones

General details	Name of River Stretches	Hasdeo River- Korba to Urga- 20 Km	Kharoon River- Bhatagaon to Bendri Stretch- 20Km	Kharoon River- Padkibhat to Dhamtari Stretch- 18 Km	Mahanadi River- Sihawa to Arang- 70 Km	Mahanadi River- Sihawa to Arang- 70 Km	Mahanadi River- Sihawa to Arang- 70 Km	Shivnath River- Simga to Bemta- 10 Km	Kelo River- Raigarh to Kanaktora- 20 Km
Plantation in flood zone in available spaces.	No. of flood zone identified	4	10	Nil	5	6	2	2	1
	Plantation done (No.)	3150	Flood zones are in low laying dense slum area, where plantation is not possible.	Nil	250	1065	320	250	7500