

STATUS OF RIVER RESTORATION PROJECTS IN CHENNAI

We state that in the respect of the Original Application No. 556 to 559/2018 (Earlier Hon'ble NGT (SZ) O.A Nos. 299/2013, 164/2014, 164/2015 & 130/2016) the issue taken up for consideration by Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi is the pollution of rivers Adyar, Cooum and Buckingham Canal in and around Chennai in the State of Tamil Nadu.

Original Application No. 164/2014 (SZ) was filed by P. Edwin Wilson on which notice was issued on 13.06.2014. The case is P. Edwin Wilson versus The State of Tamil Nadu, Rep by its Chief Secretary and 15 others. The Hon'ble NGT (SZ) in its Order dated 30.3.2015 directed CRRT to file the status report of river restoration measures. In the Affidavit filed by CRRT on behalf of Chief Secretary in April, 2015, it is reported that, as restoration of Cooum river has been at the top of agenda of the Government of Tamil Nadu, a study was undertaken in 2012 and the report was completed in 2014 and a copy of report in 10 volumes was submitted to Hon'ble NGT (SZ).

The Hon'ble NGT (SZ) in its Order dated 28.07.2015 directed the Chief Secretary to convene a meeting once in every two months. From thereon, the Chief Secretary would convene a meeting bi-monthly to review the progress of the river restoration projects along with the line department and an Affidavit along with the Minutes of the Chief Secretary review meeting would be submitted by CRRT on behalf of the State of Tamil Nadu.

Later, another application was filed by Jawaharlal Shanmugam in 2015 and S. Muthumeena in 2016 in the same matter. All the four matters have been tagged for consideration and were being heard in Hon'ble NGT, Southern Zone Bench. Later, the case was taken over by the Principal Bench, New Delhi and new Case (OA) numbers were assigned. As per the Order dated 13.2.2019, the Committee headed by Chief Secretary to meet fortnightly for a period of next three months and thereafter on monthly basis to review the progress in the matter and quarterly report may be furnished to this Tribunal on the progress in the matter by email at ngt.filing@gmail.com. Thereon, the Chief Secretary has been conducting monthly meeting and thus far filed Seven Quarterly reports in Hon'ble NGT, Principal Bench, New Delhi through email in ngt.filing@gmail.com. Last quarterly report was submitted in December, 2020 and the next quarterly report is due in February, 2021. The details are as follows:

S. No.	Quarterly Report	Date of Submission	Annexure
1.	First Quarterly Report	30.05.2019	Annexure 1
2.	Second Quarterly Report	30.08.2019	Annexure 2
3.	Third Quarterly Report	10.12.2019	Annexure 3
4.	Fourth Quarterly Report	13.02.2020	Annexure 4
5.	Fifth Quarterly Report	23.05.2020	Annexure 5
6.	Sixth Quarterly Report	26.08.2020	Annexure 6
7.	Seventh Quarterly Report	07.12.2020	Annexure 7

Progress of Integrated Cooum River Eco-Restoration Project and Adyar River Restoration Project as on 31st January 2021.

Restoration of Chennai's major waterways is a top priority for the Government of Tamil Nadu and to this end, river restoration plans of both Cooum and Adyar rivers have been drawn up and are currently under implementation by various line departments such as Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB), Greater Chennai Corporation, Public Works Department (PWD), Commissionerate of Municipal Administration, Directorate of Town Panchayats and Department of Rural Development and Tamil Nadu Slum Clearance Board. Chennai Rivers Restoration Trust is entrusted with coordinating and monitoring the projects. The progress of restoration of the waterways as on January 2021 is detailed below:

INTEGRATED COOUM RIVER ECO-RESTORATION PROJECT

Work on the sub-projects has been initiated by the concerned line departments and are under various stages of progress as detailed below:

1. Public Works Department (PWD):

PWD has been entrusted with the implementation of 9 sub-projects viz., desilting the river to enhance free flow of water during monsoon and, formation of baby canal to maintain minimum ecological flow during the non-monsoon season.

- In the three reaches beyond the CRZ stretch i.e., Ch. 9677 m to 27336 m, desilting and formation of Baby canal has been fully completed. In the CRZ stretch i.e. from Ch. 700 m to 9677 m, desilting has been completed

and in the Northern arm, desilting has been completed for a length of 1200 m out of 2040 m. Desilting for the remaining length is under progress.

- Within the CRZ stretch i.e., from Cooum river mouth to Napier bridge (Ch.0 m - 700 m), for the continuous opening of river mouth and desilting of the river, Administrative Sanction for Rs.70.00 Crores has been obtained vide G.O (Ms) No.76, Municipal Administration & Water Supply (MC-I) Department, dated 31.07.2020. For this work, CRZ Clearance has to be obtained by PWD. Consultant has been identified and work order was given on 28.10.2020 and Rapid Environment Impact assessment study is underway.

2. Greater Chennai Corporation (GCC):

GCC has been entrusted with the implementation of 3 sub-projects. The work components consist of fencing for a length of 23.92 km on both the sides of the river, removal of 81,364 MT of construction and demolition waste and 23,527 MT of Municipal Solid waste alongside the river and installation of booms at 8 locations to collect the floating waste in the river. The status of the work progress is as follows:

i. Removal of Solid Waste:

The removal of accumulated Solid waste removal works from the banks of the Cooum River has been fully completed.

ii. Installation of Booms:

Trash boom systems have been deployed across the river at 8 locations viz., near C-in-C bridge, Periyar bridge, Choolaimedu, Metha Nagar, near Central Buckingham Canal, behind Madras Medical College, Quaid-e-Millath bridge and near Napier Bridge.

iii. Fencing:

Under this project, fencing work has been fully completed for a length of 12.6 km out of a total length of 23.92 km and work is under progress in the remaining stretches.

3. Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB):

CMWSSB has been entrusted with the implementation of 15 sub-projects. The work components consist of 10 Interception & Diversion systems along the river and 3 Modular Sewage Treatment Plants (STPs) at Chetpet, College Road and Maduravoyal, one 10 MLD sewage treatment plant at Langs Garden and 1 Under Ground Sewerage Scheme (UGSS) at Nerkundram. Work on the 14 sub-projects is in progress as detailed below:

i. Interceptor and Diversion pipelines:

- Package I (Chintadripet) - 74% of work completed. Work is under progress and the scheduled date of completion is 30.06.2021.
- Package II (Chetpet) – 100% of works have been completed. The outfalls will be plugged after commissioning of the STP.

- Package III (Nungambakkam) – 100% of works have been completed. The outfalls will be plugged after commissioning of the STP.
- Package IV (Metha Nagar) – 52% of work completed. Work is under progress and the scheduled date of completion is 31.08.2021
- Package V (Anna Nagar) – 100% works have been completed and the systems have been commissioned.
- Package VI (Langs Garden Road) - 44% of work completed. Work is under progress and the scheduled date of completion is 30.06.2021.
- Package VII (South Cooum River Road) – 48% of work has been completed. Work is under progress and the scheduled date of completion is 30.06.2021.
- Package VIII (Aminjikai) – 100% of works have been completed.
- Package IX (NSK Nagar) – Work could not be taken due to existing encroachment and will be commenced after the removal of encroachments.
- Package X (Anna Nagar) – 100% works have been completed and the systems have been commissioned.

ii. Modular STPs

- For Modular STP (1.0 MLD) near College Road, Chetpet, Civil works are under progress and so far, 83% of work has been completed and the scheduled date of completion is 15.03.2021.

- For Modular STP (1.2 MLD) at Nungambakkam, Civil works are under progress and so far, 60% of work has been completed and the scheduled date of completion is 15.03.2021.
- For Modular STP (0.6 MLD) at Maduravoyal – Work site finalized in February, 2020 and Civil works are under progress and so far, 9% of work has been completed and the scheduled date of completion is 19.06.2021.
- For the 10 MLD STP (TTUF) at Langs Garden - Civil works are under progress and so far, 25% of work has been completed and the scheduled date of completion is 15.03.2022.

iii. Under Ground Sewerage System (UGSS):

- For UGSS Nerkundram, Pipe laying and construction of Sewage Pumping Station works are in progress. 24% of work has been completed and the remaining works are under progress, is scheduled to be completed by 30.04.2022.

4. Commissionerate of Municipal Administration (CMA):

CMA has been entrusted with the implementation of 2 sub-projects. The work components consist of removal of 1648 MT of solid waste along the river side in Thiruverkadu Municipality and fencing for a length of 10.78 km.

- Accumulated solid waste along the banks of the river has been fully removed within Thiruverkadu Municipality limits.

- In Phase I, fencing has been fully completed for a length of 1.65 km and the work has been fully completed.
- In Phase II, fencing has been fully completed for a length of 1.74 km and the work has been fully completed.
- In Phase III, fencing works completed for a length of 3.31 km. Fencing could not be taken up for a length of 1.35 km due to water logging near Velappanchavadi Bridge and for a length of 1.06 km due to encroachments. The work is expected to be fully completed by February, 2021. Slum encroachments have to be evicted for a length of 1.06 km and work will be commenced after the relocation of slum habitations i.e. Shanmuga Nagar and Perumal Koil Street, Thiruverkadu.

5. Department of Rural Development (DRD):

DRD has been entrusted with the implementation of 7 sub-projects. The work components consist of removal of 4582 cubic metre of solid waste alongside the river, fencing for a length of 3.3 km in 3 village panchayats (Seneerkuppam, Adayalampattu and Vanagaram) and plantation at Vanagaram.

- The accumulated solid waste has been fully removed from the banks of the Cooum river within the DRD areas viz., Senneerkuppam, Adayalampattu and Vanagaram Village Panchayats.
- Fencing works have been fully completed in all 3 Village Panchayats viz., Vanagaram, Adayalampattu & Senneerkuppam.

6. Tamil Nadu Slum Clearance Board (TNSCB)

Tamil Nadu Slum Clearance Board (TNSCB) has been entrusted with the Resettlement & Rehabilitation (R&R) of 14257 identified Project Affected Families (PAFs) and 458 commercial establishments. Thus far, TNSCB has allotted 12295 tenements. To resettle the remaining 1962 PAFs, 377 tenements are ready for allotment now and another 1585 tenements will be ready by March, 2021.

7. Chennai Rivers Restoration Trust (CRRT):

CRRT is entrusted with plantation of mangroves, mangrove associates and terrestrial plants alongside the river. The plantation work will be taken after the completion of desilting and stabilization of bunds by PWD and other riverfront development works by GCC.

- Regarding the Plantation along the banks of the Cooum River for a length of 60 km (both the banks), agreement was executed on 30.09.2020. Thus far 1700 nos of plants has been planted and the work is expected to be completed by August 2022.
- Under Community Education Programme, Regular Community Sensitization Programmes for NGC & Eco-Clubs of Schools, NSS & Enviro Clubs of Colleges, ULBs, PRIs, NGOs, CBOs, RWAs & CSOs have been conducted by CRRT and thus far 6837 stakeholders covered.

ADYAR RIVER RESTORATION PROJECT FROM ORIGIN TO MOUTH

Work on various sub-projects of the Adyar River Restoration Project were initiated by all the line departments in 2018 and are under various stages of progress.

1. Public Works Department (PWD)

PWD has been entrusted with the implementation of 7 sub-projects - desilting and widening the river for 16.18 km; construction of flood protection walls for 1.76 km and river mouth opening and its maintenance. The work progress is detailed below:

- For the package 1, i.e., from River mouth to Thiru. Vi. Ka Bridge, PWD has to get CRZ Clearance. The proposal has been recommended by TNSCZMA to MOEF & CC for CRZ clearance in its meeting held on 13.01.2021.
- For package 2, i.e., from Thiru. Vi. Ka. bridge to Kotturpuram bridge, desilting works is fully completed for a length of 2353 m.
- For package 3, i.e., from Kotturpuram bridge to Saidapet road bridge, desilting works is fully completed for a length of 2892 m.
- For package 4, i.e., from Saidapet road bridge to Jafferkhanpet road bridge, flood protection wall for a length of 650 m and desilting for a length of 2498 m are fully completed.
- For package 5, i.e., from Jafferkhanpet Road bridge to Manapakkam Check dam, desilting is fully completed for a length of 3334 m and flood protection wall for a length of 500 m.

- For package 6, i.e., from Thiruneermalai to Outer Ring Road, desilting is fully completed for a length of 3000 m and flood protection wall for a length of 406 m.
- For the packages # 2 to 6, in the encroachment stretches, sectioning of work will be taken up after eviction.
- For package 7 (maintenance of river mouth for 4 consecutive years), NIOT has taken up the multi-seasonal study and have requested a period of 12 months for submission of the report. The application to CRZ will be submitted after the study has been completed.

2. Greater Chennai Corporation (GCC)

GCC has been entrusted with the implementation of 19 sub-projects. The work components consist of boat jetties at 2 locations, fencing for a length of 24.67 km on both the sides of the river, solid waste removal alongside the river, levelling and compacting the solid waste at dumpsite, booms at 3 locations to collect the floating waste in the river, beautification of bridges (3 nos), community toilets in 5 locations, parking lots at 5 locations and plantations alongside the river course.

- Under this project, out of a total 24.67 km, fencing work has been fully completed for 8.8 km and for remaining length works are in progress. The expected date of completion is June 2021.
- Under Solid waste removal works, so far, 8891 MT out of a total 50664 MT of debris and 3505 MT out of a total 16826 MT of garbage have been cleared from the banks of the Adyar River. Right now PWD has completed

widening, desilting, levelling and formation of bund in certain stretches. Hence, in these stretches, there is no scope for debris and garbage removal at present.

- For the trash boom systems which are to be installed at 3 suitable locations across the Adyar River, viz., Kotturpuram Bridge, Maraimalai Adigalar Bridge & Jafferkhanpet Causeway, preliminary works has been commenced and it will be completed by March 2021.
- Regarding the work on beautification of bridges, work has been completed on all the three bridges being maintained by GCC (South Buckingham Canal Bridge near Kotturpuram Railway Station, Thiru. Vi. Ka Bridge and Alandur Bridge) and on one bridge being maintained by State Highways Department i.e., Maraimalai Adigalar Bridge (Saidapet Bridge). All the bridge beautification works have been fully completed.
- Regarding the Plantation works along the river, this work will be taken up by CRRT after the completion of I&D works by CMWSSB.
- For the Park near Kotturpuram, work has been commenced and it will be completed by June 2021.
- For the construction of community toilets at 5 locations, Resettlement & Rehabilitation is planned for all the slum habitations within the Right of Way of river. Hence construction of community toilet is not required and the proposal may be dropped.

- Regarding parking lots proposed at 5 locations, the proposal for developing parking lots is dropped and CRRT has been requested to develop green belt with native species supporting the biodiversity of Adyar riverine system. Work will be taken up by CRRT after the completion of Bund formation and laying of I&D Pipelines by PWD.

3. Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB)

CMWSSB has been entrusted with 14 sub-packages and the status of works is as follows:

i. Interceptor and Diversion Pipelines:

- Package I- Adyar & Kotturpuram – 16% works has been completed so far and the scheduled date of completion is 30.06.2021.
- Package III - Nandanam Extension, Turn Bulls Road & Radhakrishnapuram Slum - 21% works has been completed so far and the scheduled date of completion is 30.06.2021.
- Package IV – Mambalam Canal - 11% works has been completed so far. Work is in progress and the scheduled date of completion is 30.06.2021.
- Package V - Guindy & Ekkattuthangal - 57% works has been completed thus far and the scheduled date of completion is 30.06.2021.
- Package VI – Samiyar Thottam, Jafferkhanpet & MGR Drain – 39% works has been completed so far and the scheduled date of completion is 30.06.2021.

ii. Modular STP:

- Package VIII – 5% works has been completed so far and the scheduled date of completion is 09.06.2022.
- Package X - 17% works has been completed so far and the scheduled date of completion is 21.01.2022.
- Package - XI - Alternative proposal has been finalised and DPR under preparation. Tender for this package will be floated by February 2021.
- Package – XV – DPR has been revised as per current SoR and the tender will be floated by 1st week of February 2021.

4. Commissionerate of Municipal Administration (CMA)

CMA has been entrusted with the implementation of 4 sub-projects - solid waste removal alongside the river; fencing for a length of 3.32 km; community toilet at 1 location and plantation alongside the river.

- Under solid waste removal, 522 MT of garbage has been removed and the work is fully completed.
- The construction of community toilet in Anakaputhur Municipality has been fully completed and opened to public.
- In Anakaputhur Municipality, under Phase 1, out of a total length of 1.524 km, fencing completed for a length of 0.3 km and work is in progress for a length of 0.335 km. Fencing could not be taken up for a length 0.889 km

due to formation of bund in Patta land. The ongoing work is expected to be completed by February, 2021.

- Under Phase II for a length of 1.719 km, fencing will be taken up after the removal of encroachments (4 slums – 676 PAFs).
- In Pammal Municipality, out of a total length of 0.3 km, PWD has constructed flood protection wall for the entire length of 300 m and hence fencing is not required.
- Regarding UGSS for Anakaputhur and Pammal Municipalities, tender is under evaluation.
- The Vettiver grass plantation within CMA limits will be taken up under the scope of CRRT.

5. Directorate of Town Panchayats (DTP)

DTP has been entrusted with the implementation of 3 sub-projects. The work components consist of solid waste removal alongside the river, fencing for a length of around 14 km, and plantation alongside the river.

- In Kundrathur Town Panchayat, under phase I, fencing work has been completed fully for a length of 1.20 km and under phase II, for a length of 1390 m, tender will be floated on 04.02.2021.
- In Perungalathur Town Panchayat, out of a total length of 7508 m, fencing has been fully completed for a length of 1446 m and grill alone to be fixed for a length of 4942 m. Fencing could not be taken up for a length 1.0 km

due to encroachments and for 120 m due to the confluence point of Pappan Channel. These works are expected to be completed by March, 2021.

- In Thiruneermalai Town Panchayat, out of a total length of 3621 m, fencing has been completed fully for a length of 306 m, grill alone to be fixed for a length of 2076 m and work to be commenced for a length of 539 m. Fencing is not required for a length of 500 m as PWD has constructed a flood protection wall and hence the 500 m stretch shall be dropped. For a length of 200 m, Bridge work is being carried out by Highways department and fencing in this stretch will be taken up after completion of bridge work by Highways department. These works are expected to be completed by March, 2021.
- For solid waste removal, 5050 cu.m of legacy waste has been removed out of 8600 cu.m through bio-mining. The work is expected to be completed by March, 2021.
- The vegetation planting works with DTP limits will be taken up under the scope of CRRT.

6. Directorate of Rural Development and Panchayat Raj (DRD)

DRD has been entrusted with the implementation of 4 sub-projects - solid waste removal alongside the river; fencing for a length of 35.1 km, community toilet and plantation along the river bank.

- Under solid waste removal, 8275 MT of accumulated solid waste along the river banks has been fully removed.

- In Kancheepuram District, fencing work is proposed for a length of 21.019 km. Out of this, fencing is fully completed for a length of 2.136 km and work is in various stages of completion for a length of 18.883 km. Scheduled date of completion is May, 2021. For the additional proposal in Kundrathur block for 2.923 km, tender has been floated by fixing due date as 10.02.2021.
- In Chengalpattu District, fencing work is proposed for a length of 11.101 km and work is in various stages of completion for a length of 10.5 km. Scheduled date of completion is May, 2021. For the additional proposal in St. Thomas Mount block for 630 m, tender has been floated and it is under evaluation.
- For Community toilet, foundation work is in progress and the scheduled date of completion is March 2021.
- The vegetation planting works with DRD limits will be taken up under the scope of CRRT.

7. Tamil Nadu Slum Clearance Board (TNSCB):

- Out of a total 9539 Project Affected Families (PAFs) identified on the banks of the Adyar River, So far, 4398 PAFs have been resettled and remaining 5141 PAFs have to be resettled. In order to resettle these PAFs, 465 tenements will be ready by Dec. 2021, and another 4676 tenements will be completed by June, 2022.

- In order to resettle the remaining 5141 PAFs, construction of tenements is in various stages of progress in Perumbakkam Scheme.

Way Forward

Restoration of Buckingham Canal & its associated drains and waterways that drains into Cooum & Adyar Rivers

The Member Secretary, CRRT informed that CRRT has submitted the proposal for the Restoration of Buckingham Canal & its Drains and Cooum & Adyar Drains for Rs.1370.84 crs to the Government for seeking Administrative Sanction. In G.O (D) No.419, dated 03.12.2020, Orders have been issued accordingly for Administrative Sanction to the tune of Rs.1281.88 crs.

Mitigation of Sewage Outfalls in Adyar & Cooum Drains and Buckingham Canal and its Drains

The Government has accorded Administrative Sanction for a total project cost of Rs.2371 crore for sanitation projects in Buckingham Canal and its drains, Cooum Drains and Adyar Drains. Under Phase-I, sanction was accorded for Rs.1001 crore vide G.O. (Ms) No.107 MA&WS (MW1) Department, dated: 20.08.2019.

The Managing Director, CMWSSB informed that, out of Rs.1001 crore, Notice Inviting Tender (NIT) has been called for 51 works (Rs.735.45 crore). Work order has been issued for 30 works (324.09 crore) and NIT will be issued in phases for the remaining works.

In compliance with the directions of the Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi vide Order dated 13.02.2019, the Chief Secretary will

continue to conduct monthly meetings to review the progress of the river restoration works and to ensure that Chennai's waterways are restored, in keeping with the stated commitment of the Government of Tamil Nadu.