



ABSTRACT

Information Technology Department – Tamil Nadu Geographical Information System – Administrative and financial sanction of Rs.4,73,73,650/- towards implementation Phase - II of Tamil Nadu Geographical Information System (TNGIS) – Orders – Issued.

Information Technology (e.Gov.I) Department

G.O.(Ms).No. 3

Dated: 27.01.2020

விகாரி, தை - 13

திருவள்ளூர் ஆண்டு-2050

Read:

1. G.O.(Ms) No.2, Information Technology (e.Gov.I) Department, dated 24.01.2014.
2. G.O. (Ms) No. 13, Information Technology (e.Gov.I) Department, dated 30.07.2014.
3. G.O. (Ms) No. 8, Information Technology (e.Gov.I) Department, dated 01.07.2016.
4. G.O (Ms.) No.16, Information Technology (e.Gov.I) Department, dated 05.09.2017.
5. G.O (Ms.) No.17, Information Technology (e.Gov.I) Department, dated 05.10.2018.
6. From Commissioner of e-Governance & Chief Executive Officer, TNeGA, Letter No.70/TNeGA/ 2009, dated 21.10.2019.

ORDER:

In the Government Order first read above, administrative approval was accorded for the creation of an integrated "Tamil Nadu Geographical Information System" (TNGIS) at a total estimated cost of Rs.1,32,80,000/- (Rupees one crore thirty two lakhs and eighty thousand only) towards capital expenditure under Phase-I. Out of this, in the Government Order second and third read above, financial sanction and release was accorded to Tamil Nadu e-Governance Agency for a sum of Rs.61,40,000/- and Rs.61,40,000/- respectively, totaling Rs.1,22,80,000/- (excluding the Training Cost of Rs.10,00,000/-).

2. In the Government Order fourth read above, the Government constituted a Technical Committee and User Committee for creation of Standard Geographical Information System (GIS) Platform in the State.

3. In the Government Order fifth read above, based on the request received from the Commissioner of e-Governance & Chief Executive Officer, TNeGA, revised administrative approval was accorded for an estimated cost of Rs.2,12,80,000/- (Rupees two crore twelve lakhs and eighty thousand only) and also sanction and release of a sum of Rs.90,00,000/- (Rupees ninety lakhs only) (i.e. the unreleased Training Cost of Rs.10 lakhs + Rs.80,00,000/- from the revised administrative approval) to Tamil Nadu

e-Governance Agency towards the implementation of Phase-I of Tamil Nadu Geographical Information System (TNGIS) Project.

4. In the letter sixth read above, the Commissioner of e-Governance and Chief Executive Officer, Tamil Nadu e-Governance Agency has requested for administrative and financial sanction and release of Rs.4,73,73,650/- (Rupees four crore seventy three lakh seventy three thousand six hundred and fifty only) towards the implementation Phase - II of Tamil Nadu Geographical Information System (TNGIS). The proposal for Phase-II of Tamil Nadu Geographical Information System (TNGIS) is as follows:-

TNGIS Preamble

During the Tamil Nadu Legislative Assembly Budget Session 2013-14, TNGIS project Announcement was made on 08.05.2013 under Rule 110 at a cost of Rs.6 crore, by Hon'ble Chief Minister. Based on the announcement, the Chief Executive Officer, Tamil Nadu e-Governance Agency submitted a detailed proposal for creation of a Geographical Information System to the Government at an estimated cost of Rs.567.52 lakhs and it has been proposed to deploy the project in two phases.

The Government issued administrative approval for Rs.1.32 crore for the implementation of Phase-I of the Tamil Nadu Geographical Information System. Tamil Nadu Geographical Information System was inaugurated on 08.08.2015 with necessary infrastructure. The TNGIS website was formally launched by the Hon'ble Chief Minister on 5th August 2016.

Phase-I Objective and achievements:

Objective : Spatial data procured from Survey of India should be made sharable through enabling Government Orders. This data needs to be corrected for current administrative setup. Consolidating the efforts already put in by the nodal departments by pooling all the other available layers, establishing the necessary structure and framework at the first stage.

Achievement:

- Centralized Geo-Spatial data repository web portal has been created.
- 348 layers collected from various departments and hosted as a WMS (Web Map Service) in TNGIS portal.
- Around 19,000 village cadastral scanned maps were hosted in TNGIS Portal for department officials.
- Role based access established to various Government Departments.
- Entire Tamil Nadu Village Panchayat Boundary has been corrected with the help of Rural Development Department.
- Whenever new bifurcation occurred in the District / Taluk Boundary, the corrections were made in the administrative boundary layers with the coordination of Directorate of Survey and Settlement.
- GIS data preparation and integration has been completed for various departments based on their request like Health, DPH Health, SIPCOT, TNEB, ICDS, TNPCH, etc.

- Make-my-Map module prepared. Service Based Thematic Map Module developed. Spatial Decision Support System created for SSA and Health department for 108 Ambulance Services for using dynamic Grid / Cluster / Proximity Analysis.
- Data collected from 30 various departments and agencies for TNGIS Project.
- Entire website developed using open source software and every module and tools need to be explored and implemented in TNGIS Portal.
- It's had highly extensive manual work. Therefore, implementing TNGIS Phase-I has extended more than the given period.

Fund utilization under TNGIS Phase-I

An amount of Rs.2,12,80,000/- was sanctioned and released for implementation of Phase-I of Tamil Nadu Geographical Information System. Out of the sanctioned amount, Rs.2,05,39,064/- has been utilized and an unspent balance Rs.7,40,936/- available under the head "Training Cost" which will be utilized for training purpose.

TNGIS Phase-II

Objective: Augmenting the efforts made in the 1st Phase, the Tamil Nadu Geographical Information System would enhance its repository with other department specific applications. Additional layers for various departments and spatial layers at larger scale for urban application could be made.

Proposed Activities in Phase-II

The proposed enhancements would involve both data preparation / correction, enriching of spatial datasets and also maintenance and improvement of TNGIS web interfaces. However, data preparation / correction measures require the coordination and cooperation of all the Departments concerned in a timely manner.

- i. Periodic updation of all the administrative maps and Taluk boundaries, preparation of Revenue Division, Constituency Boundaries with the help of Directorate of Survey and Settlement.
- ii. **Jurisdiction layers:** Creation/Extraction of Health District & Sub District, Educational District, Police Districts, other Departmental Divisions etc., based on the latest standard boundaries with the help of respective Department input.
- iii. Road Network
 - **State Highway & Major District Roads:** Tamil Nadu Highways Department has provided complete Road Network data.
 - **Other District Road and Village Roads:** To be prepared in association with Department of Rural Development & Tamil Nadu Highways Department
 - **Use the Institute of Remote Sensing's Road Data** which required high digitation work and extensive support from Rural Development Department. Rural Development has developed Road data with support of IRS which needs to be examined in detail.

Once the corrected layers are ready, Network data on roads can be prepared to enable shortest routing queries, distance by road analysis wherever required etc.

Maintenance Activities

The following are the mandatory activities to be covered for seamless operation of TNGIS Phase-II.

- TNGIS Server co-location charge
- Server Annual maintenance
- Application Security Auditing
- Server replacement
- SSL Certificate Renewal

Fund requirements

- **Software License and Upgradation**

As in TNGIS Phase - I, seamless maintenance shall be an important element in TNGIS Phase - II. Also, mandatory expenditure for continuous maintenance of Servers, Server co-location charges, etc. is required. In Phase-I, for one year, Rs.13.5 lakh was spent for four TNGIS Servers' maintenance and Server co-location charges. In Phase-II, the cost may go up to Rs.31 lakh per year for 4 DC, 4 DR and 1 storage server. Hence, the financial sanction under the subhead "**Software license and up-gradation**" is required at Rs.93 lakhs for three years period. (31 x 3 = Rs.93 lakhs).

- **Infrastructure Cost**

The TNGIS server was purchased in 2011 and it is already 8 years old. Also TNGIS applications are rapidly increasing the load. Due to this, TNGIS Server need to be changed for the potential continuance of the TNGIS project. Currently, TNGIS application is running in 4 servers located at SIFY Data Center. It may be replaced with a new advanced server at a cost of Rs.100 lakh for 5 servers and Rs.20 lakh for cabling charges. Hence, the financial sanction under the subhead "**Infrastructure Cost**" is required at Rs.120 lakh for new servers and cabling charges.

- **Application Security Audit**

TNGIS Application Security Audit must be done whenever major changes happened in the application. During the TNGIS Phase-II, the application may get modified based on the future requirements. TNeGA would do the Security Auditing internally with internal resources. Hence, no financial sanction is required for Phase-II under the sub head "**Security Auditing**".

- **Manpower cost**

Now the TNGIS Application maintenance and further development are being handled by TNeGA itself from NIC. The following are the manpower required for TNGIS Application maintenance and further development.

Sl. No.	Role	Designation	Each One Salary Per Month (A) (in Rs.)	Required Man power (B)	Per Annum Manpower Cost (C) (A*B*12= C) (in Rs.)	Three years Manpower Cost (D) (C * 3 =D) (in Rs.)
1	Head	Senior System Analyst	70,000	1	(70,000*1* 12) =8,40,000	25,20,000
2	Development	System Analyst	60,000	1	(60,000*1* 12) = 7,20,000	21,60,000
3		Senior Programmer	50,000	2	(50,000*2* 12) = 12,00,000	36,00,000
4		Programmer	40,000	2	(40,000*2* 12) = 9,60,000	28,80,000
5		Assistant Programmer	30,000	4	(30,000*4* 12) = 14,40,000	43,20,000
6	Analytic Team	Database Administrator	60,000	1	(60,000*1* 12) = 7,20,000	21,60,000
7		GIS Analyst	40,000	1	(40,000*1* 12) = 4,80,000	14,40,000
8	Server Maintenance	Server Administrator	30,000	1	(30,000*1* 12) = 3,60,000	10,80,000
9	Administration	Document Assistant	25,000	2	(25,000*2* 12) = 6,00,000	18,00,000
Total				15	73,20,000	2,19,60,000

Hence, the financial sanction under the subhead “**Manpower Cost**” is required at Rs.219.60 lakhs for three years period (73.20 x 3 = Rs.219.60 lakhs).

• **Training**

As against the TNGIS Phase-I sanctioned amount of Rs.10 lakhs, the balance available under the subhead “**Training**” is Rs.7,40,936/-. Now, TNeGA has planned to conduct an Awareness program and Training program to Secretaries to Government, Heads of Departments, Second-level Officers and Technical Officers of the respective departments in batches. The balance fund would be utilized for the same.

Additionally, TNeGA has planned to give the GIS Training in open source standards, to those Government entities approaching TNeGA. Hence, the financial sanction required under the sub-head “**Training**” would be Rs.10 lakhs for three years period (3.3 x 3 = Rs.10 lakhs).

A. Fund Requirement – Recurring Cost

S. No.	Sub-Head	Details	Per Annum Cost (Approx) Rs.	Amount (approx)	Total (approx) Rs.
1	Software (Licenses & Up-gradation)	AMC for 9 server, Server co-location charge	AMC 6,00,000 co-location charge - 25,00,000 AMC+ co-location charge	AMC 3 years * 6,00,000 (9Servers) = 18,00,000 Co-location charge 3 years * 25,00,000 (9servers) = 75,00,000	93,00,000
2	Application Security Audit	-	-	-	-
3	Manpower cost	Man power cost for maintenance and development	73,20,000	-	2,19,60,000
4	Training	Training cost	3,33,333		10,00,000
Total			1,07,53,333		3,22,60,000

B. Fund Requirement -Non Recurring Cost

S.No.	Sub-Head	Details	Amount (approx) (in Rs.)	Total (approx) (in Rs.)
1	IT Infrastructure	5 Servers & Cabling	Server 5 * 20,00,000 = 100,00,000	1,00,00,000
2	Cost	Charges	cabling charge- 20,00,000	20,00,000
Total				1,20,00,000

Recoupment from TNGIS Funds

Due to insufficient funds and the need for the continuance of the TNGIS Phase-I project, a sum of Rs.31,13,650/- (as on date) was met out from TNeGA's own funds that is also need to be recouped upon receipt of future funds sanctioned under TNGIS Phase-II.

Thus, financial sanction required under the TNGIS Phase-II is as follows:

S. No.	Item	Recurring Cost (in Rs.)	Non- Recurring Cost (in Rs.)	Total Amount Request Cost (in Rs.)
1	Fund Requirement	3,22,60,000	1,20,00,000	4,42,60,000
2	Recoupment of Funds		31,13,650	31,13,650
	Total Amount			4,73,73,650

Hence, an amount of **Rs.4,73,73,650/-** (Rupees four crore seventy three lakh seventy three thousand six hundred and fifty only) required for the continuance of the following activities under TNGIS Phase-II:-

- Manpower cost towards updating of Administrative Layers, Creation/Extraction of Health District & Sub District, Educational District, Police Districts etc. and MDR, ODR Road Network correction for the next three year period.
- Annual maintenance charge and server co-location charge for the next three year period.
- Replacement of existing TNGIS servers.
- Awareness program and Training program to be conducted in TNGIS Phase-II.
- SSL Certificate Renewal

5. The Government, after careful examination of the proposal of the Commissioner of e-Governance and Chief Executive Officer, Tamil Nadu e-Governance Agency, hereby accord administrative sanction for the implementation of Phase-II of Tamil Nadu Geographical Information System (TNGIS) and release a sum of Rs.4,73,73,650/- (Rupees four crore seventy three lakhs seventy three thousand six hundred and fifty only).

6. The expenditure sanction on para-5 above shall be debited to the following head of account:

“2852 – Industries – 07 – Telecommunication and Electronics Industries – 800 Other Expenditure State’s Expenditure – JS – Creation of an Integrated Tamil Nadu Geographical Information System – 309 Grants-in-aid – 03 Grants for Specific Schemes”
IFHRMS (DPC 2852 07 800 JS 309 03)
Old (DPC 2852 07 800 0937)

7. The expenditure sanctioned above shall constitute an item of “New Instrument of service” and the approval of the Legislature shall be obtained in due course of time by an inclusion in the Supplementary Estimates for the year 2019-2020. Pending approval of the Legislature, the expenditure will be initially met by drawl of an advance from the Contingency Fund. The Commissioner of e-Governance is authorized to draw and disburse the amount sanctioned in para-5 above to Tamil Nadu e-Governance Agency. The Commissioner of e-Governance / Chief Executive Officer is directed to calculate the

actual amount required for the period up to next Supplementary Estimates and apply for sanction of the same as advance from the Contingency Fund to Finance (BG.I) Department directly in Form "A" appended to the Contingency Fund Rules, 1963 along with a copy of this order. Orders for sanction of an advance from the Contingency Fund will be issued from Finance (BG.I) Department. The Joint Secretary to Government, Information Technology Department shall also send necessary draft explanatory note for inclusion of this expenditure in the Final Supplementary Estimate 2019-2020 to Government in Finance (Ind.) Department at the appropriate time without fail.

8. The Chief Executive Officer, Tamil Nadu e-Governance Agency is requested to send the physical and financial progress of the scheme every month to the Government along with the details of expenditure incurred and Utilization Certificate. Unspent balance, if any, should be remitted into Government account.

9. This order issues with the concurrence of Finance (Industries) Department vide its U.O. No. 721/2020/Finance (Industries)/2020, dated 21.01.2020 and Additional Sanction Ledger No. 2886 (Two thousand eight hundred and eighty six).

(By Order of the Governor)

SANTHOSH BABU,
Principal Secretary to Government.

To

The Commissioner of e-Governance & Chief Executive Officer,
Tamil Nadu e-Governance Agency, 2nd and 7th Floor,
P.T.LEE Chengalvaraya Naicker Building, Opp. LIC Building, Anna Salai, Chennai – 2.
The Principal Accountant General (Accounts & Entitlements), Chennai-600 018.
The Accountant General (Revenue & Economic Sector Audit), Chennai-600018.
The Accountant General (CAB), Secretariat, Chennai-600 009.
The Pay and Accounts Officer (South), Chennai-600 035.
The Pay and Accounts Officer, Secretariat, Chennai-600 009.
The Resident Audit Officer, Secretariat, Chennai 600 009.

Copy to:

Hon'ble Chief Minister's Office, Secretariat, Chennai – 600 009.
Hon'ble Deputy Chief Minister's Office, Secretariat, Chennai – 600 009.
The Special Personal Assistant to Hon'ble Minister for Revenue, Disaster
Management and Information Technology, Secretariat, Chennai – 600 009.
The Principal Private Secretary to Principal Secretary to Government,
Information Technology Department, Secretariat, Chennai – 600 009.
The Finance (Ind/BG.I/BG.II) Department, Secretariat, Chennai – 600 009.
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Sf/Sc.

// Forwarded / By Order //


Section Officer 27/01/2020
R.M.
27/1/2020