

Chapter-5

Integrated Coastal Zone Management Project

A Snapshot

Instruments purchased for capacity building of GEER Foundation and GPCB were not put to optimum utilization. There was vast difference in mangroves plantations claimed by the Project Executing Agencies (PEAs) and as observed through GIS by audit. However, no third-party evaluation of the mangroves plantation was conducted by GEC for plantation carried out during 2012-19. ICZMP activities were carried out without getting approval of Procurement Plan and activity schedule from the World Bank.

There were deficiencies in planning of works, preparation of estimates, selection of contractors, and terms and conditions of the contract agreements during the process of awarding the respective contracts. The works were not executed as per the standards prescribed in the contracts and instances such as use of substandard materials, assets not being optimally utilised etc. were noticed. Monitoring by the GEC and TPI agency was found inadequate. The GEC instead of getting substandard works set-right by the contractors simply made deductions for the same. Further, no penal action was taken against the contractor for fraudulent claims.

During joint inspection by audit team with the Department officials, cases of assets in dilapidated condition/ incomplete works/ non-execution of works as per contract etc. were noticed.

Introduction

Integrated Coastal Zone Management Project (ICZMP) addresses environmental, economic and social issues in an integrated manner. A financing agreement for ICZMP was entered into by Government of India (GoI) with the World Bank in 2010.

The objectives of ICZMP were capacity development in a sustainable coastal management approach for India's coastal zones and piloting integrated coastal zone management approaches in three States, viz. Gujarat, Orissa and West Bengal.

5.1 Project cost for Gujarat

Gujarat Ecology Commission (GEC) was designated as the State Project Management Unit (SPMU) for implementation of ICZMP in Gujarat. The ICZMP phase I for Gujarat with World Bank assistance was approved by the GoI in March 2010. Additionally, on 5 March 2019, MoEF&CC approved the proposal for 'Livelihood Improvement through Smart Eco Villages' (SEV) under ICZMP (apart from Phase I), to be implemented by GEC. The component

wise details of outlay approved, expenditure incurred and availability of funds are as under:

Table 5.1: ICZMP- Approved outlay, expenditure incurred and funds availability

(₹ in crore)

Sl. No.	Name of Component	Outlay approved originally	Revised approved outlay	Expenditure incurred	Funds received and available with the SPMU
1	Phase I	298.34	387.17	336.62	336.62
2	SEV	--	117	74.29	53.35
	Total	298.34	504.17	410.91	389.97¹

Source: Information provided by GEC

Thus, SPMU had booked an expenditure of ₹ 410.91 crore as on 31 March 2020, when the Project was officially closed. Against this, the funds actually available with the SPMU was only ₹ 389.97 crore. Remaining expenditure of ₹ 20.94 crore was incurred under SEV without availability of funds, and was thus yet to be paid to the contractors (August 2022).

5.2 Implementation of phase I of ICZMP in Gujarat

A Detailed Project Report (DPR) was prepared (February 2009) by WAPCOS Limited for Phase I of the ICZMP for the Gulf of Kachchh having four components². Memoranda of Understanding (MoU) were entered into (April 2010) between SPMU and Project Executing Agencies (PEAs) i.e., Gujarat Ecological Education and Research (GEER) Foundation, Gujarat Pollution Control Board (GPCB), Jamnagar Municipal Corporation (JMC) and Marine National Park and Marine Sanctuary (MNP&MS) for the activities to be carried out during the period from April 2010 to March 2015 which was extended up to March 2020. Activities assigned and outcomes achieved by the SPMU and the four PEAs with expenditure incurred as of 30 September 2021, are shown in *Appendix-7*. Audit found that most of the activities envisaged in the DPR had been carried out by the PEAs/ SPMU. Out of these activities, Audit reviewed the capacity building and mangroves plantation activities carried out by the PEAs, and the SEV implemented by the SPMU. The audit observations are discussed in the succeeding paragraphs.

¹World Bank: ₹ 293.65 crore, GoI: ₹ 49.58 crore, GoG: ₹ 37.77 crore, Interest earnings: ₹ 8.97 crore

²Component A- Coastal Resources Conservation and Management.

Component B- Coastal Environment Monitoring and Conservation.

Component C- Socio-Economic Development.

Component D- Integration of Geo-Spatial Information.

5.2.1 Mangroves Plantation under ICZMP

Mangroves form one of the most important ecosystems of coastal and marine areas. The Mangroves restoration would also lead to conserving marine biodiversity of the Gulf of Kachchh, especially Corals. Under ICZMP; 19,551 hectare mangroves were planted by various agencies as mentioned below:

Table 5.2: Mangroves plantation done under ICZMP during 2010-2019

Sl. No.	Name of District	Period	Name of Agency	Mangroves Planted (in Ha)
1	Jamnagar	2010-15	Marine National Park and Marine Sanctuary	3,901
2	Kachchh	2010-16	Forest Circle, Kachchh	12,500
3	Rajkot	2013-14	Forest Department	500
4	Bhavnagar	2013-14		1,000
5	Bharuch	2018-19	Gujarat Ecology Commission	1,550
6	Navsari	2011-12		100
Total				19,551

Source: Information provided by GEC

SPMU entrusted the task of evaluating the mangroves planted at 67 sites during 2010-12 at Jamnagar and Kachchh coasts to Gujarat Institute of Desert Ecology (GUIDE). GUIDE measured (January-June 2014) plantation at 62 out of 67 sites using GIS techniques based on coordinates furnished by GEC. GUIDE reported (December 2014) that against the 4,125.92 hectare plantation as per record, actual plantation was only 1,859.61 hectare. GUIDE also carried out physical verification of all the 67 sites to assess survival rate of mangroves based on approved (December 2012) ICZM scale³ and categorised 24 sites as 'Good', 27 sites as 'Average' and 16 sites as 'Poor'. Thus, only 39 per cent of the 67 mangroves sites measured by GUIDE fell under 'Good' category.

On reporting of the discrepancy between mangroves areas as per record and as measured by the GUIDE, the GEC instructed (October 2015) the jurisdictional Chief Conservator of Forest (CCF), Kachchh to reconcile the figures with GUIDE within one month. However, neither any reconciliation report of the CCF nor any follow-up by GEC was found on record. Subsequently, GEC asked (April 2017) the CCF, Kachchh to reconcile the discrepancy in GIS coordinates pointed by BISAG in its study report (conducted as per direction of GEC) on the mangroves plantation done between 2010 to 2016. The CCF, Kachchh informed (December 2017) GEC that overlapping was found only on 1.56 per cent of the claimed mangroves plantation (7,800 hectare) instead of 9.22 per cent as reported by BISAG.

Audit observed that the GEC ought to have reconciled the discrepancies reported by BISAG either on its own or through a third party evaluation. However, GEC accepted the self-verification of the jurisdictional CCF regarding correctness of the mangroves plantation done by itself. This involved conflict of interest as the authority which did the plantation verified the discrepancies itself.

³'Good' (More than 75 per cent *otla* (raised bed) with a minimum of five surviving saplings), 'Average' (50 to 75 per cent *otla* with minimum five surviving saplings) and 'Poor' (less than 50 per cent *otla* with minimum five surviving saplings).

Audit observed that GEC did not make any efforts to reconcile the anomalies reported by two different agencies. Third party evaluation was conducted for an area covering only 21 *per cent* of claimed mangroves plantation which also pointed out difference in the plantation claimed by the PEAs and that observed through GIS technique. However, no third-party evaluation was carried out by GEC to ascertain veracity of the claimed area of plantation or survival rate thereof for the remaining mangroves plantation.

In view of the above, Audit reviewed 13,522 hectare out of 14,116 hectare mangroves planted during 2012-19, in 45 sites with an area of more than 100 hectare, through GIS technique. It was observed that there was no shortfall in the mangroves plantation on 4,107 hectare as reported at 12 sites; however there was a shortfall of 1,968.80 hectare in mangroves plantation out of reported plantation of 9,415 hectare at 33 sites.

The State Government/ GEC did not furnish any response on the anomalies pointed by audit in the area of mangroves plantation and non-conduct of third party inspection. However, during Exit Conference held on 02 September 2022 the Member Secretary, GEC stated that there was a need to carry out third party inspection of the mangroves plantation.

Recommendation 9: The State Government may fix responsibility of the agencies involved for the shortfall in mangroves plantation.

5.2.2 Capacity building of institutions

A project for capacity building of the GEER Foundation at an estimated cost of ₹ 15.74 crore was undertaken wherein a central laboratory and five marine field stations were established between July 2013 and June 2016. During the physical verification (October 2021) of two of the marine field stations at Mandvi and Jamnagar, Audit observed that as against four⁴ persons required to be deployed at each field station, only one person at Mandvi and two persons at Jamnagar field station were found on roll. Further, out of 25 instruments installed at Mandvi, 21 instruments were intermittently operated only for checking and calibration and were never used for the intended purpose i.e., to study the physio-chemical parameters of soil and water of the intertidal area of the Gulf of Kachchh. Similarly, out of the 15 instruments provided at Jamnagar, 12 instruments remained unused after April 2019. Thus, the marine field stations were not put to optimal use.

The State Government/ GEC stated (August 2022) that due to non-availability of staff, the instruments could not be put to use. However, the GEER Foundation was in the process of recruiting permanent staff for the field stations.

Similarly, the laboratory infrastructure of the GPCB was to be enhanced by purchase of scientific analytical instruments. GPCB developed one laboratory each at Gandhinagar, Bhuj, Jamnagar and Rajkot. GPCB procured 18 instruments for Central Laboratory, Gandhinagar. During the joint physical

⁴Lab Technician/ JRF, Lab Assistant, Field Assistant and Watchman

verification (October 2021) of Central laboratory, Gandhinagar by Audit with the officials of GPCB, it was observed that one instrument⁵ costing ₹ 0.74 crore was never used though procured in April 2017. Similarly, HRGC-HRMS⁶ costing ₹ 2.52 crore was purchased in March 2015 but used only between January 2018 and June 2019. Similarly, X-Ray Diffractometer (XRD) costing ₹ 0.97 crore, purchased in March 2015, was used in 2016-17 only. The Comprehensive Maintenance Contracts (CMC) of HRGC-HRMS and XRD instruments had also lapsed in May 2019. Thus, the instruments were not being optimally used rendering the expenditure incurred unfruitful.

The State Government/ GEC stated (August 2022) that CMC of these instruments would be renewed. No response was furnished for not using the instruments optimally.

5.3 Smart Eco-Village Project

The World Bank informed (October 2018) GEC regarding extension of ICZMP and investment of ₹ 120 crore to ₹ 140 crore on livelihood improvement in 112 villages (Kachchh: 104, Navsari: 08). The World Bank asked GEC to prepare project proposal depicting linkage of expected outcomes to the activities proposed, institutional arrangement for implementation and sustenance of the project and cost estimates. The World Bank also asked to start conducting baseline survey simultaneously.

Accordingly, GEC (which acted as both SPMU and PEA for the project) carried out a quick survey from 26 to 30 October 2018 for 112 villages and divided them into seven clusters⁷. GEC submitted (01 January 2019) project proposal to the World Bank for the “Livelihood Improvement through Smart Eco-Village project” (SEV) with an outlay of ₹ 122 crore. Subsequently, MoEF&CC approved (05 March 2019) the smart eco-village project with an outlay of ₹ 117 crore. The activities envisaged and carried out in the 112 villages by GEC are shown in *Appendix-8*.

5.3.1 Project proposal, procurement plan and actual project implementation

The project proposal submitted (January 2019) by GEC consisted of four outcomes having seven outputs to be achieved through 32 activities (*Appendix-9*). GEC sent (March 2019) procurement plan with an outlay of ₹ 115 crore and implemented various activities under SEV between September 2019 and March 2020. Comparison of activities envisaged in the project proposal with procurement plan and actual execution is given in *Appendix-9* and summarized below:

⁵Micro Digital Balance.

⁶High Resolution Gas Chromatograph (HRGC)- High Resolution Mass Spectrometer (HRMS).

⁷(i) Dayapar (Kachchh): 22 villages (ii) Naliya (Kachchh): 22 villages (iii) Anjar (Kachchh): 17 villages (iv) Jamnagar: 11 villages (v) Morbi: 13 villages (vi) Dandi (Navsari): 08 villages and (vii) Dwarka (Devbhumi Dwarka): 19 villages.

Table 5.3: Activity wise proposal, procurement plan and actual work executed under SEV as on (31 March 2020)

(₹ in crore)

Description of Activities	Project proposal		Procurement Plan		Execution		
	No of Activities	Amount	No of Activities	Amount	No of Activities	Amount of Contract Awarded	Amount of Work executed
(A) Included in proposal, procurement plan and also executed	13	79.76	10	69.26	11	43.11	35.22
(B) Included in proposal but neither included in procurement plan nor executed	15	37.18	00	00	00	00	00
(C) Included in proposal and procurement plan but not executed	4	5.06	02	10.00	00	00	00
(D) Not included in proposal but included in plan and executed	00	00	04	21.60	04	31.66	30.88
(E) Neither included in proposal nor in procurement plan but was executed	00	00	00	00	04	9.44	8.19
(F) Not included in proposal but included in plan, however, not executed	00	00	04	14.14	00	00	00
Grand total	32	122.00	20	115.00	19	84.21	74.29

Source: Project Proposal, Procurement Plan and other Information furnished by GEC

As can be seen from the **Table 5.3**, against 32 activities envisaged in the project proposal, 20 activities were included in the procurement plan which were not as per the originally proposed activities.

Further, the procurement plan was also not executed as proposed. It can be observed from **Table 5.3** that six activities (shown at (C) and (F)) which were envisaged in the procurement plan were not executed whereas four activities (shown at (E)) were executed without being envisaged in the project proposal or procurement plan. In the case of 14 activities (shown at (A) and (D)) there was variation between procurement plan and execution.

The GEC/ State Government did not furnish any remarks on the non-synchronization between project proposal, procurement plan and actual execution. However, during Exit Conference held on 02 September 2022, the Member Secretary, GEC agreed that there were discrepancies in the procurement process.

5.3.2 Not adhering to World Bank guidelines on procurement plan

Procurement Manual (2013) for ICZMP issued by Society of Integrated Coastal Management⁸ (SICOM) stipulates that the World Bank's Procurement Guidelines of January 2011 will be applicable for procurement under the

⁸Society of Integrated Coastal Management (SICOM) is a registered society under the aegis of the MoEF&CC. It is the designated National Project Management Unit for planning, management, execution, monitoring and implementation of ICZMP.

project. These guidelines emphasize the need for preparation of a realistic Procurement Plan for a project which should include various aspects like a brief description of goods and works, proposed methods of procurement, time schedule for key procurement activities, etc.

As per Procurement Manual, procurement action can be initiated after receipt of no objection from the World Bank to the Procurement Plan (PP) and Procurement Activity Schedule (PAS) as submitted by the SPMU. Any procurement done outside the PP will be ineligible for reimbursement.

GEC sent (19 March 2019) a PP of ₹ 115 crore containing only broad items which was not as per the World Bank prescribed format. Further, GEC did not submit PAS along with the PP. Moreover, GEC without obtaining NOC from the World Bank for PP and PAS, awarded contracts worth ₹ 84.21 crore and incurred expenditure of ₹ 74.29 crore for executing activities under SEV up to 31 March 2020. The ICZMP (Phase I and SEV) was declared as closed by the World Bank on this date.

MoEF&CC asked (28 December 2020) GEC to submit the final PP and cost table of the closed project which was submitted by GEC on 05 January 2021. As discussed in paragraph 5.1, for phase I of ICZMP, GEC had funds of ₹ 389.97 crore from which it incurred expenditure of ₹ 336.62 crore and had unspent balance ₹ 53.35 crore. Under SEV, GEC incurred expenditure of ₹ 74.29 crore up to 31 March 2020. GEC utilised the unspent balance of ₹ 53.35 crore lying under Phase I of ICZMP to make payments for the expenditure incurred under SEV Project. Even after routing the savings from Phase I of ICZMP to SEV Project, ₹ 20.94 crore were yet to be paid to the contractors by GEC as on the date of closure of ICZMP (31 March 2020). MoEF&CC informed (15 April 2021) GEC that shortfall of funds may be met from State Government funds as the ICZM Project is closed.

The State Government/ GEC did not offer any remarks on the deficiencies in the submission of the PP and PAS and consequent possible burden on State exchequer due to non-receipt of funds from the World Bank.

5.3.3 Adoption of different methods for awarding contracts

Procurement Manual 2013 prescribes threshold limit (as revised in February 2017) for adopting different methods of bidding whereby National Competitive Bidding⁹ (NCB) is to be adopted for procurement of Goods and equipment valued between US \$ one lakh and 30 lakh and for construction work between US \$ two lakh and two crore. In case, value of procurement/ work is below the bracket prescribed for NCB, Shopping Method (SM)¹⁰ can be adopted whereas for procurement/ work above the threshold prescribed for NCB, International

⁹NCB is the competitive bidding procedure normally used for public procurement in the country and may be the most efficient and economical way of procuring goods or works, by their nature and scope. The procedures shall provide for adequate competition to ensure reasonable prices. The method to be used in the evaluation of tenders and the award of contracts shall be made known to all bidders and not be applied arbitrarily.

¹⁰Shopping Method is a procurement method based on comparing quotations obtained from several national/ international suppliers/ contractors, usually at least three to ensure competitive prices.

Competitive Bidding (ICB)¹¹ shall be adopted. Further, World Bank's Procurement Guidelines (January 2011) stipulate that open competition is the basis for efficient public procurement allowing the borrowers to select the most appropriate method.

GEC formed activity wise packages of villages and awarded 92 contracts worth ₹ 74.84 crore under SEV. Of these 92 contracts, 33 contracts amounting to ₹ 10.44 crore were having contract value lower than threshold limit of NCB. Details of remaining 59 contracts is given below:

Table 5.4: Details of contracts awarded through NCB and SM under SEV during September 2019 to March 2020

(₹ in crore)

Activity	Total No. of Contracts	Total Contract Value	SM applied		NCB applied	
			No. of Contracts	Contract value	No. of Contracts	Contract value
Alternative energy development activity	4	4.35	3	0.47	1	3.88
CCTV	12	5.87	5	3.00	7	2.87
Clean and green village activities	11	11.88	11	11.88	0	0.00
Green School	11	8.84	11	8.84	0	0.00
Public Address (PA) system	4	1.73	4	1.73	0	0.00
Recharge Well	5	2.17	0	0.00	5	2.17
Roof rain water harvesting system (RRWHS)	11	14.36	9	10.48	2	3.87
Water desalination plant	1	14.91	0	0.00	1	14.91
Total	59	64.11	43	36.40	16	27.70

Source: Information furnished by GEC

It can be seen from **Table 5.4** that 16 contracts valuing ₹ 27.70 crore and 43 contracts valuing ₹ 36.40 crore were awarded through NCB and SM respectively to multiple parties. Considering the overall contract value of each activity, the GEC had the option to treat execution of the respective activity in all the selected villages as one item of procurement/ work and go for NCB. However, GEC preferred to award the contracts package wise and in the process opted for SM instead of NCB in majority of the cases. Audit observed that this was also inconsistent with Central Vigilance Commission's guidelines that award of contract through open competitive bids should remain the most preferred mode of tendering. Audit compared on test-check basis, the average rates received for procurement of two items through SM and NCB methodology, which revealed as under:

¹¹ICB is generally adopted where the supplies need import and/ or foreign firms are expected to participate.

Table 5.5: Comparison of items procured through SM and NCB

(Amount in ₹)

Item	Contract awarded through SM			Contract awarded through NCB			Difference in price of the item
	No. of contracts	Number of items	Average rate	No. of contracts	Number of items	Average rate	
CCTV	5	333	90,150	7	490	56,500	33,650
RRWHS	9	1,675	62,600	2	695	55,720	6,880

Source: Information furnished by GEC

Audit analysis revealed that the above contracts were awarded by the GEC between January-March 2020 and were similar/ same in nature and execution period. Had the GEC adopted NCB in all these packages or had considered activity of installing CCTV/ RRWHS as single package instead of different packages and adopted NCB, it could have saved approximately ₹ 2.26 crore¹². Thus, awarding of contracts through SM method proved uneconomical.

The State Government/ GEC stated (August 2022) that the procurement plan was prepared considering the geographical locations of villages, distance among the villages and accordingly contracts were split to make them commensurate with World Bank guidelines. The State Government/ GEC asserted that this was done to ensure quality of the works and adhere to the time schedule. It was further stated that the World Bank had also not objected to these splitting of contracts in its post-procurement assessment.

The reply of the Government/ GEC is not convincing as no detailed procurement plan was prepared and quality of the works was not satisfactory as discussed in the subsequent paragraphs. Thus, in spite of having knowledge of the threshold limits prescribed by the World Bank for procurement/ works, the GEC adopted procurement methods arbitrarily.

During Exit conference (02 September 2022), the Government agreed with the audit observation and opined that there should be proper justification for awarding the contracts.

5.3.4 Procurement of items for Green Schools

The concept of Green School was introduced in Europe in the 1990s. The World Summit on Sustainable Development (WSSD) in Johannesburg in 2002 catalysed the efforts to bring about a shift from ‘educating about the environment’ to ‘educating for sustainability’. A “Green School” is identified with those elements and practices that inculcate environmental sensitivity and promote environmental sustainability through various environment-friendly means that encourage judicious use of resources. Establishment of smart (Green) schools was envisaged as one of the 19 activities under SEV. The activity included procurement of 12 different items as detailed in the following table:

¹²CCTV: ₹ 1.12 Crore (333 x ₹ 33,650) plus RRWHS: ₹ 1.15 crore (1,675 x ₹ 6,880).

Table 5.6: Details of items procured under ‘Green School’ activity

(₹ in lakh)

Sl. No.	Name of item	Numbers acquired	Estimated cost	Actual cost
1	2MP CCTV Camera	278	51.43	81.82
2	Water cooler- 150 Litres	28	21.00	32.56
3	Fire Extinguisher for fire safety- 2KG	28	4.20	7.45
4	Junior/ Senior Mathematical lab kit	28	21.00	21.21
5	Rotary Drum Composter	28	21.00	20.53
6	Children Play Area Equipment	28	124.60	127.07
7	Solar LED Street Light of 12 W	85	15.89	12.75
8	Basic outdoor PA Setup	114	27.29	32.97
9	Classroom Projector	17	16.15	11.50
10	HDPE Wastewater Container of 120 Ltr	108	4.86	4.62
11	PV Solar Plant of 3KW	28	43.26	43.26
12	Smart Auto Digital Board	16	82.40	76.20
	Total		433.08	471.94

The observations relating to procurements of items for Green Schools have been narrated in the succeeding paragraphs.

5.3.4.1 Selection of contractors

Twenty eight schools of 27 villages were conceptualised as ‘Green Schools’ for supply and installation of various items¹³ under eight packages. GEC identified six bidders arbitrarily and invited quotations under SM for the particular package from any three of them. In the process, four bidders were awarded contracts for execution of the eight packages. Audit observed that this was not justified as except one firm, all other three firms were engaged in landscaping and construction activities and did not have any experience in supplying all the above indented products.

The tender documents specified conditions for technical and financial qualification of bidders including past experience. However, it was observed that neither any of the bidders provided documents in support of past satisfactory performance of similar nature of works/ supplies nor bid evaluation reports were prepared by the GEC. Since the works/ goods were of different nature and technologies, no bidder could have possibly undertaken all the activities unless the bidder acts as an agent/ middleman for the goods. In absence of submission of required documents and bid evaluation, it could not be established that the bidders were manufacturer/ authorised agency for the respective items. This might have resulted in quotations on higher side as detailed in the succeeding paragraph.

¹³CCTV camera, water cooler, fire extinguisher, Mathematical lab, Children Play area, Public Address (PA) setup, Classroom Projector, Solar Plant etc.

5.3.4.2 Purchases made at higher rates

GEC installed Public Address (PA) system in all 28 schools. It was observed that in case of Morbi and Dandi clusters (11 schools), the estimates were prepared and contracts were awarded based on the number of speakers/ horns (97 numbers) to be provided in each classrooms with the PA Setup. While in case of Dwarka and Jamnagar clusters (17 schools), common PA systems (17 numbers) were installed in the school campus. This implied that there was no standardisation of work in the schools based on the utility/ cost effectiveness of the individual PA system. As a result, it was observed that the cost incurred for installation of PA system in the schools at Morbi and Dandi clusters (₹ 24.07 lakh for 11 schools) was high as compared to the other two clusters (₹ 8.90 lakh for 17 schools).

GEC informed (August 2022) that the estimates for items to be procured under ‘Green School’ component were prepared by the consultant appointed by it. Audit ascertained market rates of ‘smart interactive display’ and ‘Rotary Drum Composter’ from Government e-Market place (GeM) portal on which GEC was registered. Audit also obtained the rates of the supply and installation order in respect of children play area at Rampar Village, Kachchh District executed by GEC under “Smart Shala” work as part of ICZMP during the same period. A comparison of work orders issued and market rates is shown below:

Table 5.7: Comparative statement of work order rates viz.-a-viz. market rates obtained by Audit

(₹ in lakh)

Sl. No.	Cluster	Item supplied	Brand	Work order rate per item	Rate compared with	Rate for comparison
1	Dandi	Smart interactive display 75 inch	Techno	4.65	GEM	1.54
2	Jamnagar		Techno	5.15	GEM	1.54
3	Morbi		Newline	4.55	GEM	1.88
4	Dandi, Morbi,	200 Litres Rotary Drum Composter	Spintech	0.60 to 0.95	GEM	0.09 to 0.21
5	Jamnagar and Dwarka	Children Play Area	Generic	4.25 to 5.00	Concurrent purchase by GEC	2.22

Source: Information furnished by GEC

As seen from the **Table 5.7**, work order rates of the above items were considerably higher in comparison to the rates on GeM and rates of concurrent procurement at other site. GEC could have ensured economy in execution of these works had it opted for NCB instead of SM.

The State Government/ GEC stated (August 2022) that the quotations were invited from bidders already identified as per previous experience of GEC during garden development work under other project.

The reply of the State Government/ GEC is not convincing as the bidders were to be identified and properly evaluated as per requirements of the Green School component. Further, the estimates prepared by the consultant were also not conforming to the prevailing market rates.

5.3.4.3 Grid connectivity of Solar plant

Solar plants of 3 KW capacity in each of the 28 Green Schools with average cost of ₹ 1.55 lakh (aggregating to ₹ 43.26 lakh) were installed in March 2020. Audit team carried out joint inspection at nine schools with officials of GEC in October 2021 and found that though the solar panels were installed in March 2020, grid connectivity was not established as of 30 September 2021 in three¹⁴ schools and established belatedly i.e. after June 2021 in six¹⁵ schools. Hence, solar panels remained unutilised for want of grid connectivity in these nine inspected schools out of 28 schools.

The GEC stated (August 2022) that out of 28 schools, 21 schools have been connected to grid.

The reply of the GEC confirmed that remaining seven schools were still to be connected to grid.

5.3.5 Construction work at Green schools

GEC awarded three contracts (two in Dwarka, one in Jamnagar cluster) for construction work in 17 'Green Schools' worth ₹ 411.83 lakh to a single contractor. Tender conditions required use of material of relevant specification. The contractor was responsible to replace the defective material brought on site or materials used in the work being found defective at a later date. The contractor submitted (March to June 2020) total claim of ₹ 410.63 lakh through Bills which was also certified (March to June 2020) by the Third Party Inspection (TPI) agency. However, while processing the Bills, GEC noticed (June 2020) that the Contractor had not executed the work as per specifications. For example, instead of installing 10,000 litre modular tank with precast structure (costing ₹ 174.25 lakh), the contractor installed PVC tanks costing ₹ 25.50 lakh only. Hence, after further field inspection, GEC approved only ₹ 219.61 lakh against the claim of ₹ 410.63 lakh. This was not in order since as per contract conditions the contractor was required to set right the defective works at its own cost to ensure quality of work.

Moreover, in spite of the established fact that the contractor had not executed works as per specification, and had raised fraudulent claim of ₹ 191.02 lakh in collusion with TPI, GEC did not take any legal/ penal action against the contractor as well as TPI.

The State Government/ GEC stated (August 2022) that acting upon the audit observation, the TPI had been black-listed. However, GEC did not offer any remarks regarding action taken against the contractor.

5.3.6 Development of Gardens

GEC developed 10 gardens (six in Dwarka, three in Jamnagar and one in Morbi cluster) under the SEV. It was observed that against the projected cost of

¹⁴Rasulnagar (Jamnagar district), Goriyali (Devbhumi Dwarka district) and Varshamedi (Morbi District).

¹⁵Jangi Girls and Boys school (Kachhh district), Balachadi and Khara-beraja (Jamnagar District) and Mojab and Tupani (Devbhumi Dwarka district).

₹ 2.74 crore as per the SoR issued by the Roads and Buildings (R&B) Department, GoG; gardening work was awarded by GEC at the cost of ₹ 8.42 crore. Further observations regarding operation and maintenance of gardens have been discussed in the following paragraphs.

5.3.6.1 Operation and Maintenance of the Gardens

Of the 10 works of Garden development, six¹⁶ work orders of Dwarka cluster included Operation and Maintenance (O&M) of landscape area of all plantations for six months for ₹ 94.18 lakh. No such O&M conditions were incorporated in tenders of other four works relating to Jamnagar and Morbi clusters. This indicated that GEC did not assess the requirement of maintenance for all the works and failed to adopt a uniform policy for O&M of the Gardens developed under the project.

It was further observed that GEC made 90 *per cent* payment to the agency in advance (₹ 84.76 lakh) prior to completion of the six months O&M period. Further, no agreement for handing over to and/ or maintenance of developed Garden by the concerned Gram Panchayat was found on record after completion of six-month period, to ensure sustenance of the developed gardens.

The State Government/ GEC stated (August 2022) that the gardens were handed over to the concerned Gram Panchayat for future O&M as per Exit Plan.

The reply is not convincing as no Exit Plan were found on record. Further, no response was furnished regarding inflated O&M costs, authenticity of the O&M bills with regard to maintenance done by the contractor and non-inclusion of O&M clause in other four garden works.

5.3.6.2 Joint inspection of Gardens

Audit team visited (October 2021) eight gardens of Jamnagar (03) and Devbhumi Dwarka (05) district. It was observed that most of the gardens were not well maintained, the lawns were damaged and unwanted weeds and plants had grown. The following photographs indicate the status of the gardens:

¹⁶Tupani, Mojap, Shamlasar, Padli, Goriyali and Mulvel.

Figure 5.1: Photographs (October 2021) of gardens developed under ICZMP at Balachadi and Khara-Beraja villages of Jamnagar cluster



Though, work order of the five¹⁷ gardens of Dwarka cluster included construction of boundary wall and installation of water tank. Except village Mojap, no compound wall was observed during joint inspection and water tank was not observed in any of the gardens. However, payment was made to the contractor against these items. This was a financial irregularity which remained unnoticed due to inadequate physical verification by the GEC. Incidentally, the work of garden development was executed by the same contractor who had made fraudulent claim against modular tank with precast structure as discussed in *paragraph 5.3.5*.

The State Government/ GEC stated (August 2022) that appropriate deductions had been made for the works which remained unexecuted.

The facts remain that the Audit scrutiny revealed that no amount had been deducted for these aspects from the bills raised by the contractor while making payments.

5.3.7 Installation of CCTVs

The work of installation of CCTVs through 12 packages was executed at a cost of ₹ 5.87 crore. In six packages (Jamnagar package 1 and 2 and Morbi package 1 to 4), the contractors changed the scope of work without approval of GEC and did overhead wiring instead of stipulated underground cabling. Overhead cables tend to get damaged easily and are prone to theft as compared to the underground cables.

It was further noticed that work orders included providing and fixing of Poles in all packages except three packages¹⁸. In the absence of such provision in these three packages, the contractors installed the CCTVs on the electricity poles without obtaining permission from the electricity distribution company. Apart from creating a legal situation regarding right to use, this also poses risk to life during repairs and maintenance of these CCTVs.

¹⁷Mojap, Tupani, Mulvel, Goriyali and Padli villages.

¹⁸Package 1 to 3 of Kachchh cluster.

The GEC while accepting the audit observations stated (August 2022) that underground cabling could not be done due to RCC structures and amount paid to the contractors was adjusted accordingly.

The reply of the GEC indicated that the scope of work was arrived at without conducting ground survey and analysing requirements of the specific sites.

5.3.7.1 Joint inspection of CCTV Surveillance System

Audit team carried out joint inspection (October 2021) of CCTVs with GEC officials in 10 villages¹⁹ of four districts where 175 CCTVs were installed during January to March 2021. During joint inspection it was noticed that 152 out of these 175 cameras stopped working within a period of six to nine months of installation. As reported by the villagers during joint inspection, of these 10 villages, eight²⁰ had registered complaints to the contractor; however, the CCTVs were not repaired/ replaced (October 2021). It indicated that no proper exit plan was in place for sustenance of the project. It was further observed during joint inspection (October 2021) that underground cable laid (February 2020) at Hamusar village of Jamangar Cluster, was damaged by another contractor of GEC during construction (March 2020) of Sewage Treatment Plan (STP). Due to the above damage, CCTVs were not operational in Hamusar village as well. Thus, most of the CCTVs in above 11 villages were non operational.

The State Government/ GEC stated (August 2022) that the CCTVs were handed over to the concerned Gram Panchayat for future O&M as per exit plan.

The reply is not convincing as no Exit Plan was found on record.

5.3.8 Mobile Sea Water Treatment Vehicles

GEC awarded (September 2019) contract for providing and operating seven Mobile Sea Water Treatment Vehicle (MSWTV) for ₹ 12.56 crore through NCB for treatment of sea water into potable water. The agency supplied MSWTVs during January to March 2020 which were commissioned in September 2020. As per the contract, the purchase cost included operation and maintenance of the MSWTVs for a period of one year by the agency. However, Audit noticed that in the contract, important conditions regarding performance such as (i) Quantity of water to be treated and supplied (ii) penalty provision for non/ under-supply of treated water, were not incorporated. It was observed that against capacity to treat 20,000 to 80,000 litre water in a day per MSWTV, the agency had supplied 5,000 to 7,000 litre water per day per MSWTV. Thus, due to non-incorporation of the quantity of treated water to be provided in the contract agreement, optimal utilisation of the MSWTVs could not be ensured.

The State Government/ GEC accepted (August 2022) the audit observation.

¹⁹Jamnagar (Balachadi, Rasulnagar, Khara-beraja), Dwarka (Tupani, Goriyali, Padli, Mulvel, Khatumba), Morbi (Varshamedi) and Kachchh (Jangi).

²⁰Jamnagar (Balachadi, Rasulnagar, Khara-beraja), Dwarka (Tupani, Goriyali, Padli, Mulvel, Khatumba).

5.3.8.1 Joint inspection of Mobile Sea Water Treatment Vehicles



During joint inspection (October 2021) of MSWTV at two²¹ out of seven villages with GEC officials, it was noticed that the vehicles were lying idle. Panchayat officials and operator confirmed that operation of vehicles was discontinued by the contractor after completion of O&M period of one year in September 2021.

Figure 5.2: MSWTV

Audit further observed that as per procurement agreement (September 2019), three years Comprehensive Annual Maintenance Contract (CMC) for ₹ 2.35 crore (to be paid on quarterly basis) for the seven MSWTV was to commence after one-year warranty and operation period (September 2021). However, GEC did not pay the CMC charges rendering GEC at the risk of bearing cost of repairs/ spare parts in the event of malfunctioning/ damage to the MSWTV.

The State Government stated (August 2022) that GEC was planning to handover the MSWTV to the Corporates under Corporate Social Responsibility (CSR) activities.

The reply confirms that a concrete plan for the sustenance of the MSWTVs was yet to be chalked out which was required to be in place at the time of procurement of these high cost equipment.

Recommendation 10: The State Government may take immediate action to utilise/ revive the idle MSWTVs so as to avoid further deterioration of these vehicles, which may render the expenditure wasteful.

5.3.9 Roof Rain Water Harvesting System

In 24 villages through 11 packages 2,257 RRWHS were constructed at a cost of ₹ 9.91 crore. Audit observed (October 2021) that in 21 villages hand pumps were not installed and in 18 out of the above 21 villages, waste water chambers were also not constructed. Further, rain water harvesting filters (24 villages), pipes (15 villages), Cast Iron (CI) main holes (02 villages) and hand pumps (02 villages) installed were of sub-standard quality. However, instead of insisting upon replacement of sub-standard material as stipulated in the tender condition, GEC decided to deduct the cost difference for the sub-standard work while making payment to the contractors. Mere deduction of cost difference was not sufficient as sub-standard items would compromise durability and utility of the RRWHS. These deficiencies also highlighted that monitoring of on-going works by the GEC and TPI agency was inadequate to ensure quality of the work.

²¹Rampar village of Kachchh district and Goriyali village of Devbhumi Dwarka district.

The State Government/ GEC stated (August 2022) that works remained incomplete due to closure of the project. It was further stated that maintenance of the constructed assets was the responsibility of the individual households. Further, applicable deductions had been made from the bills of the contractors for inferior quality of works.

The reply indicates that the works were not properly planned keeping in view the deadline of the ICZMP. Moreover, no efforts were made to set right the inferior quality of works and ensure sustenance of the created assets.

Recommendation 11: The State Government may fix responsibility for not ensuring economy in the award of contracts under Smart Eco-Village project. It may also strengthen its monitoring mechanism to ensure that works are executed and items procured as per the prescribed standards.

Ahmedabad
The

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