

CHAPTER – VI

Ministry of Earth Sciences

6.1 Non-establishment of desalination plants and wasteful expenditure

National Institute of Ocean Technology, Chennai undertook a project on establishment of desalination plants in six islands of Lakshadweep without conducting detailed survey of locations, techno-economic conditions and assessment of its resources for execution of the large scale project. As a result, out of six plants planned, only two plants were established. Of the remaining four plants, one plant was established but remained non-functional even after spending ₹ 4.32 crore due to site related issues, resulting in wasteful expenditure. NIOT incurred expenditure of ₹ 37.54 crore on the project. An amount of ₹ 69.28 crore remained idle with NIOT.

National Institute of Ocean Technology, Chennai (NIOT) is an autonomous organisation under the Ministry of Earth Sciences (MoES) engaged in developing technologies and their applications for sustainable utilisation of ocean resources and providing technical services and solutions to organisations working in the oceans.

NIOT established (May 2005) a plant of one lakh litre of water per day capacity at Kavaratti in Lakshadweep using Low Temperature Thermal Desalination (LTTD) technology which converts saline water into potable water. The water generated by the plant was accepted by the local population. With a view to provide safe drinking water to people on other islands, Lakshadweep Administration (LA) decided to install similar plants based on this technology in eight islands and approached NIOT. Accordingly, NIOT submitted (December 2005) a project proposal indicating a cost of ₹ 4.70 crore and ₹ 3.90 crore for LTTD plants having capacity of three lakh litres per day and 1.5 lakh litres of water per day respectively. The project was to be funded by Ministry of Drinking Water and Sanitation (MDWS).

Planning Commission accorded (March 2006) in-principle approval for setting up eight plants in eight islands³³. However, LA decided (June 2006) to establish plants at

³³ Agatti, Minicoy, Andrott, Amini, Kitlan and Chetlet, Kadmat and Kalpei.

six islands³⁴ during the ongoing financial year. NIOT entered (August 2006) into Memorandum of Understanding (MoU) with LA for installation and commissioning of LTTD plants. The plants were to be commissioned within 24 months of commencement of the project. LA released (September 2006) an amount of ₹ 26.60 crore to NIOT for setting up the plants. LA also released (October 2006) an amount of ₹ 73.79 lakh to NIOT for conducting Bathymetric³⁵ survey of the various islands. NIOT however, did not conduct the survey at that time.

NIOT initiated (October 2006) the work by calling for tenders but the same could not be commenced due to increase in project cost quoted by bidders. Consequently, the estimated project cost was increased (March 2007) to ₹ 60 crore and further (November 2007) to ₹ 85 crore. The revised cost was not approved by Planning Commission which insisted (July 2007/October 2007/November 2007) on submission of detailed item wise cost estimates. Subsequently, LA decided (January 2008) to implement the project in six islands in two phases viz. Agatti, Minicoy and Andrott in the first phase and Amini, Kitlan and Chetlet in the second phase. The capacity of the plants was also reduced to one lakh litre per day for all the proposed plants at cost of ₹ 9.88 crore per plant. The revised plan was approved (March 2008) in-principle by Planning Commission. The plants were to be commissioned within one year from date of commencement (August 2008).

During course of the project, NIOT informed (November 2008) LA that it could not carry out the committed work due to shortage of manpower and stating that it was not the mandate of NIOT to carry out job work as a whole. Instead, it agreed to undertake the work with vendors to whom it would transfer the technology in the form of design and drawing documents at the end of Phase I. Subsequently, NIOT conducted (February 2009) a detailed survey of the islands.

NIOT could not commission the three plants as envisaged within one year (August 2009). The plants at Minicoy and Agatti were commissioned in April 2011 and July 2011 respectively at total cost of ₹ 26.86 crore. The plant at Andrott was not commissioned due to complex site conditions requiring change in design and methodology in execution. After incurring expenditure of ₹ 4.32 crore, NIOT decided to defer further work at Andrott to the second phase and at a different site.

³⁴ Agatti, Minicoy and Andrott in the first phase and Amini, Kitlan and Chetlet in the second phase and first four plants with capacity of three lakh litres per day and last two plants (Kitlan and Chetlet) with capacity of 1.5 lakh liters per day.

³⁵ Bathymetry is the study of floors of water bodies.

Second Phase (Amini, Kitlan and Chetlet Island)

LA released (July 2009) an amount of ₹ 32.68 crore for commissioning of the three plants under the second phase. Again, due to increase in cost quoted by bidders, NIOT submitted (May 2011) a proposal to LA for revising the cost of the project to ₹ 125 crore³⁶. LA accorded (July 2012) approval for revision of total project cost to ₹ 99 crore.

In the meantime, NIOT awarded (September 2011) the contract to the lowest bidder, Kirloskar Construction and Engineers Ltd. (KCEL) for amount of ₹ 40.66 crore and released (December 2011) the first instalment of ₹ 4.80 crore to it. However, KCEL sought cost escalation of ₹ 55 crore. Eventually, NIOT cancelled (May 2013) its contract with KCEL and encashed a bank guarantee of ₹ 14.40 crore submitted by the firm.

Based on estimate submitted (June 2013) by NIOT, LA submitted a revised proposal (November 2013) to MDWS seeking approval for total cost of ₹ 181.27 crore. However, Ministry constituted (December 2014) a Technical Committee to examine the techno-economic aspects of the proposal. The Committee recommended (June 2015) project cost of ₹ 280 crore. The proposal was still under consideration as of February 2016.

NIOT received funds of ₹ 59.28 crore³⁷ from LA and earned interest of ₹ 33.14 crore on the same. Besides, NIOT also had the amount of ₹ 14.40 crore towards encashment of bank guarantee from KCEL. NIOT incurred an expenditure of ₹ 37.54 crore³⁸ on the project. The balance amount of ₹ 69.28 crore remained idle with NIOT.

Audit observed that NIOT neither conducted detailed survey of the locations nor assessed the techno-economic conditions before committing to the project initially. Further, NIOT committed large scale commissioning of desalination plants at eight locations even though its mandate was limited to providing technical services. NIOT also failed to assess its manpower position to ascertain whether such extensive work could be effectively and efficiently supervised. Deficiency in planning the project resulted in frequent revisions in the scope of work as well as cost of the project, delay in project execution and wasteful expenditure of ₹ 4.32 crore on the non-functional plant at Andrott island.

³⁶ including project cost of ₹ 96 crore and charges for project management

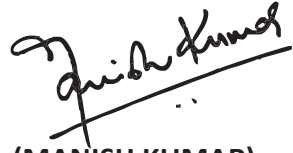
³⁷ ₹ 26.60 crore + ₹ 32.68 crore

³⁸ ₹ 10.36 crore (Minicoy Island) + ₹ 16.50 crore (Agatti Island) + ₹ 4.32 crore (Andrott Island) + ₹ 6.36 crore for others and first milestone for execution at the six islands selected.

MoES stated (February 2016) that desalination plants could not be commissioned on time due to difficult site conditions, remoteness of islands and administrative procedures to be followed for approvals.

The reply of MoES is not acceptable as the objective of providing drinking water to people living in four out of six Islands planned under the project remained unachieved even after a lapse of more than six years mainly due to deficiency in planning, frequent revision in the scope of work and cost of the project and delay in project execution.

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