

# ASSESSMENT/EVALUATION REPORT ON MAJOR RESEARCH PROJECT

Sponsored by

University Grants Commission

Bahadurshah Zafar Marg, New Delhi- 110002

## A: DETAILS OF PROJECT

Title of the project	Identification of sources of Groundwater Salinization in parts of Nagapattinam and Karaikal coastal aquifers: a Geophysical, Hydrochemical and Isotopic approach
Total duration of project	03 years
Project status	Completed
Subject	Hydrogeology
File number (Ref.No.)	F.41-1036/2012
Grants approved	10, 04,620/-

## B: EVALUATION REPORT OF EXPERT MEMBER

1.	Name of Principal Investigator	Dr.K.Srinivasamoorthy
2.	Designation	Associate Professor
3.	Address of Principal Investigator	Department of Earth Sciences, Pondicherry University
4.	Whether work is focused on the title of the sanctioned project	Yes, the work is well focussed on the title of the project.
5.	Whether original work is done	Yes, the work is original with additional input from modelling studies.
6.	Whether significant contribution made	Yes significant contribution has been made in view of groundwater salinization demarcation using multiple techniques.
7.	Whether proposed work have relevance to the society/scientific community	Yes, Groundwater salinity is one among the major issues faced by coastal regions. The studied area karaikal and Nagapattinam coastal aquifers is already marked with increasing population, industrial activities and agricultural activities which has significantly influenced the water quality in the way of increasing salinity. Understanding salinity evolution of groundwater can aid in improving the Hydrochemical processes for the promotion of sustainable water Resources development and management.
8.	What type of contribution found in the final report: theoretical/practical. If there are theoretical contribution given by the Principal investigator whether real applications are given	The study attempted is oriented towards both theoretical and practical components. The study demarcated multiple sources of salinization that influences and destroys agricultural yield and lands, Jeopardize livelihoods by making water unfit for human consumption and increase in costs of industrial processes. All this factors depend on how present

		groundwater is utilised and how it should be utilised to meet the future demand. This study will contribute to provide such essential information to the peoples to promote and enhance their understanding about the sources and pathways of groundwater salinity. The study also gives information about the present status of salinization and its influence on the public so as to develop proper measures to mitigate or adapt to groundwater salinity.
9.	Whether theoretical contribution and their results and findings are published.	Yes, theoretical results and findings have been published in Journals. A total of five publications have been made which converse in detail about theories attempted, conclusion made from each theories along with proper discussions.
10.	Whether results and findings are significant	Yes, the results and findings are significant so that it can be considered as such by the stake holders for effective management and development of groundwater resources in their area.
11.	Whether the significant publications made by the Principal Investigator in peer reviewed Journals	A total of 5 publications have been made by the PI in Scopus indexed Journals which deals in detail about the techniques adopted along with discussion and conclusions.
12.	Number of publications made by PI in standard Journals	5
13.	Whether contributions made by PI is sufficient	Yes, the contributions made are sufficient
14.	The findings and results of the sanctioned Major research project are justifiable	Yes, the results and discussions made in the major project are justifiable. Integrated techniques have been attempted to isolate groundwater salinity which is the first of its kind.
15.	Whether completed project work meet the proposed objectives	Yes, the results and discussions made in the major project are in similarity with the objectives framed for the project.
16.	Give your brief comments on the overall work of the project	The study area being influenced by saline intrusion and contamination due to intensive groundwater exploitation. Understanding salinity evolution of groundwater is essential for the proposed study area. For which salinization sources were isolated using resistivity, modelling and hydrochemical techniques incorporating major, trace, REEs and isotopes that influences the salinity and other geochemical processes activated in the study area. The study will contribute essential information to the stake holders to understand the sources and pathways of groundwater salinity and allied hydrochemical processes. The study also suggests subtle measures for proper development and management of coastal aquifers to mitigate or adapt to groundwater salinity.
17.	Any specific comments	NIL

18. Indicate your overall assessment of the project	8 out of 10
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Date: 07.05.2018

Place: Gandhigram

Name & address of Expert

Dr. B. Gurugnanam

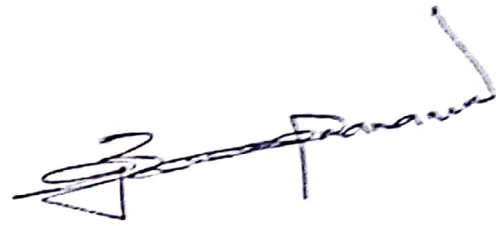
Professor and Director

Centre for Applied Geology

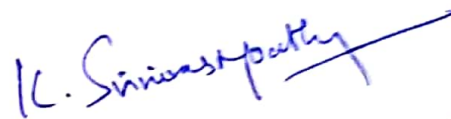
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