

## **G-1 Synthetic Studies on Evaluation of Desertification and Technologies for Desertification Control (Final Report)**

**Contact person** Hideyuki Shimizu  
Research Program Manager  
Center for Global Environmental Research  
National Institute for Environmental Studies  
Ministry of the Environment  
16-2 Onogawa, Tsukuba, Ibaraki 305-8506, Japan  
Tel: +81-298-50-2347 Fax: +81-298-58-2645  
E-mail: hshimizu@nies.go.jp

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This research project aims to evaluate the desertification and seek for technologies effective to control the desertification. It comprises "synthesization of desertification researches" and "field researches addressing each of typical desertified regions in the world". The results obtained in this project are summarized as follows:

(1) To grasp the desertification process systematically, we developed the framework and modeling method of "Desertification Integrated Model" which should be linked to "Benchmarks and Indicators" of UNCCD. Further, we conducted "literature review and questionnaire survey" for systematization of diverse technologies to combat desertification and developed the technologies matrix, with which evaluation method was examined.

(2) In researches conducted in China, we clarified the effectiveness of prevention technology for desertification and developed the evaluation method of desertification and impact to environment for the land use planning. We also estimated the new farm management methods not only for reducing the impact to land but also for increasing framers revenue.

(3) In researches carried out in Western Australia, some species were selected as pioneer plants, a technology to remove salts from the soil with plants and ecoplanting technology were developed, and cultivation method of some useful plants in salinized locations were developed.

(4) In researches addressing Sub-Saharan West Africa, a multi-disciplinary research was carried out in three different sites in this region: the main results were development of a monitoring method of desertification status, analysis of problems in agricultural and socio-economical conditions, and so on.

(5) To evaluate the effectiveness of activities and technologies to combat desertification in China, relevant literature were collected from China and other countries and reviewed to evaluate their effectiveness for desertification control. Databases were established which indicate the results of this study effectively.

(6) To establish appropriate desertification indicators in China, relevant literature were reviewed, and databases were established with them. Also, a desertification indicator was proposed to evaluate the desertification degree of grasslands in a Chinese semi-arid region.