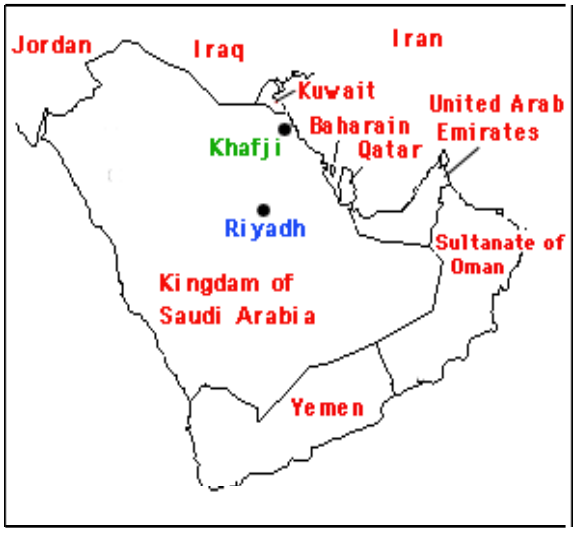
Saudi Arabia News (1)

Part 1: On Demonstration Project of Large Scale Desert Greening

n this new series we will report on the Demonstration Project of Large Scale Desert Greening in Saudi Arabia(KSA) supported by the Petroleum Energy Center, Japan (PEC), using a subsidy for technologies on petroleum refining, etc. in which AAI has been involved since the end of January 1998. This project has been implemented as a part of strengthening the collaborative relationship between Japan and oil producing countries. Initially only the demonstration project was planned in Khafji alone(refer to the attached map), but following a request from KSA it was later decided to include some research activities as well. The counterpart is Riyadh-based King Abdulaziz City for Science and Technology (KACST), which is equivalent to the Science and Technology Agency of Japan. KACST is 23 years old, although it only came to be known by its current name 14 years ago. As a research institute, KACST has seven research centers, including the Natural Resources and Environment Research Institute (NRERI), the direct partner for this project. NRERI accommodates research fields such as ecology (fauna and flora), hydrology, agronomy (cultivation and irrigation), inland fisheries, remote sensing, etc. This is the only research center (under KACST) which is capable of covering almost all of the themes necessary for our project. The research activities are carried out at the KACST HQ in Riyadh and the KACST Muzahimiah Experimental Farm near the capital, while the demonstration are carried out in Khafji as stated above. The current project consists of six major themes as shown in the table below. One primary investigator and co-investigator are assigned to each of the themes, and currently three Japanese researchers and five local researchers from KACST are together engaged in research and demonstration.



Map of the Arabian Peninsular

KACST HQ

Theme	Activities
Sewage treatment technology (KACST HQ in Riyadh)	- Development of membrane and sewage treatment technologies. - Development of water recycling system for removing high ammonia nitrogen.
Water-saving irrigation technology (Muzahimiah Experimental Farm)	- Development of water-saving irrigation technology using porous tubes. - Impermeable layer formation technology using polymer solution. - Development of water-saving irrigation technology by using water holding materials. - Testing and selection of water-saving equipment for irrigation systems and sewage.
Development of greening technology (Muzahimiah Experimental Farm)	- Development of greening technology by use of symbiotic micro-organisms. - Development of greening technology by use of fertilizer. - Utilization of soil mixture with various organic compositions for dry land greening - Screening of salt-and drought tolerant plants in Saudi Arabia. - Development of seedling production by using automatic system.
Environment and energy technology (KACST HQ, Riyadh)	- Development of solar power technology. - Development of database for land utilization, and vegetation, by use of remote sensing and GIS.
Waste water treatment technology (Khafji experimental site)	- Development of waste water treatment technology.
Technology for cultivating salt-, drought-, and heat-tolerant plants	- Investigation of technology for lawn cultivation. - Investigation of technology for growing dates and other tree plant species.