

New Series: Lessons Learned from Mangrove Ecosystems

Part 1: Mangroves and AAI

Many people seem to think that the word mangrove applies to one individual tree species, but that is wrong. It is a general term covering various highly salt-tolerant plant species which grow in inter-tidal zones, that is to say in the areas which are submerged at high tide and dry at low tide. It is said that there are some 70-100 species of mangroves worldwide. They are widely distributed in Southeast Asia, Africa, the Pacific islands, North America, Central and South America etc. They can be also found in the Arabian Peninsula where a lot of AAI's work is focused. In Japan they mainly grow in the area south of Okinawa, for example on Iriomote Island.

AAI has had a lot to do with mangroves in its work thus far, dating back to the early 1980s when it was involved in the mangrove plantation pilot project led by aquaculture experts in UAE. Later on, together with some researchers, AAI started the MAMAS (Marine Aquaculture and Mangrove Afforestation in Sabkha) project, to gather information and knowledge on afforestation in high-salinity wetlands found in arid countries. Most recently, from April 2000, in response to a request from the Oman Ministry of Regional Municipalities,



Mangrove forest in Sur Region, Oman

Environment & Water Resources (MRME&WR), an AAI staff member has been working as a JICA expert in Oman on the "Mangrove Afforestation Project." His main tasks include technical training (selection of suitable afforestation sites, seedling production, transplanting, cultivation management etc.) for counterparts, as well as policy advice regarding nature conservation and management. Along with this project, also upon request from MRME&WR, in June 2002, JICA started categorization of afforestation, conservation and development activities in major creeks with due consideration given to environmental, social and economic impacts, as well as a master plan survey regarding mangrove restoration, conservation and management to draw up a development project for each creek. AAI has been involved in this latter work as well as being a part of the joint venture.

From the conservation viewpoint, mangrove ecosystems are seen as highly vulnerable just like coral reefs and other wetlands. Many mangrove ecosystems are found in those wetlands which are protected under the Ramsar Convention, and in recent years, like other wetlands, they have been drawing significant attention as biodiversity hot spots. The importance of various other functions of mangrove forests (e.g. protection of coastal regions from natural disasters like cyclones, marine resources nurseries, coastal shields etc.) have gained wide recognition today, and there are many projects going on to conserve or rehabilitate them. On the other hand, loss of a great deal of mangrove ecosystems remains a serious problem today as they are being destroyed for construction of shrimp farms or for other regional development activities.

In this new series we would like to discuss the mangrove's historical, social and economic significance, based on AAI's long-term experience involving mangroves (especially in the Gulf region of Oman, UAE and their neighboring areas). We would also like to consider the future of our relationship with mangrove ecosystems from the viewpoint of environmental conservation and regional development.



Development of aerial roots and mangrove flowers

(Shinas Region, Oman)