

AAINews

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On the Banks of the Tana River

Jambo! That welcoming call I have missed for so long! I have come back to Kenya again after a considerable interval away.

Back in 1991 and 1992 I took part in the national farm construction project in Kenya's Tana Delta. I was in charge of environmental impact assessment (EIA) at the pre-construction stage. The aim of this project was to develop the delta at the mouth of the country's largest river, the Tana, in order to start mechanized rice farming there. The project was to support the Kenyan authorities in various aspects related to this delta development, i.e. not only the construction but also the management of the farms, as well as the conservation of the surrounding environment. The target area is an important habitat for wild birds and animals, and it was crucial to carry on the development project while ensuring co-existence with the wildlife. Therefore, the pre-construction EIA team consisted of specialists from the University of Nairobi, the National Museum, as well as wildlife conservation NGOs. On-site visits and planning of the monitoring scheme were conducted in cooperation with the Kenyan Wildlife Services and UNEP.

Last summer El Nino caused floods in the Tana basin, and the farm construction project, which had been almost completed, was badly damaged. Therefore, it was decided that another on-site assessment is carried out to plan restoration of the project site, and this summer I was given another opportunity to visit the Tana Delta as part of the assessment team. The farmland on the project site today is perfectly arranged, with a nice management office, rice mills and workshops for agricultural machinery, which made me feel that a long time had passed since I had been here last. The local people seemed to have just overcome the hardships of the flood, and I could hear them singing cheerfully in every corner of the village. However, the remains of the incident could still be found in many places. Part of the surrounding forests had been destroyed in order to repair broken houses or to make canoes which served as the only means of transport during the flood, and there were concerns about the negative impact on the wild life. Also in areas where floodwaters don't recede for a long time, forests and fruit farms are beginning to show signs of partial damage. Furthermore during the floods cholera spread and the death toll of livestock due to drowning and disease was significant.

In minimizing the damage caused by the flood, not only the local clinic built under the project but also cars and boats belonging to the project played a significant role by transporting relief goods and medicines. Under the project there are some divisions specialized in different aspects of the project such as environment monitoring and tree plantation, which have been carrying out their tasks from the beginning. Some NGOs are also starting plantation activities in order to restore the forests destroyed by the flood, and the project is now considering support for such activities as well. I hope that this Tana River Delta development project, which has been promoted with support from Japan, can carry on developing activities with much consideration for the environment, so that it can present a good example of environmentally friendly agricultural development.

(By OHNUMA in Kenya)



Making canoes



Inundated mango field

Coexistence of Nature and Humans - the Path towards the 21st Century

Part 1: Introduction

"Looking back through history, it is only very recently that we have turned our eyes to, and started making attempts for, the safeguarding of life systems and the biodiversity of this planet Earth. I pray for the great success of all those who make such attempts. Because there is no other way left for us." (Bill Morrison, Permaculture, Preface to the Japanese edition)

One of the most important tasks for the 21st century is addressing the 'environmental problem'. In considering problems related to natural environment and agriculture in particular, we can think of various key phrases such as 'conservation of biodiversity', 'coexistence of nature and humans', 'society with self-contained circulation of resources', 'environmentally sound agriculture', 'organic farming', and 'attempts to link urban and rural areas'. Phrases such as 'rural life', 'new career in agriculture for middle-aged people and senior citizens', and 'agricultural life' are frequently used in today's media. However, it is also a clear fact that 'agriculture', 'rural life' etc. are not something easily done, even if they are easily said. One can see it in the fact that in Japan in past years organic farming has been replaced by chemical dependent farming, the number of farmers has decreased drastically and a large portion of the population has become concentrated in cities. This is the same process that can be observed today in developing countries.

As a proponent of 'agricultural life' Dr.Katsuo Ohtsuka claims it is not necessary, and indeed not possible, to lead a 100% agricultural life by devoting all one's time to agriculture. One can start by spending 1% of one's daily life in a natural environment or engaged in farming, and then gradually increase the amount of such time one spends. Everybody can start by doing whatever he or she can do. The only way for a change might be to continue to let such activities accumulate. Also, what comes to mind when considering 'agricultural life' is the question as to the necessity of international competition for agriculture, as well as 'the relationship between agriculture, environment and development'. Needless to say, Japan's paddy fields play a significant role in the soil conservation of the mountain regions, and their value cannot be measured solely in economic terms e.g. the price of rice. If the value of Japanese rice is judged only from the viewpoint of international competition, Japanese agriculture dwindles and at the same time environmental destruction continues with the significant possibility of paddy fields, forests and crop fields falling into neglect. The issue is related to the quest to find 'real affluence'. 'Breakaway strategies' such as a departure from the purely money dependent economy, self sufficiency, a gentle form of isolationism, and a withdrawal from the WTO system may be an important means for survival. Of course this situation is not relevant only to Japan. It is relevant to farmers of many developing nations who have become entangled and absorbed in the world economy by growing cash crops.

'The problems of urbanisation and rural depopulation' is another important theme. There are many causes for the depopulation in rural areas, aside from the attraction of material wealth in urban areas and the dislike of agriculture as an occupation. One of the causes might be the somehow uneasy life in rural areas, with overly close relationships with neighbours which some people might find troublesome or oppressive. On the other hand, there are many people in urban areas who wish to live in rural areas. Some people seek to become 'weekend villagers' without constantly living in a village. Of course there are also people who wish to be engaged in farming in rural areas more seriously. 'Communication between cities and villages' would be necessary to link such people to farming villages.

This new series will report on activities that pursue the coexistence of nature and humans in Japan and abroad, not only from already existing written materials but also from our actual field research. And we intend to discuss the significance and future tasks of such activities, as well as their implications for Third World development. The cases reported in this series will not necessarily be representative of their kind or very successful. Some of them may have caught our eyes purely by chance. However, isn't it true that, in a sense, everything begins with a chance encounter, some sort of 'fate'? Nothing starts without facing something new.

"I see in the future an industrial society which respects the coexistence of nature and humans, that is centred around agriculture and which encourages agricultural life. If it is impossible to create such a society of agricultural coexistence, human beings will eventually face the risk of extinction." (Dr. Katsuo Ohtsuka, Economy in the Era of Coexistence, Preface)

Agriculture and Forestry in Pakistan (new series)

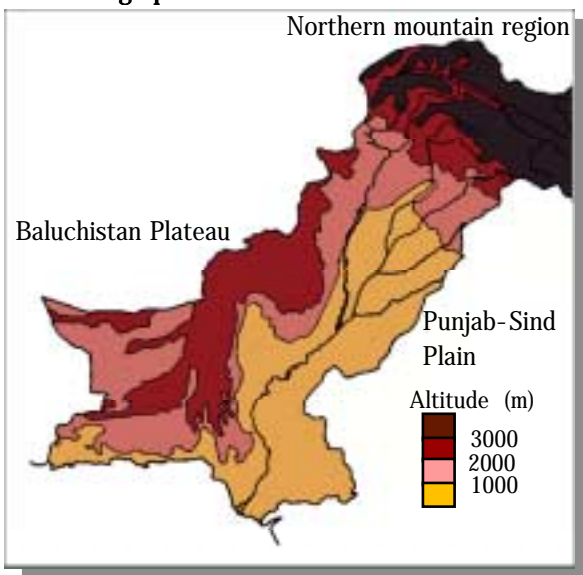
Part 1: Nature and agriculture in Pakistan

AAI has been involved in technical assistance activities in Pakistan, mainly for development study in the field of agriculture. As a result we have had several reports on Pakistan in AAINews. Viewing Pakistan as a whole, our experience is quite limited to certain areas of the country. However, in this new series we would like to take up issues in Pakistan again, to consider agricultural development in dry land in general and discuss the present form and future tasks of agriculture which make the most of the local environment and the particular characteristics of each region.

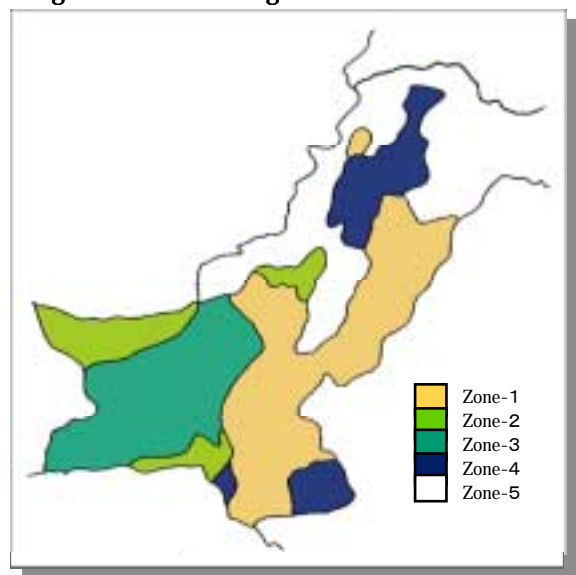
The territory of Pakistan extends from the coast of the Arabian Sea to the mountains in Central Asia. It borders Iran, Afghanistan, China and India, and occupies an area of 796,000 km² (almost twice the size of Japan). Geographically it can be divided into three regions: the northern mountain region, the Punjab-Sind Plain, and the Baluchistan Plateau. The high steep mountains in the north form part of the world's roof which ranges from the Hindu Kush in the west, to Karakoram, to the Himalayas in the east. The Punjab-Sind Plain is formed in the river basins of the Indus and its tributaries, and there is an irrigation system which is thought to be the world's largest, with a total length of 64,000km. The Baluchistan Plateau consists of the Sulaiman mountain range and other smaller mountain ranges which lie north-south to the west of the Indus River, and it forms the east wing of the Iran Plateau. It is a vast area with a low population density.

Although the Punjab-Sind Plain serves as Pakistan's granary, its annual rainfall amounts to no more than 500mm, making the area arid or semi-arid region. For this reason, the most important factor in agriculture in Pakistan is irrigation, and as shown in the figures below this country can be divided into five agricultural zones according to the kinds of irrigation available in each region. Zone-1 indicates the region where river irrigation is used on over 50% of the entire farmland, in Zone-2 river flood water is used for agriculture in over 50% of the farmland, in Zone-3 reservoirs or canals supply water to over 50% of the farmland, and in Zone-4 over 50% of farmland relies on rainfall. In Zone-5 the agricultural types of Zones 1 to 4 are mixed. Irrigation rates in Pakistan are almost the highest in Asia. Also, both the cultivation areas and per unit productivity have been expanded and improved for major crops such as wheat, rice, cotton, sugar cane and corn. Therefore, the important task now is to promote diversified agricultural activities aiming at revenue increase by increasing crop production, introducing fruit cultivation and cattle farming. Agricultural development, which takes advantage of the local environmental characteristics, will be a rational and reasonable strategy for this purpose.

Geographical features of Pakistan



Regional divisions of agriculture in Pakistan



Mini-series: AAI's challenge for database management (1)

Part 1: Databases at AAI

The use of computers (PC) has become widespread with surprising speed in recent years. Thanks to the advancement of computer technology today we can purchase PCs, which have more capabilities than earlier gigantic computers used to contain, and at reasonable prices. There is a whole range of application software for PCs and these can be used in a variety of ways, but one of the ways of making the full use of computer functions is database management.

The advent and popularization of the Internet have had a great impact on the world of database management. Although such tendencies had been observed even without the use of Internet, since Internet technology came into existence we have entered the era of 'information flooding', and now we have to think of how to access necessary information, and how to get rid of unwanted information, in the quickest and most efficient way. It goes without saying that the amount of data and information alone does not count for much. What is important is to be able to access the most needed, appropriate and valuable information.

In this sense, 'specialized databases', for example, containing data belonging to particular organizations or related to particular fields are very useful. A company's internal databases may include, for instance, an address database for recording and managing all the addresses (an electronic address book) necessary for the company, a personnel / technician database for their employees' employment histories and performance records, special skills and qualifications, or a database for employees' schedule management. A dry land database (containing data of dry land plants, references, etc.) may be an example of a database used for a specialized field. These specialized databases are naturally meant for certain users, and a high quality standard is expected of such databases.

Databases can be used in various fields for various purposes, but in this mini-series on databases we would like to deal mainly with those fields that are related to AAI, such as agriculture, forestry, regional development and environmental resources management. For a long time AAI has been handling data of various kinds and forms, and we manage databases of agriculture and forestry statistics, climatic data, soil and water quality analyses, plant resources, satellite images (remote sensing), GIS (Geographical Information System) etc. These databases can be roughly divided into three types: 1) statistical databases for climatic data and soil and water quality data; 2) card-form databases which deal with texts, figures and images (photos), such as a plant resources database; and 3) GIS-related databases including remote sensing and grid maps.

Type	Example of data	Example of software
Statistical database (table form)	Agricultural production statistics Climatic data Soil and water quality data	Excel, Lotus 1-2-3 Excel, Lotus 1-2-3 Excel, Lotus 1-2-3
Card-form database	Addresses Reference list Plant resources data Image data list	FileMaker, Access FileMaker, Access FileMaker, Access Fetch
Geographic Information System (GIS)	Grid maps Remote sensing Link between maps and statistical data	MF works IDRISI, Win ASEAN ArcView

What is important here is the 'handiness' of the databases. One of the necessary conditions of a good database is that it can be used easily and comfortably by anybody, without having to consult specialized operators or hard-to-understand manuals.