

**HOMESTEAD FORESTRY
FOR RURAL COMMUNITY
DEVELOPMENT IN
BANGLADESH**

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Bangladesh is one of the most densely populated countries (755 persons per sq. km) in the world with an area of about 14400 sq. km. (BBS, 1993). In Bangladesh designed forests land is only about 17% of the land (Bhuiyan, 1994 a). Again these forests are unevenly distributed throughout the country. Out of 64 districts, 28 do not contain any government managed forest, where there is only 2% tree cover but the demand for forest produces is remarkably high (Bhuiyan, 1994 b). Productivity of the government forests is extremely low (0.5–2.5 m³/ha/yr, ADB, 1993). Despite a very low per capita consumption of wood (fuel wood 0.06m³ and timber 0.018m³, Bhuiyan, 1993) the supply from the forest is grossly inadequate. There remains a wide gap between supply and demand of forest products (ADB, 1993). With the increasing population and shrinking forest resource base the gap will continue to widen in the future. Rural homesteads are by far the most important resource base in this respect. In Bangladesh the homesteads are small in size. About 80% of the homesteads comprise of less than 0.16 ha and 17% of the households do not have their own homestead (Alam and Mohiuddin, 1992). The total size of the homestead is about 270000 ha (Ohlsson, 1984). None the less 48% of saw and veneer logs and up to 70% of fuelwood and 90% bamboos come from village homesteads (FAO, 1982). Homesteads are the integral part of family subsistence living in the rural community supplying food, fuelwood, timber, fruit, shade etc. Akter *et al* (1997) reported from a broad-based survey that homestead forestry contributes about 22% of average annual income of the studied households. The rate of extraction from village forest is 8.9% but the rate of increment is 5% (FAO, 1982). Considering the unique role and immense potential of the village homestead forests in our economy, it is indispensable to ensure their replenishment and sustained production.

Bangladesh has an estimated 68,000 villages covering a total area of 386,000 ha (Hassan and Mozumder, 1990). The population recorded in 1991 stood at 108.8 million in which the rural population was 84.8% (BBS 1993). Typically with the establishment of a house the planting is initiated. It is a general tendency to plant fruit trees in and around the homestead. The farmers select the location to be planted based on the characteristics of the plant and its importance. Multi-layered structured and species diversity are two distinctive features of homestead forests. The upper stratum is dominated by guava,

banana and other shrubs and the ground layer is planted with variety of annual vegetables crops and spices. The diversity of economic plants rather than individual number of plants per species are a characteristic feature.

About 183 species (excluding bamboo) comprising of 136 genera under 48 families represents village trees in Bangladesh. Among them leguminosae ranks top of the list and is represented by 33 species (Alam *et al.*, 1996). Floristic elements of this flora consists mostly of native and exotic species. About 50% species are exotics and still being introduced. Alam and Mohiuddin (1992) suggested that the tree species in homestead area should be selected on the basis of demand oriented criteria, adaptability to site condition, multipurpose in use, fast growing, tree management and ecological effects.

For developing indigenous knowledge local participation in research should be the first and foremost condition. According to Rochleau (1987), local control of change often matters more than rapid transformation and new technologies are often most successful when built upon existing practices and knowledge. Effective participation provides not only a means of integrating indigenous knowledge and perspective into development process, but also an environment that encourages better understanding through dialogue and participation may empower farmers to pursue their own research and make the activity of individual research and extension worker more relevant to farmers' circumstances.

Indigenous management techniques of homesteads were investigated using different PRA methods by Millat-e-Mustafa (1996). Homestead provided more than quarters of the required planting materials, as Millat-e-Mustafa noted, to regenerate home garden plants. Mother trees were selected for fruit species only. Farmers practised simple cultural operation. The fertility of home gardens was maintained naturally from leaf litter, animal dung, kitchen wastes and mud of fish pond. There was a clear separation between man and woman for management. Farmers spent only 5-12% of their labour and 4-7.5% of their active time in homestead.

If indigenous knowledge is analysed and synthesised with scientific, it is found that farmers have much more intimate experience of their production practices than external professionals. They have developed an in-depth understanding about the ecology of those practices (Barrow, 1992). The knowledge held by farmers can provide a resource for science (irrespective of the participation of farmers in the use of that knowledge). In other words, the ecological understanding developed by one farming community may be relevant to addressing the constraints encountered by other communities. As a result investigating local knowledge may be a powerful and efficient means of rapidly filling gaps in scientific understanding about homestead forestry. So, amalgamating specific local knowledge and general scientific knowledge may

be more powerful in designing appropriate land use practices than the use of either alone. Indeed, it has been claimed that homestead forestry is in a unique position to learn from traditional knowledge and practice given the long history of traditional homestead forestry practice as compared to relatively to a relatively recent scientific interest.

Walker *et al* (1995) distinguished following three broad categories of approaches to incorporating indigenous knowledge and perspective into development:

- Approaches based on the active participation to local experts in development activities;
- Interaction with local people to generate descriptions of actual practice and constraints on the system in order to improve development professionals understanding of the target community's needs.
- Interaction with local people to investigate indigenous explanation of the ecological functioning of the system to facilitate the integration of local and scientific knowledge and produce a more complete and useful resource base for use by professionals or local people in the incremental improvement of land use systems.

Village homesteads provide about 80% of fuelwood and 90% of bamboo requirements for the rural community of Bangladesh. This contribution of traditional indigenous homesteads is clearly significant.

For documentation and application of this indigenous knowledge as well as for sustained use of the homestead forest products the followings can be considered:

- Understanding of the knowledge and expectation of the target farming communities can improve the communication and facilitate active partnerships between target communities and professionals in the development process.
- Effective identification and prioritisation of research objectives with active involvement of target communities and dissemination of knowledge to target farming communities and improved monitoring and evaluation of research activities.
- Understanding indigenous knowledge in conjunction with understanding practice in the context of social, economic, cultural and environmental variables is an important means of understanding needs and constraints facing farmers.
- Indigenous knowledge provides a useful source of understanding of the functioning of homestead forestry practices that may be complementary to scientific knowledge.

References

- ADB. 1993. *Forestry Master Plan*. Forest Production, Government of Bangladesh, Ministry of Environment and Forest. Government of Bangladesh, Dhaka, p-66
- Akhter, S., T.K. Nath and M. Mohiuddin. 1997. Village Homegardens in Chittagong: Socioeconomic aspects and tree species consumption. *Chittagong University Studies-Science*, 21 (1): 63-72.
- Alam, M.K. and M. Mohiuddin. 1992. *Some Potential MPTS for homesteads in Bangladesh*. BARC-Winrock International, BARC, Dhaka, 24p.
- Alam, M.K., M. Mohiuddin and S.K. Basak. 1996. *Village trees of Bangladesh: Diversity and Economic aspects*. Bangladesh Forest Research Institute, Chittagong, pp 21-36.
- Barrow, E.C.G. 1992. Building on local knowledge: the challenge of agroforestry for pastoral areas. *Agroforestry Today*, 3(4): 4-7.
- BBS. 1993. *Statistical Pocket Book of Bangladesh*. Bangladesh Bureau of Statistics. Ministry of Planning, Government of Peoples' Republic of Bangladesh.
- Bhuiyan, A.A. 1993. Social Forestry in Bangladesh: Problem and Prospect. In: T.B.S. Mahat and S.Mr. Amin (eds.), *Participatory Forestry Perspectives*. Agroforestry Information Series 3, BARC-Winrock International, Dhaka, Bangladesh, pp. 25-26.
- Bhuiyan, A.A. 1994a. *Forest Land Agroforestry: the North Bengal Experience.*, BARC- Winrock International, Dhaka, Bangladesh, pp. 33.
- Bhuiyan, A.A. 1994b. Social Forestry as a development strategy. Proceedings of a national workshop held on 5-10 October 1991. FAO/FTPP. Edited by Rokon Uddin Ahmed, IFCU, Chittagong.
- FAO. 1982. *Village Forest Inventory, Bangladesh: Project Funding and Recommendations*. UNDP/FAO, BGD/78/020. 25p.
- Hasan, M.M and A.H. Mazumdar. 1990. An exploratory survey of trees on homestead and waste land of Bangladesh. *ADAB News*, March-April, 1990.pp 26-32.

- Millat-E-Mustafa. 1996. The Ecology and management of traditional homegardens in Bangladesh, *Newsletter of National Agroforestry working group (NAWG)*, BARC, Dhaka. p.8.
- Ohlsson, B. 1984. *Composite Planning in Bangladesh*. Mimographed consultancy report for proposed employment Sector Programme in Bangladesh by ORGUT AB, Stockholm, 152pp.
- Rocheleau, D.E. 1987. The user perspective and the agroforestry research and action agenda. In: H.L. Gholz (ed.), *Agroforestry: Relations, Possibilities and Potentials*. Martinus Nijhoff Publishers, Dordrecht, The Netherlands. 59-87pp
- Walker, D.H., F.L. Sinclair and B. Thapa. 1995. Incorporation of indigenous knowledge and perspectives in agroforestry development. *Agroforestry Systems*, 30: 23-248.

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