

**INTEGRATED WATERSHED MANAGEMENT  
OF INLAND VALLEY-ECOTECHNOLOGY  
APPROACH**

**PROCEEDINGS OF THE INTERNATIONAL WORKSHOP**

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## FOREWORD

Rice has over the past 30 years or so become a major staple in the Ghanaian diet. However, the greater proportion of the grain, estimated to cost about US\$100 million, is imported every year. The Ghana Government is determined therefore, to raise the level of production in the country in order to attain higher level of self-sufficiency and reduce importation.

In Ghana four main rice production systems can be found. These are: (i) rainfed upland (ii) rainfed lowland/hydromorphic, (iii) inland valley swamps and valley bottoms, and (iv) irrigated paddies. The rainfed system is beset with many production problems and hence unreliable while the uplands are also being rapidly degraded. The inland swamps including the valley bottoms and floodplains represent an important agricultural asset that can contribute to food security and poverty alleviation.

In view of the experience of the Japanese in the development of rice fields using sawah (a leveled and bunded rice field with inlet for irrigation and an outlet for drainage), the government of Japan was approached for assistance in developing simple, low cost and environmentally benign technologies for managing the inland valleys. This culminated in the signing of a joint technical agreement in August 1997 by the Governments of Ghana and Japan through the Council for Scientific and Industrial Research (CSIR) and Japan International Cooperation Agency (JICA) which established a project on "Integrated Watershed Management of Inland Valleys". The main objective of the project was the development and testing of environmentally friendly and sustainable technologies based on integrated watershed management and participatory approach for the production of rice and other crops by resource-poor farmers.

The farmer participatory research which investigated into areas such as rice agronomy, soil and water management, use of forest/plantation systems to recycle nutrients in the watershed and the socio-economics of developing watersheds for rice production has demonstrated that the sawah technology can play significant role in helping the government achieve the noble target of reducing rice importation. Since the adoption of the sawah can increase rice production by more than 50 folds, then the post harvest problems of milling, storage, packaging and marketing also need to be looked into seriously and urgently by researchers. Furthermore, researchers should move from demonstration sites to farmers fields so as to enhance widespread adoption for improved livelihood.

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