

has been achieved during the past decade, the productivity response and sustainability of irrigation systems have been constrained by problems of water-logging and salinization. Financial and market constraints are also a common problem. Soil erosion in the upstream watersheds, mismanagement and over-exploitation of the natural resources [in downstream watersheds] and acute competition for water, have all influenced the extent of poverty, hunger and famine in the developing nations. Soil erosion caused by overgrazing of livestock in uplands is also often responsible for the siltation of lakes. The development of irrigation schemes is most often not supported by environmental impact assessments identifying hydrological consequences within watersheds and due to interbasin transfers, nor by the assessment of social impacts on peoples in river valleys.

### Objectives

48. An International Action Programme on Water and Sustainable Agricultural Development (IAP-WASAD) has been initiated by FAO in cooperation with other international organizations. The main objective of the IAP-WASAD is to assist developing countries in planning, developing and managing water resources on an integrated basis to meet the present and future needs for agricultural production, taking into account environmental considerations.

49. The IAP-WASAD has developed a framework for sustainable water use in the agricultural sector and identified priority areas for action at national, regional and global levels. Quantitative targets for new irrigation development, improvement of existing irrigation schemes and reclamation of waterlogged and salinized lands through drainage for 94 developing countries are estimated on the basis of food requirements, agro-climatic zones and availability of water and land.

50. [Freshwater fisheries in lakes and streams are an important source of food. Utilization of water resources for other purposes should minimize their impact on freshwater ecosystems and fish populations and on the people who depend on these ecosystems for food security. Objectives for livestock, inland fisheries and aquaculture to be inserted. References: PC/61 and PC/69.]

51. The projections for irrigation are as follows:

[By the year 2000:

- a. 21 million hectares of new irrigation development
- b. 17 million hectares of improvement/modernization of existing schemes
- c. 10 million hectares installed with drainage and water control facilities
- d. 15 million hectares of small-scale irrigation water programmes and conservation.]

52. The development of new irrigation areas at the above level may give rise to environmental concerns as this may imply the destruction of wetlands, water pollution, increased sedimentation and a reduction in biodiversity. Therefore, new irrigation schemes should be accompanied by an environmental impact assessment in case considerable negative environmental impacts are expected and also depending upon the scale of the scheme. Before developing new irrigation schemes, efforts should be made towards a more rational exploitation of existing schemes, including increased efficiency and productivity. Technologies for new irrigation schemes should be thoroughly evaluated, including their potential conflicts with other land uses. The active involvement of water users groups is a supporting objective.

53. [Quantitative targets for livestock, inland fisheries and aquaculture to be inserted. References: PC/61 and PC/69.]