

## Activities

54. [Countries, especially developing countries, according to their possibilities and with the support of the international community and cooperation of the private sector and NGOs, could undertake the following activities to protect their water resources from depletion and degradation:]

### a. water use efficiency

- increase of efficiency and productivity in agricultural water use for better utilization of limited water resources
- strengthening of water and soil management research under irrigation and rainfed conditions
- monitoring and evaluation of irrigation project performance to ensure, *inter alia*, the optimal utilization and proper maintenance of the project
- support to water users groups with the aim to improve management performance at the local level
- supporting the appropriate use of relatively brackish water for irrigation

### b. waterlogging, salinity control and drainage

- introduction of surface drainage in rainfed agriculture to prevent temporary waterlogging and flooding of lowlands
- introduction of artificial drainage in irrigated and rainfed agriculture
- encouragement of conjunctive use of surface and groundwaters, including monitoring and water balance studies
- practising of drainage in irrigated areas of arid and semi-arid regions

### c. water quality management

- establishment and operation of cost-effective water quality monitoring systems for agricultural water uses
- prevention of adverse effects of agricultural activities on water quality for other social and economic activities and on wetlands, *inter alia*, through optimal use of on-farm inputs and the minimization of the use of external inputs in agricultural activities
- establishment of biological, physical and chemical water quality criteria for agricultural water users and for marine and riverine ecosystems
- prevention of soil run-off and sedimentation
- proper disposal of sewage from human settlements and of manure produced by intensive livestock breeding
- minimize adverse effects from agricultural chemicals by use of integrated pest management
- education of communities about the pollution impacts of the use of fertilizers and chemicals on water quality and food safety

### d. small-scale water programmes

- development of small-scale irrigation, water supply for humans and livestock and for water and soil conservation
- promotion of local initiatives for the integrated development and management of water resources
- provision of adequate technical advice and support and enhancement of institutional collaboration at the local community level
- [promotion of a technical farming approach for water management which takes