

2 PART 2: PRESENT STATUS OF LANDUSE & SHORT-TERM TRENDS

2.1 Introduction

The growth of the rural population, but with insufficient parallel support to poverty alleviation and capacity building, is leading to the largely unplanned expansion of extensive agricultural landuse at the expense of forested land and wildlife habitats and a consequent negative impact on fisheries. Growing urban populations with accompanying economic aspirations and increased appetite for food, natural resources, also leads to agricultural expansion, diminution of the forested area, over-exploitation of the fisheries and atmospheric and water pollution from industrial wastes. To reverse this downward spiral to the benefit of both present and future generations, it is necessary to take the following actions in both rural and urban areas:

- agricultural sedentarisation accompanied by soil erosion control in uplands and highlands with slopes less than 25%;
- sustained yield forest and plantation management for production and community forests;
- community-based natural resources management with buffer zones surrounding biodiversity core zones and watershed protection forests;
- community-based sustained yield management of riverine, lacustrine and estuarine fisheries;

Conservation forest landscapes and their connectivity corridors for all countries in the Basin have been identified, some of them gazetted and some of these brought under more or less effective management. To conserve the long-term integrity of the biodiversity resources of the region, it will be necessary to establish a chain of inter-connected, effectively managed, wildlife sanctuaries and national parks surrounded by buffer zones, wherein the population is enabled by agricultural development and a share in income from forestry, to live above the poverty line without any further justification to trespass on the protected area.

In the Mekong Basin hunting and gathering can sustainably support no more than two persons/km². Pioneer swidden cultivation is untenable because of worsening watershed degradation. Cyclic re-occupance swidden cultivation can sustainably support no more than 20 persons/km², while erosion-protected rainfed arable agro-forestry can support up to 100 persons/km². Irrigated fields, on the other hands, when commanded by a year-round water supply delivered by a state-of-the-art canal network, with provision for drainage at will, can support in excess of 2,000 persons/km², albeit with atmospheric and hydrospheric environmental penalties inherent in mechanisation and the utilisation of imported fertilisers and pesticides.

Irrigation system rehabilitation, expansion and upgrading therefore is the key to restoring man/land balance in the Basin, provided that it does not expand into sensitive wetland habitats or potentially saline areas. To ensure the longevity of the irrigation water supply, concurrent attention must be diverted to stabilising landuse in the catchments through contouring, terracing, forest regeneration, land titling and the legalisation of incorporating income from village forestry into the farm family cash flow. Investment in irrigation *per se* is expensive, but when

viewed in the context of the number of people that it can feed, and the parallel economic returns from the sustained yield management of the forest land that irrigation development releases from agricultural pursuits, then the combined internal rate of return is quite attractive.