The major rivers of Africa, the Nile, the Congo, the Niger, the Zambezi and the Volta have all experienced varying degrees of hydro-development, often in order to control the perceived squandering of water resources that flow into wetlands or out to sea. These interventions aimed at the development of African economies have often backfired in spectacular ways. This has been due to the lack of understanding of the basic elements of floodplain ecosystem function. The construction of large dams, massive irrigation systems or the isolation by dikes or levees of rivers flowing through floodplains, have caused immense losses in development and to the local people of African floodplains as well as the degradation and outright destruction of floodplain resources and habitats. The impacts of climate change and other external factors are additive to the already existing problems of floodplain management.

Floodplains in the developing countries of Africa face a different set of challenges as opposed to those in developed countries. Most floodplains in the developed world are “functionally extinct” (Tockner & Stanford, 2002). In Africa, large populations live “close to nature” and as such, changes in the ecological integrity of floodplains have great impact on the quality of life of local peoples. The continuing growth in population pressure in Africa and the related socio-economic consequences can be considered to be the root cause of land and water use conflicts. These pressures require the urgent development and application of adaptive planning and management mechanisms.

Floodplains are vibrant systems that are in dynamic equilibrium with the constant flux of pulsing events occurring at different spatial and temporal scales within them. Some of these pulses are minor and some are major, all however are critical to the health of the system. The full appreciation of the dynamism inherent in floodplain systems requires an ecosystem based approach to management of natural resources. This in turn requires a hierarchical perspective with appropriate indicators. Apart from the fact that the most basic indicators of floodplain health such as river flows are not monitored in the African context, the complexity of floodplain systems means that no single set of hierarchical indicators, i.e., indicators based on biophysical systems or on area and boundaries will be sufficient. In Africa there is a need to have indicators that would allow analysis and management to be conducted at multiple scales, and integrated to adequately addresses the many issues arising from the ecosystem based approach. In doing this, it must be appreciated that complexity results from the interaction of several levels of organisation.

African floodplains provide a whole host of goods and services; these include floodplain recession agriculture, fish production, wildlife services and goods, livestock grazing, ecotourism, biodiversity as well as natural products and medicine. Not one of these goods and services has been valued completely. Estimates abound for individual floodplains, but no systematic evaluation for the economic valuation of floodplain services has been carried out continent wide nor has this been linked to floodplain resilience to stress. It is this lack of information on the economic value that has been a major contributory factor in the destruction of floodplains. Decision makers and politicians see floodplains, as areas without use, to be “developed”.

Many of Africa’s river basins are transboundary, often with six or more nations sharing one river. This adds another layer of complexity for the management of floodplains. The lack of effective regulatory agreements, the lack of effective institutional structures for Integrated Water Resource Management (IWRM), the lack of the political will by Africa’s leaders to enforce those agreements and regulations that do exist all contribute to a dismal future for Africa’s floodplains. A major contributing factor is the lack of capacity and skills to first build up the information base needed for the real understanding of floodplains and then the critical mass of researchers and managers who can actually carry out IWRM. The design of many donor funded projects based on the principles of IWRM, do not adequately address the capacity building issue, leaving governments eternally in the hands of consultants and international non-governmental organisations.

To move forward in the research and management of African floodplains, models of ecosystem function with appropriate indicators need urgent development, capacity for IWRM needs to be built, the policy framework surrounding floodplains needs to be developed and harmonised using the basin approach and finally politicians and decision makers need to be educated on the true value of floodplains.

Reference