

Preface

As far as water resources are concerned the African continent presents very contrasting situations. Extensive arid regions as well as extensive rainforest regions with heavy and sometimes excessive rainfall are found there.

In addition to this spatial heterogeneity, recent events have shown that water availability can undergo very significant fluctuations with time. During the 20th century dry and wet periods have alternated in West, East and southern Africa. These periods have not necessarily been concurrent in different regions.

This important spatial and temporal variability creates, for the whole continent, numerous problems in all the areas of water resources management, namely, traditional and irrigated farming, hydroelectric production, domestic consumption, without mentioning risks related to floods in rural and urban areas. In the environmental domain these fluctuations might lead to serious disturbance for the fauna and flora of Africa.

In the particular case of the Sahelian region and, more generally, of West Africa, it has been subjected to a drought for more than 25 years, which has brought about a marked decrease in rainfall and consequently in runoff.

Considering such a phenomenon the question which arises is the existence of new hydrological conditions and therefore defining new standards in the matter of water resources availability.

Focusing chiefly on the 20th century the Abidjan'98 Conference contributes to reviewing the situation of water resources variability in Africa and its consequences. The following topics are dealt with:

- Variability of rainfall and flow regimes
- Rainfall-runoff relationship
- Human activities-environment relationship

Therefore the conference provides decision-makers and managers with a collection of scientific contributions to be taken into account before setting up any project dealing with water resources uses and management. Thus, it joins the world context of concerns over the relationships between Water, Development and Environment.

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