Geophysical Research Abstracts, Vol. 7, 11172, 2005
SRef-ID: 1607-7962/gra/EGU05-A-11172

Some aspects of water balance indicators in Western central Africa: example of the savannas in the Niari valley (Congo).

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Shrubby savannas of the Niari valley are an ecosystem form that have a weak predisposition to evapotranspirate water in the atmosphere. They seem to be a "reducing" environment of energy transformation. The interactions of the soil-vegetation-atmosphere system seem to be largely dependent of surface conditions. What mostly explains the weakness of recycled moisture over this local area (at a local space scale). That partly leads to a high variability of the field capacity which fluctuates between one and five months.

Moreover, shrubby savannas of the Niari valley are characterized by a continuous seasonal dryness. It is the result of a climatic azonality characterized by weak rains combined with an edaphic dryness. Seasonal dryness becomes very complex to analyse in terms of median frequency and one year on five, or during the dry years. That raises the problem of water resources variability, which is crucial for plants growth.

Water balance analysis in the Niari valley thus offers some original characteristics of vegetation adaptability to hard seasonal water conditions associated to a differential water capacity.