

84. Building climate smart pastoralism in the Sahel: ways forward

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The critical triptych (food security-adaptability-mitigation) that ensures climate smart agriculture is not really reached in Sahelian pastoralism. The major shock remains spatiotemporal variability of rainfalls and temperatures. Deficits that followed 1970s lead to a severe drought that cruelly affected the mixed/lower mobility production systems (100,000 people and third of the cattle died) reverting to a higher mobility system. This appears to be the most effective strategy to sustain pastoralism as the second large-scale drought occurred in 1984 was less destructive. However, the direction of temperature and precipitation change remains unknown especially in Western Africa (Schellnhuber *et al.*, 2013) thus reinforcing global uncertainties in which live pastoralists. Beyond climate variability, Sahelian herders are increasingly confronted to other shocks (commodity price variability and transmission, sanitary risks with re-emerging diseases, misused zoo-sanitary agreements and conventions on cattle marketing and transborder transhumance). Therefore political, socio-economic and ecological events all affected the increasing vulnerability of pastoralists. To build a climate smart pastoralism, it is crucial to integrate uncertainty in the outcomes of improved options (Jeuland and Pattanayak, 2012) and social, economic, political and institutional aspects into diagnosis and resolution of climate change impacts (Wane *et al.*, 2014).

Empirically, we focus in Senegal Sahel with a survey that showed pastoral population strategies before and after the establishment of boreholes in 1956 in changing production systems and mobility schemes. A different history is told according to different sub-steps characterized by climate and economic crises, deregulation of agricultural sector, upgrading and rehabilitation of the livestock sector and food crises.