

The Importance of Developing Demand-Side Agricultural Statistics for Sustainable Resource Planning and Management: A Reflection from the Perspective of the National Water Resources Plan (PNRH) of Brazil

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Abstract: The current expansion of the agricultural frontier puts additional pressures on available water resources beyond the carrying capacity of regional ecosystems. Much of the answer to water scarcity can be found in farming-related techniques harvesting more rainfall, reducing waste in irrigation, increasing crop productivity, and in changing crop and dietary choices (FAO, 2007). With the advent of bio-fuels, the challenge to balance inputs to carry out agriculture will become a more difficult task, and the need for developing agricultural demand-side statistics becomes an utmost priority to achieve sound resource management and country strategies.

Current agricultural statistics have concentrated on the producer and supply side while neglecting the demand side, including the environment as a major user, offering additional challenges for sound natural resources planning, management, and policy making. Also, agricultural statistics in developing countries frequently leave aside major use indicators at the watershed and local scales, driving agricultural and rural development policies towards resource depletion or inefficiencies, and confusion of targets between agriculture, natural resources management, and socio-economic development.

To address these disparities, Brazil established its “Water Law” (9433/97) calling for water management plans and strategies, including a National Water Resources Plan (PNRH) that defines the guidelines for public policies oriented towards the improvement of water supply in qualitative and quantitative terms, by promoting demand-side management measures while considering the water resource as the cornerstone resource for the implementation of sectoral policies under an ethos of sustainable development and social inclusion for a planning horizon until 2020 (PNRH, 2005).

Unless demand-side agriculture statistics are developed further, markets will continue to be very unpredictable as far as setting appropriate price structures for crops as a function of guaranteeing food, energy security, environmental quality, and social equity. Consequently, the planning for the most essential natural input, water, for agriculture and all form of life, will also continue to be largely uncertain.