Agricultural Water Poverty Index for a Sustainable World

Masoumeh Forouzani, Ezatollah Karami, Mansour Zibaei, and Gh. Hossein Zamani

Abstract Water is a major constraint to development of all countries with low water access, especially those located in arid and semi-arid areas with heavy dependence on agriculture. Water scarcity due to long-term droughts, increased demand, and mismanagement of the available water resources has threaten the sustainability of agricultural development. The need of more food production for growing population drives the agricultural sector to manage the water resources in a sustainable way. Water sustainability encompasses different dimensions which need to be addressed clearly by appropriate indices. The Agricultural Water Poverty Index as an assessment tool measures the level of agricultural water poverty as the most important construct that influences agricultural water management. It encompasses a variety of water-related aspects including availability and access to water resources, capacities to manage available water usage and finally environmental factors affecting availability of water resources. Each aspect needed to be translated into practical and subtle indicators to demonstrate what it is intended to measure, and also to jointly measure the Agricultural Water Poverty Index. Accurately and reasonable selection of indicators needs to apply a suitable framework which increases scientific credibility of water assessment.

M. Forouzani (✉)
Department of Agricultural Extension and Education, Khuzestan Ramin Agricultural and Natural Resources University, Mollasani, 63417-73637, Ahvaz, Iran
e-mail: m.forouzani@yahoo.com

E. Karami • G.H. Zamani
Department of Agricultural Extension, College of Agriculture, Shiraz University, Shiraz 71441-65186, Iran
e-mail: ezatkarami@gmail.com; Ghh_zamani@yahoo.com

M. Zibaei
Department of Agricultural Economics, College of Agriculture, Shiraz University, Shiraz 71441-65186, Iran
e-mail: zibaei@shirazu.ac.ir

E. Lichtfouse (ed.), *Farming for Food and Water Security*, Sustainable Agriculture Reviews 10, DOI 10.1007/978-94-007-4500-1_6,