GROUNDWATER USE ON NORTH AFRICA'S NEW IRRIGATION FRONTIERS: LIBERATION OR ANARCHY?

Marcel Kuper^{1,2}, Nicolas Faysse^{1,3}, Ali Hammani², Tarik Hartani⁴, Serge Marlet^{1,5}, Farah Hamamouche^{1,2,4}, Fatah Ameur

¹Agricultural Research Centre for International Development (Cirad); Umr G-Eau, Montpellier, France; kuper@cirad.fr

Abstract

Two contrasting views prevail on groundwater use in situations of predominantly stateled irrigation development. The first considers 'groundwater as liberation', i.e., how, by capturing the irrigation initiative, farmers liberated themselves from 'state' water, enabling more intensive and productive agriculture. The second view – 'groundwater as anarchy'- considers groundwater as a declining resource, overexploited by millions of individualistic farmers in the absence of effective groundwater governance with mounting inequalities in groundwater use. We analyse the Janus nature of groundwater in the expanding groundwater economy in Morocco, Algeria and Tunisia. Groundwater redesigned irrigation frontiers, and caters to over 60% of the total irrigated area, supplying more than 500,000 farms with irrigation water. However, more than half of the aquifers are overexploited, and typically only 40-50% of farmers in a given area access groundwater. We conclude that groundwater use in North Africa cannot be qualified as anarchy, but rather as a negotiated disorder where the interests of farmers, the private sector, and the state, are continuously realigned. Groundwater 'liberated' farmers only partially from 'state' water, as the state remained present in groundwater economies. Moreover, groundwater concerned a minority of farmers, who are often keen to get state support when facing resource depletion or harsh agricultural markets. Breaking the current conundrum will require creating space for change, by making visible the current and future effects of groundwater dynamics to local actors, and supporting the building of coalitions of actors towards a sustainable agricultural use of groundwater.

²Agronomy and Veterinary Institute Hassan II (IAV Hassan II), Rabat, Morocco

³National Agronomy School (ENA), Meknes, Morocco

⁴National High School of Agronomy (ENSA), El Harrach, Algeria

⁵National Research Institute in Rural Engineering, Water Management & Forestry (INRGREF), Tunis, Tunisia