The Risks of Agricultural Development and Irrigation in the Countries of the Mediterranean Basin

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Many countries in the Mediterranean Basin have developed their economies based on agriculture, supported by the unsustainable use of water resources. Cyprus, similar to many Sahelian countries, experienced a break in precipitation in 1970/71, reducing the average annual precipitation over the country from 540 to 460 mm. However, water resources development continued its business as usual with construction of dams and irrigation schemes throughout the country. Rising standards of living and increasing demands from the domestic, tourism and industry sectors, and the quality deterioration or depletion of many aquifers have now turned agriculture into a risky business. Desalination started in 1997, but the tricky Mediterranean climate (a few wet years) and a change of government shelved further desalination expansion plans. Thus, in 2008 the country was caught unprepared and ran out of water. Agricultural water supply was nearly completely cut off and domestic water had to be imported with tankers from Greece. This risk has come at a cost of 7.6 million euro for the EU Solidarity Fund, to which the Cypriot government applied for assistance. The Cyprus Agricultural Payment Organization paid 2.4 million euro in emergency state aid to farmers, while substantial funds were also paid out by the national Agricultural Insurance Organization. However, EU policy reforms may restrict future pay outs to an unsustainable agricultural sector. This paper analyzes climate, water supply and demand and agricultural production time series to expose the increasing risks Mediterranean societies face to under global change.