



How to use water footprint as an indicator to assess the sustainability of food systems? Insights from a Mediterranean perspective

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The water footprint (WF) accounts for both the direct and indirect water use. It enables to calculate the water used to produce specific agricultural products. These have different water footprints. Thus the composition of the diet drives its water footprint, and ultimately agriculture's water consumption. This paper considers how the WF indicator could be used to assess the sustainability of food systems. FAO has started to study the notion of sustainable diets in order to design methods and indicators towards their assessment in different agro-ecological zones. A first issue is to identify issues which are critical to sustainability in a given area. Water scarcity is the most critical development problem in the Mediterranean area and the single most important factor in limiting agricultural growth. Water availability in the region has been declining steadily since the late 1950s. In turn, agriculture is one of the main water user. The Mediterranean diet model has been well scientifically characterized through its new revised pyramidal representation (Bach et al, 2011). Studies have calculated that the Mediterranean diet consumes less water than Anglo-Saxon types of diets. But such studies measure the water footprint of a model rather than the reality of food consumption patterns in the Mediterranean area. Moreover for a given water footprint, the "net" environmental impact depends not only on water consumption but also on water scarcity (WS) in the area of production, and also at the time of production. Therefore a more complete indicator to assess the sustainability of a food system from a consumption perspective could be WF/WS. It would include the distinction between green and blue water, as well as methodologies to determine the most appropriate scale (local, national, watershed) and measure it. Such a use of the WF, applied to domestic and imported food products alike, would enable to assess the water impact of food consumption. It could be completed by an indicator calculating the WF of agricultural employment and income.