

# SUSTAINABLE DIETS AND BIODIVERSITY

DIRECTIONS AND SOLUTIONS  
FOR POLICY, RESEARCH AND ACTION



The alarming pace of biodiversity loss and ecosystem degradation and their negative impact on health makes a compelling case for re-examining food systems and diets.

Further information: <http://www.fao.org/ag/humannutrition/biodiversity/meetings/en/>  
<http://www.fao.org/docrep/016/i3004e/i3004e.pdf>

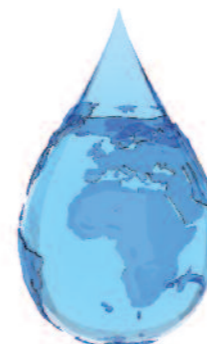


## SUSTAINABLE DIETS AND WATER FOOTPRINT

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**Definition:**

*Sustainable diets are those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources. (FAO 2010)\*.*



The natural resources of our planet are becoming more scarce as a consequence of continuous demand, with global population increase, urbanization, rising income and changing consumption patterns being major drivers. The natural resources are also becoming more degraded as consequences of their unsustainable management. The way we produce and consume food is among the most critical factors threatening natural resources, specifically water and land.

During the last few decades, unprecedented increases in food production have been achieved. However, little attention has been devoted to the links between consumption of food and production for reducing water footprints.

Regardless of the many successes of agriculture during the last three decades, it is clear that current food systems and diets are not sustainable. FAO data show that today more than 900 million people suffer from hunger, from 1 to 2 billion people have micro-nutrient deficiencies. There are a further 1.5 billion people overweight or obese. We have to face the fact that food systems are being managed in ways that result in more than half of humanity suffering from nutritional and related health problems. In spite of many efforts, the nutrition problems of the world are escalating.

Improving nutrition through better-balanced, more nutritious diets can also reduce the ecological impact of dietary choices. Therefore, a shift to more sustainable diets would trigger upstream effects on food production (e.g. diversification), processing chains and food consumption. Currently, FAO activities on sustainable diets aim to provide less water-intensive food recommendations to consumers and policy-makers and help clarify what is required for an environmentally sustainable food system.

Lower water consumption and more sustainable diets could be achieved through the following efforts:

- Maximising the food produced for every drop of water used (increase "water productivity");
- Reducing food losses and waste in supply chains, for multiple gains, among them, water savings;
- Consuming diets to meet and not exceed food and nutrient requirements, thus minimizing risks of obesity and associated chronic diseases and lowering water footprints.
- Not consuming nutrients above recommendations (e.g. proteins), which also represents a water waste;
- Stimulating the demand for food with lower water footprint by informing and educating the consumer on environmental and nutritional impact of food in terms of water.

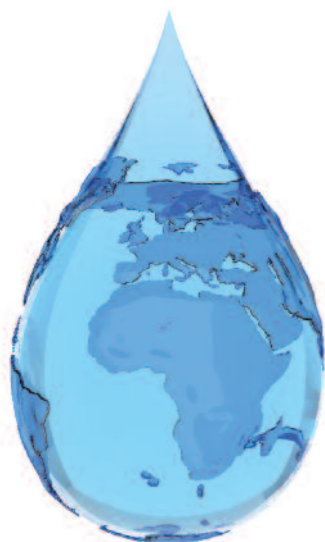
\* International Scientific Symposium on Biodiversity and Sustainable Diets, FAO, Rome, 2010. <http://www.fao.org/ag/humannutrition/biodiversity/meetings/en/>





The main challenge for the food and agricultural sector is to simultaneously provide enough food to meet nutritional needs and to conserve the natural resources for present and future generations.

This can be achieved through sustainable food production and consumption linked to sustainable diets. Everyone is involved in the food system and should act in a responsible and environmentally smart way to protect water resources while achieving food and nutrition security. To raise awareness on such efforts, FAO is assessing the water cost for human nutrition through the analysis of food consumption patterns and their impacts on various agro ecological zones.



Strategies to contribute to lower water cost and sustainable diets can include the following:

- Transform and improve food systems towards sustainable diets as a main lever to orient food production and consumption towards more efficiency in the use of natural resources;
- Capture efficiencies in food chains through the ecosystem approach fostering sustainable food production and consumption to direct the choices and behaviour of consumers;
- Develop intersectoral programs to ensure the development of program activities and policies for saving water through sustainable diets and nutrition-driven agriculture;
- Implement food and nutrition education and awareness programs with sustainable diets' lessons, addressing consumers as active participants in saving water and mitigating the climate change while achieving optimal nutrition;
- Promote education and communication programs addressing consumers' choice towards foods with low water and carbon footprints, and towards local food biodiversity, with its many nutritionally rich species and varieties;
- Develop local capacity to protect biodiversity and to use traditional knowledge for the conservation and sustainable use of indigenous species and varieties to support local food systems as well as enhance the development of sustainable diets.
- Help consumers know the origin of food and make responsible, educated choices that are both healthy and environmentally sustainable.

There are many questions about the sustainability of modern diets. The need to feed a growing population leads to continuous pressure on the food production requiring efforts toward sustainable intensification of production, that is more food without using more resources. The populations of developed countries, and increasingly the middle classes in developing countries, consume high levels of animal products, which often require more land and water than plant-based products, thus putting additional pressure on natural resources. Agro-food systems as well as food consumption patterns need to change to permit communities to adapt to this scenario. More sustainable diets are foreseen as an important element, within nutrition-driven food and agricultural systems.

A move towards healthier sustainable diets will have multiple benefits for environmental sustainability and public health, with synergies felt across a number of sectors. Sustainable diets address the sustainability of the whole food system, while acknowledging the interdependencies of water utilization and food production, food processing, food consumption, food requirements, and nutrient recommendations.

Socioeconomic changes (e.g. urbanization) and the greater distance between producers and consumers put new demands on food systems. Consumer organizations, in cooperation with food industries have a great responsibility to promote sustainable diets by stimulating the demand for foods with lower water cost in relation to their nutritional value.

The shift towards sustainable food consumption patterns aimed at responsible utilization of natural resources is a pre-requisite to achieving of the MDGs and food and nutrition security for all. The sustainable diets' approach promises a major contribution to the achievement of the MDGs 1 and 7, i.e., hunger reduction and environmental sustainability. As we move to the post-2015 development agenda, these issues emerge as mission-critical.

*Water, food security and nutrition are intimately connected. With increasing water scarcity and with high rates of undernourishment and overeating, it makes sense to scrutinize through a sustainable diets' approach how water is used, not only in food production but also in food consumption.*

