

Grace Viera  
Thorkild Nielsen, research supervisor  
Ålborg University, Denmark

## Sustainability of Food Systems

Sustainability is a key concern in food systems. Agriculture is a resource intensive activity that requires large land areas and consumes considerable amounts of water and energy. Furthermore, there are concerns about animal well-being in large-scale animal production and animal product systems. Additionally, actual consumption patterns are unsustainable and problems like obesity and malnutrition are increasing.

Schemes have been developed in order to encourage better practices in the supply side. Some wide-spread efforts include ISO standards, the life cycle assessment (LCA), corporate social responsibility (CSR) schemes, UN Global compact, among others. Nevertheless, up to date there is lack of consensus on feasible ways to make the system sustainable. For instance in the production side: “no single method is currently robust enough to capture all environmental impacts and costs associated with food production” (Ytrestøyl et al, 2011. P.12). Additionally, there are limited information flows along food systems, which makes the insertion of sustainability practices difficult.

On the demand side more and more efforts focus on customers as a key source to change consumption, portraying buys as votes towards some products over others. Many certification schemes try to provide consumers with decision making tools that will promote sustainable consumption. Some of the popular initiatives are the planets’ carrying capacity, the environmental footprint, and several fair trade schemes and brands together with government campaigns that encourage healthy choices and local consumption. Values and lifestyles have been deemed as single determinants of consumption patterns, without taking into consideration other elements of consumption. Thus, the results have been rather narrow and have not been able to generate substantial impacts on consumption patterns (McMeekin and Sotherton, 2012; Shove, 2010).

From an economic point of view extended research has been done regarding the relation between consumers stated preferences and actual consumption. Results suggest that there is no direct relation between beliefs and actions. Andersen (2011) for instance uses econometric models to analyze the relation between expressed animal concern and willingness to pay for animal welfare, finding that the first one is not necessarily reflected in final purchases. Stated preferences do not necessarily determine purchasing behavior: “Consumers may be motivated to undertake various

symbolic actions to demonstrate their “green” disposition, but most valued practices are performed with little or marginal consideration for the environment” (Røpke, 2009. P 2496).

Several efforts have been made as an attempt to include environmental and social responsible practices into the food chain. Nevertheless, the many attempts to make food provision more sustainable have not given the expected results. The efforts have been relatively dispersed, so there is still a lack of knowledge on how the consumption process happens and matching interventions that could generate meaningful changes in consumption patterns. Food production and consumption systems are still far from being sustainable.

### **References:**

- Andersen, L. 2011. Animal welfare and eggs- Cheap talk or money on the counter?. *Journal of agricultural economics*. 62 (3): 565-584.
- McMeekind, A; Sotherton, D. 2012. Sustainability transitions and final consumption: practices and socio-technical systems. *Technology Analysis & Strategic Management*. 24 (4): 345-361.
- Røpke, I. 2009. Theories of practice- New inspiration for ecological economic studies on consumption. *Ecological economics*. 68: 2490-2497.
- Shove, E. 2010. Beyond the ABC: climate change policy and theories of social change. *Environment and planning*. 42: 1273-1285.
- Ytrestøyl, T. Aas, T. Berge, G. Hatlen, B. Sørensen, M. Ruyter, B. Thomassen, M. Hognes, E. Ziegler, F. Sund, V. Åsgård, T. 2011. Resource utilization and eco-efficiency of Norwegian salmon farming in 2010. *Nofima Report 53/2011*.