



MODULE 1
SUSTAINABLE AGRO-LIVESTOCK FARM AND ANIMAL WELFARE:
METHOD, TECHNIQUE, AND EXPERIENCES

UNIT 1
Agricultural multifunctionality and sustainable farm

MULTIFUNCTIONALITY

Biancamaria Torquati
Department of Agricultural, Food, and Environmental Sciences
University of Perugia

“Positive” concept of multifunctionality

- Multifunctionality refers to the fact that economic activity may have multiple outputs and, by this, may contribute to several societal objectives at once.

“Normative” concept of multifunctionality

- The concept of multifunctional agriculture emphasizes that in addition to producing commodity output (e.g., food and fiber), agriculture also produces a wide range of non-commodity goods and services, shapes the environment, affects social and cultural systems, and contributes to economic growth.

➤ **Sustainability** refers to the use of the resources, human, natural, and man-made, in ways that allow current generations to satisfy their needs without jeopardizing the capacity of future generations to meet theirs.

- ❖ resource-oriented,
- ❖ long-term concept
- ❖ global concept.

➤ **Multifunctionality** is a characteristic of the production process that can affect achieving multiple societal goals.

- ❖ joint production
- ❖ externality (both positive and negative)
- ❖ public good

- Multifunctionality was first recognized at the international level in the Rio Declaration on sustainable development in 1992 and later by the FAO at its world Summit in 1996.



Born as a political concept, it has been a much debated and researched topic since then.

The working definition of Multifunctionality (OECD)

The Organisation for Economic Co-operation and Development (OECD) has provided a working definition of multifunctionality (OECD 2001).

“Beyond its primary function of producing food and fibre, agricultural activity can also shape the landscape, provide environmental benefits such as land conservation, the sustainable management of renewable natural resources and the preservation of biodiversity, and contribute to the socio-economic viability of many rural areas. Agriculture is multifunctional when it has one or several functions in addition to its primary role of producing food and fibre.”
(Organization for Economic Co-operation and Development OECD, 2001)

OECD (2001), *“Multifunctionality: Towards an analytical framework”*, Paris.

Key elements of Multifunctionality (1)

The key elements of multifunctionality are:



- a) the existence of multiple commodity outputs (CO) (e.g., food and fiber) and non-commodity outputs (NCO) (e.g., environmental and social products and services) that are jointly produced by agriculture, and
- b) the fact that some non-commodity outputs (NCO) exhibit the characteristics of positive externalities or public goods, with the result that markets do not exist or function poorly for these goods.

Key elements of Multifunctionality (2)

- **Externalities**’ means that the one who produces the outputs is not remunerated for it (in case of positive externalities) or does not pay for it (in case of negative externalities). The concept of externality refers to **market failure**.
- The indivisible goods, whose benefits cannot be priced, therefore, the principle of exclusion does not apply, are called **public goods**. The use of such goods by one individual does not reduce their availability to other individuals (e.g., rural landscape).
- **Private goods** refer to all those goods and services purchased and consumed by private individuals to satisfy their wants (e.g., food, clothing)
- **Free-rider problem**: people can enjoy the benefits of public goods whether they pay for them or not; they are usually unwilling to pay for public goods. This act is the so-called free-rider problem.

Key elements of Multifunctionality (3)

Features of public and private goods

CHARACTERISTICS	RIVAL	NON-RIVAL
EXCLUDABLE	PRIVATE GOODS Food	QUASI PUBLIC Toll goods
NON-EXCLUDABLE	OPEN ACCESS Ocean fish	PUBLIC GOODS Rural landscape

Multifunctionality became a **policy** issue because it is clear that agriculture deserves support mainly **when NCO are public goods**, and hence externalities are not internalized through individual or collective action (e.g., premium price for environmental food quality)

The background on the debate on multifunctionality as a process of agricultural policy reform started in the mid-1980s.

The concept of multifunctionality has been affirmed in Europe since the **Mcsharry reform** of 1992 and **Agenda 2000** reform of the Common Agricultural Policy (CAP) focused on enhancing the multifunctional role of a sustainable and competitive EU agriculture.



The concept of multifunctionality has been affirmed in Europe since the **Mcsharry reform** of 1992, in which the European Commission acknowledges that:

“Sufficient numbers of farmers must be kept on the land. There is no other way to preserve the natural environment, traditional landscape, and the model of agriculture based on the family farm as favored by society generally. (...) It implies a recognition that the farmer fulfills, or at least could and should fulfill, two functions, namely those of producing and of protecting the environment in the context of rural development (...) Concern for the environment means that we should support the farmer also an environmental manager through the use of less intensive techniques and the implementation of environmentally friendly measures”. (European Commission 1991)

From a political point of view, multifunctionality has been recognized by **Agenda 2000**, when the heads of state and government confirmed that multifunctionality together with sustainability was the objective of the reforms, to achieve the following objectives :

- maintaining agriculture all over Europe
- protecting farmers' income

- maintaining the countryside and the vitality of rural life
- ensuring the food quality and safety,
- ensuring environmental protection
- safeguarding of animal welfare



The European Model of Agriculture (EMA) is inextricably related to the diversity of countryside and rural life. It is an important asset because:

- Is capable of occupying a leading position on the world market
- It uses hygienic, environmentally friendly production methods
- It serves rural communities, reflecting their rich tradition and diversity

Approaches to the study of Multifunctionality (from 1992)

Positive approach (supply vision)

In the supply vision, multifunctionality is merely a characteristic of the agricultural production process rather than a societal objective.

Normative approach (demand vision)

Demand vision looks at the demand side concerning the multiple functions agriculture can provide and departures from the social expectations on agriculture.

Holist interpretation (supply and demand vision)

Describe a different farming system that is more territorially embedded, making use of local resources and trying to build a new link between consumers and producers



1. OECD (2001). Multifunctionality. Towards an analytical framework. OECD Publications, Paris Cedex 16, France.
2. Knickel, K., Renting, H., & Van der Ploeg, J. D. (2004). Multifunctionality in European agriculture. *Sustaining agriculture and the rural economy: Governance, policy and Multifunctionality*. Edward Elgar Publishing Inc, 81-103.