Producentsammenslutningen – Det økologiske Akademi

Bilag 5.b

Hvordan bliver økologisk landbrug i Danmark mere bæredygtigt

Naturerhverv.dk
Ministeriet for Fødevarer, Landbrug og Fiskeri
Den Europæiske Landbrugsfond for Udvikling af Landdistrikterne
Danmark og EU investerer i landdistrikterne.
Se 'European Agricultural Fund for Rural Development' (EAFRD)

on the integration of environmental concerns into Community sectoral policies. The Commission Communication (2000) 20 outlined the type of indicators needed for assessing the integration of environmental concerns into the CAP. An indicator framework for monitoring and evaluating the Agricultural Council Integration Strategy on the basis of DPSIR indicators was proposed (Figure1.1). On this basis, the Communication identified a preliminary set of 35 indicators. The document recognised that there are large gaps in the definition and development of certain indicators — in particular in the areas of farm management, landscape and biodiversity — and stressed that indicators need to be supported by appropriate and reliable statistical information.

The DPSIR concept is an analytical framework that has been developed at the European Environment Agency (EEA, 1999) in order to describe and understand the inter-linkages between economic activities and the environment. It builds on previous OECD work that divided indicators into P S R domains (OECD, 1993). When the DPSIR framework was being developed, one of the objectives was that it should be capable of providing an integrated environmental analysis. This requires the establishment of inter-linkages between driving forces, pressures and impacts. However, the discovery of associations, or even causal links, between different indicators in the DPSIR framework is often hampered by the lack of high quality data sets to underpin the indicators.

The agricultural DPSIR model is a conceptual model that is meant to capture the key 'factors' involved in the relationships between agriculture and the environment and to reflect the complex chain of causes and effects between these factors. However, it should not be overlooked that, as with other models, the agricultural DPSIR model is a simplification of reality. Many of the relationships between agricultural and environmental systems are not sufficiently understood or are difficult to capture in a simple framework. In addition, there are other social and economic factors, which may determine changes in farming systems and rural areas. Such changes may be independent of the current policy response framework and can also affect the environment significantly (Baldock *et al.*, 2000).

In 2001, a second Communication (COM (2001) 144 final) outlined the statistical information needed to develop agri-environmental indicators. For each of the 35 indicators identified by COM (2000) 20, the new Communication proposed brief definitions, the conceptual basis for the indicator, and recommendations for further development.

Figure 1.1 DPSIR framework for agriculture (from COM (2000) 20 final)

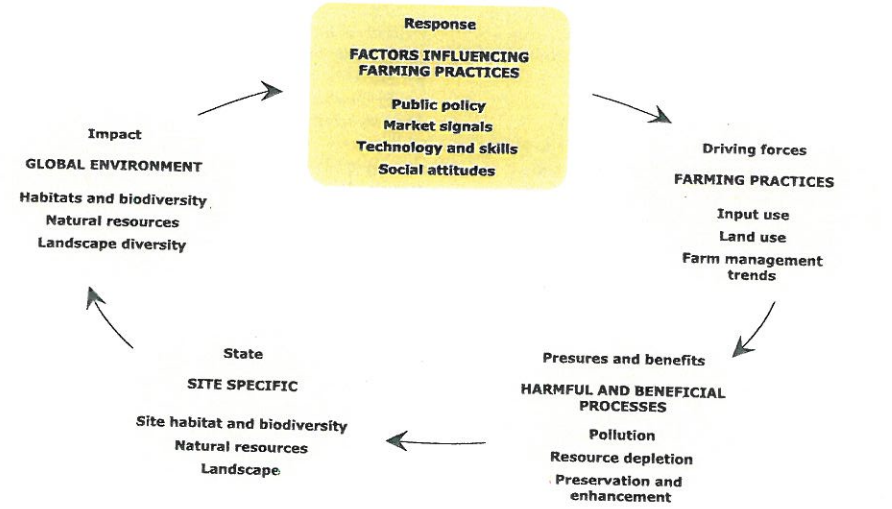

Table 1.1 Explanation of the five domains of the agricultural DPSIR framework and the equivalent IRENA indicators

Domain (3)	Sub-domain	Explanation	No	Indicator
Responses	*Public policy*	Farming activities are strongly influenced by agricultural and environmental policies and sensitive to input and product price signals. Moreover, changes in technology, farmers' skills, and consumers' and producers' attitudes affect production methods and agricultural practices.	1	Area under agri-environment support
			2	Regional levels of good farming practice
			3	Regional levels of environmental targets
			4	Area under nature protection
	Market signals		5.1	Organic producer prices and market share
			5.2	Organic farm incomes
	Technology and skills		6	Farmers' training levels
	Attitudes		7	Area under organic farming
Driving forces	*Input use*	A key characteristic of different farming systems and of farming intensity is the use of inputs (fertilisers, pesticides, energy and water).	8	Mineral fertiliser consumption
			9	Consumption of pesticides
			10	Water use (intensity)
			11	Energy use
	Land use	Land use changes as well as cropping and livestock patterns indicate land use intensity and trends in the agricultural sector.	12	Land use change
			13	Cropping/livestock patterns
		Key farm management practices include soil cover, tillage methods and the handling of farm manure.	14	Farm management practices
	Trends	Key trends in farming activities can be expressed at an aggregate level in terms of intensification/ extensification, specialisation/diversification, and economic marginalisation.	15	Intensification/extensification
			16	Specialisation/diversification
			17	Marginalisation
Pressures and benefits	*Pollution*	Agriculture can lead to nutrient and pesticide residues in soil and water as well as to ammonia and methane emissions. The use of sewage sludge can improve soil fertility but needs to be carefully monitored from a pollution perspective.	18	Gross nitrogen balance
			18sub	Atmospheric emissions of ammonia
			19	Emissions of methane and nitrous oxide
			20	Pesticide soil contamination
			21	Use of sewage sludge
	Resource depletion	Inappropriate use of water and soil leads to environmental pressures. Changes in land cover and genetic diversity can have similar consequences.	22	Water abstraction
			23	Soil erosion
			24	Land cover change
			25	Genetic diversity
	Preservation and enhancement of the environment	Agriculture provides environmental benefits via the management of high nature value farmland and the production of renewable energy.	26	High nature value (farmland) areas
			27	Production of renewable energy (by source)
State	*Biodiversity*	Birds are a measure of overall species diversity.	28	Population trends of farmland birds
	Natural resources	The state of key natural resources (soil quality, water quantity and quality) needs to be monitored.	29	Soil quality
			30	Nitrates/pesticides in water
			31	Ground water levels
	Landscape	Agriculture has a strong influence on the state of Europe's landscapes through cropping patterns, grazing of upland areas, landscape elements such as hedgerows etc.	32	Landscape state
Impact	*Habitats and biodiversity*	The share of agriculture in wider environmental issues can be significant. Its impact on natural and landscape diversity is also important but often spatially concentrated and scale-dependent.	33	Impact on habitats and biodiversity
			34.1	Agricultural share of GHG emissions
	Natural resources		34.2	Agricultural share of nitrate contamination
			34.3	Agricultural share of water use
	Landscape diversity		35	Impact on landscape diversity

(3) In several thematic chapters certain indicators are considered to be more usefully employed in a different domain than the one proposed in COM(2000) 20 (e.g. soil erosion as 'state' rather than 'pressure' indicator). This helped to build more 'logical' storylines.