

## D2 Draft Biodiversity and Landscape Standards

### Background of the development of Draft Biodiversity and Landscape Standards

#### History

At its 2002 General Assembly IFOAM was mandated by its members to further develop biodiversity standards within the IFOAM Basic Standards (IBS). Based on this mandate the IFOAM Standards Committee commissioned a consultant to prepare a report on the broad issues of biodiversity that should be considered in organic standards. Subsequently, the Standards Committee assigned a subcommittee, the "Biodiversity Subcommittee" (BDSC). In a first step the BDSC prepared a draft of biodiversity standards, which was discussed in a one day-workshop End of September 2004 with 19 invited experts and stakeholders in the field of organic agriculture and biodiversity, with a balanced representation of the worldwide diversity of production conditions and farm structures.

Based on the results of the discussions, as well as on an analysis of further documents, the BDSC prepared a second draft of Biodiversity and Landscape Standards, consisting of (reworked) draft positions, draft principles, draft recommendations, and draft standards. As agreed during the workshop this draft was sent again to all participants of the workshop with the request for comments. The comments received led to these Draft of Biodiversity Standards, which is now subject to the regular IFOAM Basic Standards development procedure.

#### Requirements of Standards

According to the BDSC's terms of reference the biodiversity and landscape standards must be "practical and functional in the context of organic agriculture." To specify this requirement, the BDSC prepared a summary containing the concerned target groups and their prevalent interests and viewpoints. This matrix was discussed during the mentioned experts' workshop and accordingly amended (see table below).

1.) Target groups/community of interests	2.) Prevalent interests, aims, viewpoints	3.) Requirement for the standards
Organic farmers, organic community	Synergies biodiversity – productivity <ul style="list-style-type: none"> <li>• Yield</li> <li>• Food security</li> <li>• Diversification of market opportunities</li> <li>• Resilience to climatic disasters</li> <li>• Respecting/supporting traditions, religion &amp; knowledge</li> <li>• No additional costs, no additional work load, no bureaucracy</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Simple</li> <li>• Practical</li> <li>• Context sensitive (regional adaptations)</li> </ul>
IFOAM / Standard Committee / certifiers	<ul style="list-style-type: none"> <li>• No more derogations</li> <li>• Short and clear</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Inspectable</li> <li>• Certifiable</li> <li>• No more derogations</li> <li>• Easy to communicate</li> </ul>

		<ul style="list-style-type: none"> <li>• Universal</li> </ul>
Consumers and tourism	<ul style="list-style-type: none"> <li>• Good sensations in landscape (esthetics)</li> <li>• Diversity of (local) products</li> </ul>	<ul style="list-style-type: none"> <li>• Definitive</li> <li>• Result oriented</li> <li>• Easy to understand</li> </ul>
Food processor and distributors	Homogeneity/restricted produce diversity	
Politicians (subsidies)	Positive effect on the natural resource base (e.g. soil, nutrient, water)	<ul style="list-style-type: none"> <li>• WTO-compatible (green box)</li> <li>• Result oriented</li> <li>• Inspectable</li> <li>• Certifiable</li> </ul>
Rural community and institutions	<ul style="list-style-type: none"> <li>• Positive effect on social and economic situation</li> </ul>	<ul style="list-style-type: none"> <li>• Supporting marketing opportunities</li> <li>• Context sensitive / flexible</li> </ul>
Conservation and scientific community	<ul style="list-style-type: none"> <li>• Effective preservation of wild life/natural biodiversity</li> <li>• Positive effect on the natural resource base (e.g. soil, nutrient, water)</li> <li>• Awareness raising of consumers on relation food - biodiversity/landscape quality</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Verifiable (monitorable)</li> </ul>

## Standards Committee Commentary

### General

The draft is constructed to go beyond the frequently incidental improvements to Biodiversity that are reported to result from organic agriculture. Standards are needed to make biological diversity a deliberate and conscious aim of the organic farmer and to see that not only are natural systems, species and genes maintained, but also that nature is seen and experienced as a functioning and integral part of the agro-ecosystem.

### Definitions

Definitions have been drawn wherever possible from the language used in the various scientific literature and the international treaties and agreements. They are designed to capture biodiversity from the entirely natural through to the crops and animals used on the farm where possible. Some relatively special terms that may differ from country to country are specifically inserted to define more precise recommendations and requirements.

### The Biodiversity and Landscape Plan

The plan has been considered an essential item by almost all during the drafting process. Some opposition has been wrongly based on the top heavy and sometimes condescending view that the farmer needs a professional consultant and an aid program to draw up a plan. The plan is intended to be a simple device that captures the present and imagines the future. The standard is that there is a plan and its complexity and format will be the domain of the operator and the certification body.

### Genetic Diversity

The first of the three areas of biodiversity treated in the standards is aimed at capturing crop, non crop and natural genetic diversity. The draft recognises the paradox that sometimes exists with relation to the desirability of wide crop and animal genetic diversity and the practical issues of farming, the commercial

demands of the marketplace and the potential supply of “organic” varieties. Nevertheless, it presents a simple standard that requires a practice which optimises biodiversity at all levels.

### **Species Diversity**

The draft deliberately addresses a wide range of species as noted in the general principle. There is emphasis placed on species, whether they be crops, natives or non natives. This point perhaps characterises the draft as one without prejudice and with cognisance of an agro-ecosystem as the foundation of organic biodiversity. The two resultant and relatively simple standards are both without precedent in the IBS, the first requiring a joint effort between the operator and the CB in identifying species of importance on the holding. Some may argue that this is technically a criterion, and whilst there may be some theoretical credence in the argument, the SC felt that it was necessary for both the parties to be cognisant of the species from a biodiversity certification point of view.

The second standard deals with complex issues relating to the removal of unwanted species antagonistic to the pursuit of agriculture. Caveated by standards requiring the retention of habitats and protection of “priority” species, the draft permits the humane excision of nominated species only after all other methods have been exhausted.

### **Ecosystem Diversity**

The draft makes some useful recommendations on some ecological factors such as patches and edges, but the most significant and possibly one of the most critical areas lies in the first standard dealing, not for the first time in the IBS, with retrospectivity. Retrospectivity or actions today resulting from past land use is a foundation of the “conversion” principle. Here, it is elaborated to make provision for the past land use and organic certification in relation to the treatment of historic ecosystems. Whilst the committee was well aware of the fact that all agriculture today is practiced on areas cleared of previous ecosystems to one extent or another, the mechanisms to prevent “primary or natural” ecosystems (see definitions) from being removed for the establishment of organic agriculture have been inserted. The period of twenty years was considered outside even the corporate planning horizon, and the effective date of 2004 was drafted to make opportunistic ecosystem removal unprofitable. The original inclusion of derogation was removed and left to the membership to respond to.

The earlier drafts had also included a minimum “set aside” or “percentage of natural ecosystem retention” This clause was not favoured in this draft in preference for more general language and the belief that the integrated approach and holism of the chapter should satisfy this.

### **Landscape**

The most subjective area of the standards was clearly within the scope of the draft as per the 2000 motion to the GA. Many geographic and political perspectives were heard in the process leading to this clause that integrates social, cultural and historic landscape perspectives along with the more functional characteristics. The only derogation in the draft can be found here.

### **Processing**

An earlier draft that includes some provisions for processors to assess the raw materials they received from organic agriculture was held in abeyance subject to responses from the membership on the desirability of including post production in the scope.

### **Pastoral lands and Water**

These two issues were addressed at some length in earlier drafts but were excluded to permit the presentation of a succinct, simple and concise set of “Standards for standards.” The revisiting of these issues is seen as important only after a framework such as that above has been accepted.

## D2 Biodiversity Standards for Organic Production

### Definitions - Biodiversity Draft Standards

**Buffer zone:** A clearly defined and identifiable boundary area protecting natural resources and habitats from degradation.

**Connectivity:** The ability of any landscape elements to facilitate the movement of organisms and gene flow between habitat patches.

**Corridors:** Semi-natural or natural habitats, that provide *connectivity* between habitat patches.

**Exotic species:** Species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is introduced in more or less recent times, deliberately or non-deliberately, by human or by natural hazards.

**Habitat:** The place or ecosystem (type of site) where an organism or population naturally occurs.

**Habitat patch:** Small-sized semi-natural or natural habitats that a) serve as temporal habitats or feeding places for animals (e.g. flower rich patches for butterflies) and/or b) provide connectivity between habitats.

**Indicator species:** Organisms that correspond to a certain level of biodiversity.

**Invasive species:** *Exotic species* that invade ecosystems having a negative impact on native species.

**Keystone species:** a species on which the persistence of a large number of other species in the ecosystem depends and whose impacts are greater than would be expected from its relative abundance or total biomass.

**Landscape:** The comprehensive, holistic character, including the aesthetic, recreational, ecological, , social and cultural functions of a particular region.

**Native species:** Species that propagate without deliberate human support, that are not introduced in recent times, and that, if introduced in former times, are adapted to and co-evolved with the existing conditions and species.

**Natural ecosystem or habitat:** An ecosystem/habitat where the species composition and frequency is that found in *primary ecosystems/habitats*; it may include previously perturbed areas that have through successional forces once again achieved a mature climax state.

**Primary ecosystem or habitat:** Pristine and anthropogenously undisturbed ecosystems/habitats.

**Priority species:** A species that is listed on the red list<sup>1</sup> of endangered species or that is known to be endangered or threatened, including in a regional context.

**Resilience:** Ability of a system to recover from disturbance and stress.

**Semi-natural habitat:** Extensively used or unmanaged ecosystem of anthropogenic origin, that did not reach climax (mature) succession state.

**Target species:** Species that are selected and deliberately chosen to monitor biodiversity on the holding. Target species may be *keystone species*, *indicator species* or *priority species*.

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<sup>1</sup> Red list: IUCN list of endangered species

## **D2.1. Biodiversity and Landscape Management Plan**

### **General Principle**

Organic agriculture deliberately maintains and enhances natural biodiversity, agro-biodiversity, and the diversity of the landscape at all its levels.

### **Recommendations**

The biodiversity and landscape management plan should take into account the the adjacent landscape within which the holding sits, including adjacent and nearby land uses, habitats, and other natural and cultural resources.

The biodiversity and landscape management plan should

- consider existing international, national and regional biodiversity and habitat inventories, conservation agreements and management plans.
- include the surroundings of the holding as far as it is ecologically concerned (corridors, buffer zones, etc.),
- assess the historical, cultural, aesthetic, and functional state of the landscape

### **Standards shall require that:**

#### **D2.1.1**

Operators shall have a biodiversity and landscape management plan.

## **D2.2 Genetic Diversity**

### **General Principle**

Organic farming maintains and enhances genetic diversity in plants and animals and other organisms as a contribution to conservation and development of genetic resources and to increase resilience of the farm ecosystem.

### **Recommendations**

Operators should grow a wide range of crop varieties and breeds with preference for local ecotypes.

Operators should conserve local and traditional breeds and varieties through cultivation and husbandry on the farm.

Operators should take care when using clonal varieties that are capable of out-crossing, especially if they are from varieties originating from other climates or ecosystems.

### **Standards shall require that:**

#### **D2.2.1**

Operators shall practice cultivation and husbandry that maximize genetic diversity of crops, plants and animals.

#### **D2.2.2**

Operators shall not introduce organisms that risk spreading exotic genes.

## **D2.3 Species Diversity**

### **General Principal**

Organic agricultural biodiversity consists of native, non native and cultivated species.

### **Recommendations**

The production system should involve multiple species.

Diversity in crop and animal types should be maintained and enhanced.

Operators should maintain as many native, non native, cultivated and domesticated species as appropriate.

Keystone species, priority species and/or indicator species should be determined by the farmer in consultation with the certification body and maintained and enhanced through farm management.

Operators should:

- identify baseline inventory of the farm biodiversity,
- identify measures for improvement in species biodiversity based on the specific potential of the farm,
- identify the existence of invasive species on the farm and the surroundings and define measures to control them,
- monitor the effects of implementation

### **Standards shall require:**

#### **D2.3.1**

Operators shall identify target and priority species for their holding in consultation with the certification body.

#### **D2.3.2**

Removal of animal species that threaten agricultural production and ecological balance shall be done humanely and only after all other control mechanisms have been exhausted.

## **D2.4 Ecosystem Diversity**

### **General Principle**

Organic farming maintains and enhances diversity of ecosystems, habitat quality and connectivity.

### **Recommendations**

The management and harvest of crops and animals should be carried out to have minimal impact on wildlife.

Isolated patches (big and small) of semi-natural habitats should be conserved and, if appropriate, augmented with suitable species.

Operators should maintain soil, vegetation, plant residues or physical structures where they are conducive to natural habitat.

The edge between cultivated and uncultivated areas should be designed and managed to increase biodiversity

Operators should plan and design for corridors and habitat patches to enhance habitat connectivity within and outside the farm according to the needs of the regional native biodiversity and ecosystem function.

Soil ecosystems should be managed in ways that improve their biodiversity.

Rare or endangered habitats should be retained on the farm.

Farms should be managed to preserve and enhance natural and semi-natural habitats.

**Standards shall require that:**

**D2.4.1**

Primary ecosystems and natural ecosystem that have been removed after October 2004 shall not be eligible for organic certification for period of 20 years after they have been cleared.

**D2.4.2**

Operations shall not impinge upon designated protected areas.

**D2.4.3**

Habitats that contain priority species, shall be protected, maintained and enhanced according to the needs of that species.

**D2.5 Landscape**

**General Principle**

Organic farming maintains and enhances the individual landscape character including its historic character, its diversity, amenity and ecological, social and cultural functions.

**Recommendations**

Operators should use local materials and traditional techniques and styles for buildings, fences and walls, and should maintain natural and man made heritage items.

Operators should assess and integrate landscape features which characterize the landscape such as drainage lines, vegetation structures etc. into the management plan.

**Standards shall require that:**

**D2.5.1**

Operators shall protect historical, sacred, cultural and functional landscape elements.

*Where it is necessary and in circumstances where adequate alternatives can be agreed upon exception from this provision may be sought.*