

# Shaping the future through change: Advancing the agricultural reform in Germany together

## Federal Environment Ministry proposal for shaping the green architecture

### Summary

In spite of considerable efforts to improve the situation, **urgent action is needed** in large parts of agriculture to improve environmental impacts, conserve biodiversity and thus secure important livelihoods in agriculture and society as a whole.

The **necessary changes** to achieve this in practice require a **far-reaching reorientation of the political framework conditions**. This applies, in particular, to the most important tools: the **Common Agricultural Policy (CAP)** of the European Union and its **national implementation**. It is not without reason that the European Green Deal has set ambitious EU-wide goals for this with the Farm to Fork Strategy and the Biodiversity Strategy.

However, the current CAP reform threatens to fall short of these at EU level. It is therefore all the more important that in its CAP Strategic Plan, Germany **makes use of its future greater scope for action** and consistently gears the implementation of European agricultural policy from 2023 onwards towards environmental needs. In particular, this must be reflected in the design of **the green architecture**, for which the **Federal Environment Ministry (BMU)** is presenting **concrete proposals in this document**.

The guiding principle is to **support farmers in as targeted and attractive a way as possible** in effectively taking account of climate action, environmental protection and nature conservation needs in land management and livestock farming. The goal therefore has to be to use **EU funding extensively, effectively and efficiently**. Looking to the future, this will have more advantages than disadvantages for farms despite initial redistributive effects.

The **eco-schemes** are a **decisive** new tool in this respect. The BMU is calling for **30 percent of direct payments** to be used for these measures, initially, and for this share to be **gradually increased**. This will help ensure that the eco-schemes trigger fundamental decisions to support greening in agriculture and strengthen existing targeted approaches at the same time as rolling out priority environmental and nature conservation measures across all areas of agriculture. The BMU proposes 10 measures which farms may choose from, including areas of high biodiversity value (e.g. fallow land or landscape features such as hedges or boundary strips), the reduction of excess nutrients, refraining from or halving the use of pesticides, diversified crop rotation and various measures for environmentally and animal-friendly use of grassland. The **measures and payments must be differentiated** in order to achieve the desired effects on different sites in accordance with needs. For this purpose, payments should be based on the respective intervention area, remuneration for multi-annual participation should be higher and regional differentiation should be envisaged for certain measures. In addition to the eco-schemes, a major expansion of **agri-environment-climate measures** (including for Natura 2000), of investments supporting climate action and environmental protection in agriculture (e.g. for peatland conservation) and accompanying qualified advisory services are

required. **The transfer of resources into Pillar II** will be essential to ensure sufficient financing for these **specific measures**. **Simply maintaining the status quo would require 10% of direct payments**; however, this will not be enough to cover existing needs and will be especially apparent if financing of the politically agreed **expansion of organic farming** is to continue under Pillar II.

Member states also have to set out specifications on **conditionality**, the basic standards for all beneficiaries of per-hectare payments. Here, among other things, the BMU is calling for a **minimum share of truly non-productive areas** (GAEC standard 9) of 5% of arable land and land under permanent crop in order to reach, together with the eco-schemes and agri-environment measures, at least 10% of agricultural land **for biodiversity**. **The requirement to protect permanent grassland** (GAEC 1) should be continued and supplemented by a deadline-date rule. Minimum requirements for climate action, water quality and soil protection must also be implemented nationwide through additional GAEC standards.

Overall, a CAP designed in this way provides Germany with a **major opportunity to make the urgently needed improvements regarding the environmental impacts** of agriculture. Despite all challenges in designing a sound legal framework and ambitious policy measures: the implementation of the CAP reform must **initiate a forward-looking process** which provides ecologically effective and economically attractive remuneration for environmental services that can only be provided by farmers. More factors will thus unite agriculture and environmental protection than divide them.

## **1. Tackle the necessary changes**

For many years now, our approach to agriculture and food has been the focus of intense public debate. The debate has centred on topics like species-appropriate husbandry, “healthy” food, strengthening regional production and value chains and especially the impacts of agricultural practices on the climate, environment and biodiversity. In spite of all the contradictions between formulated demands and our day-to-day behaviour, these discussions have demonstrated growing public awareness for the importance of agriculture which extends beyond securing food supply.

At the same time, the economic situation is not easy for many farms in light of continuous pressure on producer prices, increasing land prices and more frequent extreme weather events due to climate change. It has therefore been clear for some time that farmers alone are unable to implement the necessary changes which regularly lead to higher costs for them. It is only in a whole-society approach that viable ways can be found to reconcile the legitimate economic and social interests of farmers with the growing demands of society on agriculture. This was emphasised by Federal Chancellor Merkel’s decision to establish the Commission on the Future of Agriculture pursuing the same intentions as the social contract with agriculture which the Federal Environment Ministry has been demanding for years.

The pressure here to take action for greater environmental protection, climate action and biodiversity conservation is especially high: we are not just falling short of all agriculture-related goals in the German Sustainable Development Strategy and the National Strategy on Biological Diversity, we are actually moving away from the target, for instance, for biodiversity in the agricultural landscape. The contribution of agriculture and agricultural policy to the transformation towards more sustainable management practices is therefore becoming increasingly crucial. The logical conclusion cannot be to maintain the status quo. Rather, we must systematically tap into the openness to change, which many farmers have been demonstrating for a number of years.

To this end, the Common Agricultural Policy of the EU (CAP) as the key agricultural policy steering tool needs to be applied in a targeted manner to overcome the challenges. The EU negotiations on the CAP post 2020 have not yet been concluded. Nevertheless, the outcomes so far in the Agriculture and Fisheries Council and the European Parliament fall considerably short of what is needed. The President of the European Commission, Ursula von der Leyen, and Vice-President Frans Timmermans, rightly agree that there is a lot of room for improvement in the CAP negotiations. Particularly, given that the current Commission has not only pointed the way forward with the Green Deal, but also made clear that agricultural policy and its implementation in the member states have to play a key role in actively supporting farmers in their efforts to enhance climate action, environmental protection and nature conservation.

Irrespective of the outcomes of the negotiations, it is clear that from 2023 member states will be afforded much greater scope for action than before. Member states should use this extended scope responsibly. The German CAP Strategic Plan should therefore be developed as a pillar of the social contract with agriculture. In the plan, society has to formulate what it

expects of farmers for its CAP tax money, but also how it will appropriately reward farmers for services of general interest and ensure planning certainty in the required change process.

We cannot allow this time to go unused — the pressure to act is enormous and is growing. The longer we procrastinate, the more drastic and costly the required changes will inevitably be. Furthermore, with a “business as usual” scenario, national scope for action is increasingly limited by court rulings — as was the case with fertiliser legislation. We must therefore initiate and enforce the necessary changes now to succeed in future. Addressing these altered societal expectations offers market advantages and planning certainty. It is thus in the interest of both the farmers and society as a whole to fully exploit the possibilities of the CAP reform at national level.

So far, there has not yet been a coherent overall concept for environmental aspects in the German CAP Strategic Plan. The Federal Environment Ministry would like to close this gap and introduce the following proposals for **the main aspects of the CAP green architecture** into the public debate, with a focus on **regulatory requirements at national level**.

## **2. Align the CAP Strategic Plan with needs**

The more strategic approach of the new CAP calls for the intervention strategy of the CAP Strategic Plan to be clearly derived from previously identified needs. This will enable much greater alignment of support instruments with the specific CAP objectives in the respective member state. Clearly specifying these needs, even though they should not and cannot all be covered by the CAP in their entirety or by the CAP alone, is vital for achieving environmental objectives. The environmental needs are urgent (see above), but they are still too often suppressed or subordinated to shorter-term considerations in political discussions.

The need to take environmental action is not only comprehensive, but also multi-faceted and differs largely from region to region making it necessary to pursue a differentiated approach for the instruments to be used or the targeted support.

The CAP Strategic Plan must provide solutions, in particular, in areas where pressure to act is especially high and both agricultural policy and agriculture have a particular responsibility. The **European Commission** clearly addressed these areas **in its recommendations for the German CAP Strategic Plan**.

The most complex challenge for agriculture will certainly be to halt the proven alarming **decline in habitats and species** which are dependent on extensive farming practices. With regard to **climate change**, the need for suitable adaptation measures is growing more and more urgent, but an appropriate sector-specific contribution also has to be made to reducing greenhouse gas emissions. The fact that the CAP is to contribute 40% to the climate quota of the EU Multiannual Financial Framework must therefore be taken seriously. This is in the best interest of agriculture and must be adequately underpinned by effective measures. The continuing **regionally high levels of excess nutrients** (particularly nitrogen) have to be reduced and greater focus placed on the **protection of soil** as the most important resource in agriculture including maintenance of **soil fertility**. Finally, the **expansion of organic farming** in

line with the objectives already agreed has to be accelerated to reduce the **overall strain on natural resources**.

**Conservation and promotion of biodiversity:** The conservation status of many habitat types and species in agricultural landscapes, which are to be protected under the Habitats Directive, is unfavourable. This is particularly true for grassland, for which Germany is already facing infringement procedures due to inadequate conservation. The conservation of species-rich grassland is key for achieving national, EU and international biodiversity targets. It is therefore extremely worrying that it is not just habitats dependent on regular management measures such as oligotrophic grassland and heathland that are in a poor state, but now also flower-rich meadow types that were still widespread just a few decades ago. The same is true for the decline in open landscape species that were more common in the past, such as the lapwing, partridge, hamster and the common mushroom. In particular, the decrease in farmland bird populations and the sharp decline in insect diversity and their biomass are clear signs of increasingly dysfunctional agricultural ecosystems.

In addition to the conservation of species-rich grassland, in particular, through adapted use, a share of 10% of agricultural land is required for diversified uses and appropriately networked landscape features such as perennial fallows, buffer strips along watercourses or hedges. Beyond this, management practices that support and promote biodiversity should be employed wherever possible: these include the reduced use of synthetic chemical plant protection products, particularly in land cultivation, reduced nutrient input, particularly in grassland and area-based grazing. The pressure to achieve a targeted reduction in the use of plant protection products is, however, not solely due to the need to protect insects, but also because of the growing resistance of “problematic” weeds or harmful organisms. The implementation of cultivation measures, such as broad crop rotation and mechanical weed regulation should therefore be stepped up.

**Climate change adaptation and climate action:** Alongside forestry, agriculture is the economic sector most affected by the impacts of climate change, as has been confirmed by the increase in extreme weather events in recent years such as dry periods, heavy rainfall and late frosts. This increases the pressure even more to take and support preventive measures in land management (including wider crop rotation, permanent soil cover to protect from erosion) and minimise risks for farmers (diversification). At the same time, the demands on the agricultural sector to reduce its greenhouse gas emissions are increasing. The Federal Climate Change Act, intended to implement EU obligations and the international Paris Agreement, sets out annually decreasing permissible emission budgets. The agricultural sector has to reduce its annual greenhouse gas emissions to 58 million tonnes of CO<sub>2</sub> equivalents by 2030. This is a reduction of 12 million tonnes (-17%) compared to 2018 and 10 million tonnes (-15%) compared to 2019. To achieve this, further reductions are needed beyond the measures already envisaged under the Climate Action Programme 2030. These measures have to be applied to the largest greenhouse gas sources nitrogen fertilisation and livestock farming (methane and ammonia emissions). Key climate action measures in the land-use sector also include protecting peatland soils, maintaining permanent grassland and increasing the humus content of mineral soils.

**Water quality protection:** The intensive discussions on the revision of the Fertiliser Application Ordinance have made clear that considerably more has to be done at local and, in part, at regional level to avoid harmful discharges of nitrogen into groundwater and of phosphate into surface waters to ensure compliance with EU requirements (EU Nitrates Directive, EU Water Framework Directive). In particular, farmers with high livestock densities and biogas plants will face some comprehensive changes. The common objective should be a more area-based approach. Modifications are also required in some areas of land cultivation (e.g. the necessary extension of crop rotation, legumes and catch crop cultivation). Further measures to comply with the

agreed objectives and requirements include additional or wider buffer strips along watercourses where fertilisers and plant protection products are not used and organic farming.

**Maintaining soil fertility:** The areas in agriculture and agricultural policy where action is needed most in relation to the protected asset soil are protection against erosion and maintenance of soil fertility. To avoid arable land being washed away, permanent soil cover, conservation tillage, ensuring good soil structure and avoiding soil compaction are important, particularly on sites at high risk of erosion. Soil fertility is promoted through diversified crop rotation that increases humus content. Hedges, rows of trees and a generally diverse landscape structure help protect against wind erosion.

**Air quality control:** With regard to air quality control, the obligation to reduce ammonia emissions set out in the NEC Directive is particularly relevant for agriculture as now around 95% of ammonia emissions in Germany are attributed to this sector. Within one decade (by 2030), these emissions have to be reduced by 29% (compared to 2005, a reduction of only 1% was achieved between 2005 and 2018). Great progress is expected here from the measures set out in the National Air Pollution Control Programme and support offered by the programme for investments and the future in agriculture (Investitions- und Zukunftsprogramm) of the Federal Agriculture Ministry (in particular, support of technology to apply liquid fertiliser and cover slurry storage facilities). Nevertheless, additional measures are needed, particularly in livestock farming (investment measures and more area-based livestock farming).

**Linking animal welfare and environmental protection:** Livestock holdings are facing particularly big and expensive changes. This was made clear by the recommendations of the competence network on livestock farming (Borchert Kommission) (2020) and the Scientific Advisory Board on Agricultural Policy (WBAE) of the Federal Agriculture Ministry (2015). The focus here is on improving animal welfare. In the restructuring of livestock farming, it is important to also address environmental impacts wherever they arise due to a high intensity or particular type of livestock farming. The objective here must also be to achieve a more balanced ratio between livestock numbers and farmed land (area-based approach). At the same time, synergies should be established between animal welfare measures and the objective to reduce ammonia and odour emissions (including through restructuring animal housing into functional areas and measures to separate urine and faeces and bedding material).

**More organic farming:** Organic farming already combines the many positive effects on abiotic protected assets and species diversity through foregoing the use of synthetic chemical plant protection products and fertilisers and lower livestock numbers assigned to each area. The German government is thus pursuing the goal to roughly double the share of land under organic farming to 20% by 2030 (German Sustainable Development Strategy), individual federal states have higher targets. In its Farm to Fork Strategy of May 2020, the European Commission is striving for a share of 25% by 2030 in the EU. The expansion of organic farming is not only contingent on increased funding to support agricultural holdings but also on expanding processing and marketing.

All these requirements are called for even though the current Common Agricultural Policy and its implementation contain measures supporting environmental protection, climate action and biodiversity conservation. This once again highlights the current need for change, which has to be reflected in the ambitious implementation of green architecture in the future CAP in Germany.

### 3. Design the green architecture in a goal-oriented way

The European Commission CAP proposal envisages 3 instruments that are to be interlinked: conditionality, the eco-schemes under Pillar I and environment-related measures under Pillar II — with a view to moving towards the specific environmental objectives of the CAP (climate change mitigation, environmental protection and biodiversity conservation) in a needs-based way. These instruments have to be used in the best possible way, i. e. effectively and efficiently, to achieve these objectives. The new eco-schemes have to be made into a *game changer* in this context. All instruments are to be elaborated primarily at national level based on EU-wide minimum requirements.

### 3.1 Conditionality

As the basis for agricultural support, conditionality can help achieve environmental and nature conservation objectives in the agricultural landscape almost nationwide. As it is obligatory for direct payment beneficiaries, it covers almost half of Germany's land area and thus represents the foundation for environmental protection in the CAP.

To ensure this foundation is solid and strong, the standards for **good agricultural and environmental condition (GAEC)** have to be shaped ambitiously at nationally level.

The GAEC standards on biodiversity and climate are especially important because of the current urgent need for action (see section 2). Therefore, the implementation of GAEC 9 (minimum share of non-productive land and landscape features) must significantly contribute to making 10% of agricultural land available for **species diversity** in line with the EU Biodiversity Strategy for 2030, a requirement that is also scientifically supported. GAEC 9 should therefore include a share of at least 5% for fallow land, flower areas and landscape features on arable land and land under permanent crops. To ensure that this requirement is not met by letting species-rich extensive grassland lie fallow (see section 3.2), it is important that GAEC 9 does not apply to permanent grassland. In addition, a requirement to maintain landscape features should also be established.

To fulfill **climate requirements**, permanent grassland has to be maintained and an ambitious approach should be set out to protect peatland soils and wetland areas. GAEC 1 (maintenance of permanent grassland) must ensure proper protection of grassland: the share of permanent grassland cannot decrease, i.e. the conversion of grassland will have to be approved and can only take place if new grassland is created. Furthermore, grassland that is newly created after a deadline (to be defined) should not lose its status as arable land after 5 years in order to avoid the incentive to plough up the grassland.

A ban on converting permanent grassland into arable land should not just apply to permanent grassland in Natura 2000 sites under GAEC 10 (environmentally-sensitive permanent grassland), but also under GAEC 1 to grasslands protected under the Habitats Directive outside of Natura 2000 sites as well as to sites that are carbon-rich, at risk of erosion or near groundwater. A ban on converting permanent grassland in peatland and wetland areas ought to be envisaged under GAEC 2 (protection of peatland and wetland). Permanent crops cultivated on organic soils should also not be converted to arable land. In addition, in peatland and wetland areas the installation of new drains or the deepening of existing drains or other

drainage facilities should not be allowed; repairs impacting on the water balance will require approval.

With regard to **water quality protection**, buffer strips are an effective way to combat erosion and the contamination of surface waters with nutrients and plant protection products. Germany has a patchwork of regulations on buffer strips of different widths under water, fertiliser and federal state legislation. Under GAEC 4 (buffer strips along watercourses), the BMU is calling for uniform green buffer strips along watercourses at least 5 metres wide and on which no fertilisers or plant protection products may be used. These buffer strips also provide space for grassland or agroforestry with site-appropriate trees. If flower strips or landscape features are created, farmers can simultaneously fulfill their obligations under GAEC 9.

GAEC 6 (erosion) and 7 (soil cover in sensitive periods) contribute to **maintaining soil fertility**. GAEC 6 should contain specifications on erosion-reducing and weather-appropriate management practices in areas at risk of water and wind erosion. These should also include a limit on plot size. An extension of the territorial setting for soil erosion susceptibility by wind and water is needed. An obligation to have winter vegetation on all arable land should be set out under GAEC 7. If this is not possible, soil cover should be ensured, for instance, through the use of plant residue (in the form of mulch). On sites at high risk of erosion, permanent soil cover should be made obligatory either under GAEC 7 or through an additional GAEC standard on permanent soil cover.

An additional GAEC standard on area-based maintenance, and potentially the formation of site-specific humus content would not be necessary if other crop rotation measures are designed to increase humus production. A broad crop rotation counteracts excess nutrients and soil compaction, reduces the need for plant protection products, increases the food supply available to wild animals and promotes humus production. Irrespective of a diversified crop rotation as part of the eco-schemes (see section 3.2), GAEC 8 (crop rotation) should call for the cultivation of a different crop to the previous year on at least 85% of arable land (plot specific) and a requirement for maize cultivation to be directly preceded by a winter catch crop.

### **3.2 Eco-schemes**

The new eco-schemes are a crucial for the pending reorientation of the agricultural policy. The eco-schemes will make it possible for a considerable share of direct payments, which have been largely spent unconditionally so far, to be used to remunerate specific environmental services carried out by farmers to the benefit of society. In future, it may even be possible to establish a separate branch of farming for the provision of environmental services. When applied appropriately, eco-schemes can effectively contribute to the implementation of European and national climate, environmental and nature conservation objectives in and with agriculture. We certainly have to make use of this opportunity.

The BMU is calling for a minimum share of 30% of direct payments for the eco-schemes initially — which is over one billion euros — and for this share to be gradually increased over the

following years. The aim is to appropriately map the necessary development path for the CAP after 2027.

It is crucial, however, that the share of funds alone is not decisive. 30% of direct payments are also spent on greening, with well-known limited effects. It is important to learn from this that well-intentioned instruments do not guarantee success. The overall concept has to fit and the devil is often in the detail.

### ***Objectives for eco-schemes***

The BMU advocates eco-schemes that

- trigger fundamental farming decisions towards the greening of agriculture or strengthen existing effective approaches
- roll out priority environmental and nature conservation measures across all areas of agriculture

and remunerate voluntary environmental services of farmers based on performance and as attractively as possible.

### ***Proposal for suitable measures***

Based on the aforementioned objectives, the BMU proposes the following catalogue of eco-schemes.

The starting point is the need to establish as comprehensively as possible, in conjunction with conditionality, the required basic framework of near-natural areas and features for the general conservation of biodiversity in the agricultural landscape (1.2). In addition, agriculture should be specifically addressed in Natura 2000 sites and other protected areas (3). Similarly specific, as relevance varies regionally, is the eco-scheme on climate-related aspects for the permanent conversion of arable land into permanent grassland on organogenic soils (4).

By contrast, the aim of the eco-schemes on the reduction of nutrients and plant protection products (5, 6) and on diversified crop rotation (7) is to bring about fundamental decisions relevant for the whole agricultural holding that support more sustainable management practices. The 3 grassland eco-schemes (8, 9, 10) are largely based on the current GAK measures. As grassland is more important for environment-related objectives, these eco-schemes will transfer basic measures from Pillar II into the eco-schemes, which are not in competition with the more targeted grassland measures of contract-based nature conservation.

The individual eco-schemes are described in more detail in the annex. The corresponding framework conditions essential for ensuring the effectiveness of the measures are outlined in the next subsection.

#### **1. Areas of high biodiversity value**

Fallow land with spontaneous cover, flower areas/strips on arable land and permanent crops, and landscape features as a contribution to achieving the 10% share of land in the

agricultural landscape supporting general biodiversity conservation.

## **2. Management of small parcels of land**

Management of small parcels of land, i.e. through landscape features, field margins, permanent pasture fences, fallow and flower strips or visibly delimited individual plots through other uses, which also improve structural diversity and biodiversity in the agricultural landscape and help protect against erosion.

## **3. Bonus for Natura 2000 sites**

Bonus in recognition of the difficulties associated with agricultural land in Natura 2000 sites, nature conservation areas and specially protected biotopes. This measure thus emphasises the remuneration of a specific service to society provided by farmers.

## **4. Peatland and wetlands: Conversion of arable land to permanent grassland**

Payment for the permanent conversion of arable land in peatland and wetland areas to permanent grassland — particularly for climate change mitigation reasons, but also for water quality and soil protection. As re-conversion is to be excluded, this measure should be remunerated with a one-off payment that compensates both for losses in income and value.

## **5. Reduction of excess nutrients**

Payments for individual holdings that stay below the maximum permissible nutrient surplus for nitrogen and phosphorous in accordance with the Ordinance on nutrient balance flows (Stoffstrombilanz-Verordnung) — particularly in light of the European Court of Justice ruling against Germany.

## **6. Foregoing or reducing the use of synthetic chemical plant protection products**

Payments for arable land and land under permanent crops on which the holding uses either no or a maximum of half the amount of pesticides compared to previous years as an important contribution to insect and water quality protection.

## **7. Diversified crop rotations**

Crop rotations with at least 5 main crops and at least 10% leguminous plants and catch crops to support maintaining soil fertility, reduce pesticide use and help mitigate the risk to farmers.

## **8. Extensive management of permanent grassland based on indicator species**

The results-oriented measure to provide proof of at least 4 indicator species (to be determined regionally) in flower-rich meadows and pastures supports biodiversity conservation and gives farmers flexibility in how they achieve this objective.

## **9. Extensive grassland management with area-based livestock farming**

Reducing livestock density and keeping cattle, sheep and goats to the main forage area while also limiting stocking density in each permanent grassland area, foregoing the use of mineral fertilisers and limiting livestock manure helps to protect water quality and mitigate climate change.

## **10. Area-based pastoral stockfarming**

As an addition to extensive grassland management with area-based livestock farming, pastoral stockfarming mainly improves animal welfare, but also promotes biodiversity.

**Funding organic farming** (maintenance) would be a particularly appropriate eco-scheme. The European Commission has proposed this and a transfer into Pillar I would adequately reflect the increased importance of organic farming and the ambitious expansion goals of the EU, the German federal government and the federal states. At the same time, it would also free up funding for other ambitious dark green measures in Pillar II (see section 3.3). On the other hand, it would be detrimental if support for organic farming were to limit the federal states' ability to pursue more ambitious expansion goals and provide strong funding incentives to support them.

### ***Requirements for effective eco-schemes***

The effectiveness of eco-schemes is not a given. The selection and design of suitable measures should therefore ensure the desired effects actually arise and that they can be effective both in less profitable and intensive regions. This means that offers must be made for agricultural holdings operating at different levels of intensity. Conversely, as with greening, primarily selecting measures with the lowest adaptation costs and often very low environmental impacts and/or measures with negative effects should be avoided. Targeted arrangements are required to this end:

- *Reference to intervention area as a requirement ...*

Bonuses should only be paid for the areas in which the eco-schemes are actually implemented. This is the only way to facilitate performance-based and technically-required differentiated remuneration. However, should the provision of a certain proportion of land for a measure call for payment for the total eligible hectares of the respective holding, the payment must be proportionate to the actual intervention area.

- *...for differentiated measures and premiums*  
The decisive point is that eco-schemes take into account different local conditions and opportunity costs and consequently that the terms and premium levels of the eco-schemes are sufficiently differentiated. At the same time, the level of the premium paid must correspond with the level of ambition of the measure. A balance must be found between the premiums for the individual eco-schemes to ensure that all schemes are used to the extent needed for achieving objectives and in line with the prioritised needs.
- *Offering multi-annual measures for a greater impact*  
If implementation over several years increases the environmental benefit of a measure, this eco-scheme should be offered as a multi-annual measure, or an increased premium should be paid for participation in consecutive years.
- *Aligning eco-schemes with Pillar II measures*  
The agri-environment-climate measures (AECM) under Pillar II are essential for reaching specific environmental objectives through targeted measures (see section 3.3). They are usually multi-annual and allow for regional differentiation and a higher level of detail in their design. This is why eco-schemes must not render effective AECMs unattractive by competing with them. This must be taken into account in the set-up of these measures and the calculation of premiums.
- *Preventing negative effects on the environment*  
Eco-schemes that are designed uniformly at national level cannot cater for specific local circumstances. They may have unintended negative effects because the one-size-fits-all approach cannot be equally effective everywhere. For example, an eco-scheme on fallow land may be highly effective in cleared-out agricultural landscapes, but it must not lead to the abandonment of species-rich meadows or of fields on rare lime weathered soils with species threatened with extinction. Against this background, eco-schemes which are highly likely to also negatively impact on the environment should not be offered, or appropriate arrangements must be made to avoid negative impacts (e.g. by defining eligible areas from a nature conservation point of view). Strategic environmental assessments should be used to check for potential negative impacts of eco-schemes and explore alternative solutions, i.e. the arrangements referred to above.
- *Finding proper solutions for distribution issues*  
Which measures are efficient from a climate, environment, and in particular nature conservation point of view varies from region to region due to differences in the natural environment and agricultural structure. This may result in a redistribution of funding between the federal states. To prevent this from becoming a barrier to the implementation of the necessary ambitious measures, the federal states must address the question of how funding should be distributed considering the whole package of provisions with distributive effects (e.g. distribution of EAFRD funding among the federal states, design of redistributive income support and capping, and differentiation

of basic income support according to Art 18 (2) of the CAP Strategic Plan Regulation). It might also be an option to restrict certain measures to selected regions or areas.

- *Regularly reviewing and adjusting eco-schemes*

As a rule, the schemes, their specific design and the associated payments should be reviewed regularly (e.g. every 2 years) without prejudging the outcome. If necessary, adjustments must be made to reach environmental objectives. The review should draw on scientific expertise and the know-how of environmental administrations.

- *Using the opportunities of digitalisation*

Easy applicability of eco-schemes is a key prerequisite for their acceptance among farmers. The growing opportunities of digitalisation must be used by administrations to facilitate management and control of payments, but they should also ease the burden on farmers, e.g. when submitting applications. This would not only help reduce unnecessary bureaucracy, Germany would also contribute to the CAP cross-cutting objective of advancing digitalisation in agriculture.

### ***Other aspects to enhance effectiveness of eco-schemes***

- *Points-based assessment can increase comparability and motivation*

A smart way of calculating the premiums for eco-schemes is to evaluate measures using a point value system (see, for example, the “public good bonus” (Gemeinwohlprämie) of the Landcare Germany (DVL). This makes environmental services comparable and gives farmers greater freedom of choice, creating a competition for high point ratings. Point value systems are currently being discussed in the Netherlands and Luxembourg. Such systems highlight the innovative potential of the new eco-schemes and should therefore be developed further.

- *Transferring unused funds to Pillar II for agri-environment-climate commitments*

If, as envisaged by the Agriculture and Fisheries Council, the first 2 years are to be a “learning phase” for eco-schemes, funding that cannot be fully used for the eco-schemes should be made available for the agri-environment-climate measures under Pillar II. This would be in line with the intention behind the eco-schemes. If the interest of farmers in the eco-schemes exceeds the allocated budget, all farmers should still be given a chance to participate by using funds from other direct payment interventions.

- *Offering more qualified environmental and nature conservation advisory services*

The portfolio of support measures should be increasingly accompanied by competent and practical advisory services for climate action, environmental protection and nature conservation in agricultural holdings. This increases the effectiveness and efficiency of measures. After all, it is in the farmers’ own interest to see the intended effects on their land. Advisory services under Pillar II of the CAP should be considerably stepped up (see section 3.3).

### **3.3 Transfer of funds to Pillar II**

Pillar II of the CAP, the European Agricultural Fund for Rural Development (EAFRD), will remain the key instrument in the next funding period to finance tailor-made regional and local agri-

environmental measures, ensuring a particularly high degree of specific environmental effectiveness.

Many environmental needs must be addressed by a broad spectrum of different measures, which can only be financed under Pillar II of the CAP. Such measures include investments (e.g. structural development of water bodies, rewetting peatlands or making animal housing environmentally compatible and animal-friendly), advisory services for land users (for which there is additional need due to the eco-schemes, see above), and compensation for loss of income caused by protected animal species. Also, ambitious and by definition highly differentiated measures for extensive land use, which are necessary to implement Natura 2000, can only be funded under the EAFRD.

All this makes the EAFRD the most important financing instrument for nature conservation in Germany. However, there is a significant funding deficit here. The Coalition Agreement provides for *needs-based* financing of Natura 2000 –this would require about 1.4 billion euros per year, but only one third of this amount is currently made available. In view of the ongoing infringement procedures against Germany due to non-compliance with Natura 2000, we need much stronger action in this field in future.

The biodiversity strategies adopted by the EU, Germany and the federal states also require further targeted efforts. The same applies to implementation of the Water Framework Directive, the Federal Government's Climate Action Programme and Germany's National Air Pollution Control Programme under the EU NEC Directive.

The need for transfers is even higher if organic farming continues to be financed through Pillar II. An additional 40 million euros per year would be needed to reach Germany's national target of 20% organic farming by 2030, which corresponds to an additional financing need of nearly 300 million euros by the end of the funding period. To avoid funding for all other environmental needs running dry, the transfers to Pillar II would have to be increased by almost one percentage point per year solely to finance organic farming. If the goal is to reach the much more ambitious targets set in the Farm to Fork Strategy and by many federal states, the transfer rates need to be even higher.

According to calculations by the Federal Environment Agency and the Federal Agency for Nature Conservation in the context of their own environment-related assessment of needs, a total of between 3 and 5 billion euros per year would be required to finance all climate, environmental and nature-conservation measures, which would (predominantly) have to be addressed through Pillar II. This would by far exceed the total EAFRD funding volume. However, even applying the 40% maximum transfer rate for environmental purposes would only result in an additional 2 billion euros.

Last but not least, future changes in the total volume of Pillar II must be taken into account. The frontloading of EAFRD funding in response to the COVID-19 pandemic and the integration of funds from the recovery package in the CAP transition period will result in an increase of available funding in Germany of more than 950 million euros for the years 2021/22. At the start of the new funding period in 2023, however, due to cuts in the original total EAFRD funding, EAFRD funding will suddenly decrease by 42% to 1.09 billion euros per year. This

means a transfer rate of 10% would be necessary in 2023 to simply maintain the status quo (2021). 16% would be necessary to compensate for the gap left by the aforementioned term-limited funds. Such a sharp drop in funding without adequate compensation through transfers would be extremely problematic, especially for the multi-annual commitments for environmental measures.

The volume of the necessary transfer of funds to Pillar II generally depends on how the other elements of the green architecture are designed: the fewer environmental needs are addressed via conditionality and in particular the eco-schemes, the more funds will have to be shifted to Pillar II. Other factors play a role as well. If, for example, extensive grassland that is valuable from a nature conservation perspective is not eligible for direct payments due to an inadequate definition of grassland (see section 4), this must be offset under Pillar II. Conversely, a higher basic premium for grassland or coupled payments for sheep and goats, which could counteract the threat of undergrazing of valuable biotopes, would reduce the need for transfers.

It is not possible to specify the exact volume of necessary transfers until all other environmentally relevant factors have been adjusted. However, one thing is clear: the funding requirement for environmental measures under Pillar II can only be partly reduced through the eco-schemes, if at all. Even the basic goals of avoiding infringement procedures for non-compliance with Natura 2000 and expanding organic farming can only be achieved if comprehensive use is being made of transfers to Pillar II.

#### **4. Using further environmentally relevant elements in national CAP implementation**

In addition to the green architecture elements described above, there are a few other aspects that can be shaped at national level and have a great impact on the achievement of environmental objectives.

**Appropriate definitions**, in particular regarding the eligibility of areas for support, are essential, for example to allow land users managing species-rich areas to receive payments from both Pillar I and II. This includes a proper interpretation of the EU **definition of grassland**, which should cover as many ecologically valuable areas as possible, regardless of which type of grass is predominant and of whether gaps occur, e.g. on dry slopes or as a result of grazing or natural dynamic processes. This is vital for many of the grassland habitat types protected under the Habitats Directive and for moist meadows. **Landscape features** including individual shrubs and grassland with trees (e.g. mountain meadows) must be fully counted towards the total eligible hectares. The same applies to **agro-forestry systems**, which can be a way for structurally weak regions (territorial setting) to combine productive land management with positive environmental effects such as protection against erosion. In this case, however, agro-forestry systems must not be categorised as landscape features. Such pragmatic definitions would considerably ease the administrative burden for farmers and administrators.

Sheep and goats are indispensable for maintaining many extensive grassland areas. At the same time, sheep and goat farmers are facing massive economic problems which cannot be compensated through Pillar II payments. These farmers should be eligible for **income support**

**in the form of coupled payments for sheep and goats**, which the Bundesrat has also called for on numerous occasions. This would also increase acceptance of wolves.

To reduce the considerable greenhouse gas emissions from **farming on peatland**, incentives for conversion into grassland should be created through the above-mentioned eco-scheme (see section 3.2). In the long term, appropriate conditions must be created to ensure that organic soils and floodplains are only eligible for direct support if managed as permanent grassland or in a way that protects the peatland soil (e.g. paludiculture).

The set of indicators included in the CAP proposal does not contain useful indicators for monitoring and evaluating the impacts of the CAP on biodiversity. This is why the tried and tested **High Nature Value (HNV) Farmland Indicator** should be included in Germany's CAP strategic plan, also to allow for continued funding for this Indicator under the CAP.

## Annex

### Eco-schemes: Portfolio of measures

#### *Areas of high biodiversity value*

**What is being supported:**

Provision of non-productive areas for improving biological diversity and habitat conservation

**Conditions for support:**

- Without prejudice to their obligations under GAEC 9, farmers commit themselves to establishing/providing non-productive areas enhancing biodiversity on their arable land and permanent crop area. Non-productive areas can be one or several of the following:
  - Fallow land with spontaneous cover on arable land
  - Flower strips on arable land and permanent crop areas
  - Landscape features.
- No cultivation of protein crops, catch crops, and no other productive uses (potentially excluding areas under contract-based nature conservation measures, see below)
- No cutting during bird breeding seasons
- No fertilisation and no application of plant protection products on these areas
- Management activities preserving landscape features (such as pollarding willows) including use of the cuttings are not considered productive uses.
- Arrangements must be made to ensure that these eco-schemes are also implemented in high-yield regions and to prevent non-local farmers from leasing land in low-yield regions to convert it into fallow land (e.g. by requiring a certain proximity of measures to the location of the holding).

**Level of support (guiding criteria):**

- Per-hectare payment according to Article 28 (6) (a) of the CAP Strategic Plan Regulation in addition to the basic income support
- Differentiated payments for fallow land with spontaneous cover/flower strips, landscape features (existing), landscape features (new)
- Payments differentiated by soil quality
- Bonus for multi-annual measures on the same plot of land
- Bonus for using autochthonous seeds
- Limiting of annual flower strips/areas to 3% of arable land and permanent crop area of the holding
- Limiting of fallow land to 10% of arable land and permanent crop area of the holding
- Areas subject to contract-based nature conservation which serve the protection and promotion of arable weeds (extensive land management) and which are managed in line with the applicable guidelines of the federal states must be considered non-productive areas according to the definition above to prevent them lying fallow. In these cases, support payments will be reduced by the amount made available in the context of the contract-based nature conservation measure.

### ***Management of small parcels of land***

**What is being supported:**

- Management of small parcels of land to maintain and increase structural diversity and biodiversity in agricultural landscapes and protect soils against erosion

**Level of support (guiding criteria):**

- Low, steadily decreasing funding for individual plots (arable land, permanent grassland, permanent crop area) which are visibly delimited by landscape features, field boundaries, pasture fences, fallow and flower strips or other uses [e.g. €30/ha for a 1-hectare plot and €3/ha for a 10-hectare plot]

### ***Bonus for Natura 2000 and other protected areas***

**What is being supported:**

- Bonus for agriculturally used areas protected under Natura 2000 or – outside Natura 2000 - designated nature conservation areas, or areas with a special protection status as biotopes according to the Federal Nature Conservation Act

**Conditions for support:**

- Management in line with the protection objectives in the types of protected areas described above.

**Level of support (guiding criteria):**

- Payment of bonus per hectare of protected agricultural area (payment based on conditions remains restricted to support with EAFRD funding according to Article 67).

### ***Peatland and wetlands: Conversion of arable land into permanent grassland***

**What is being supported:**

Placing particular emphasis on climate action, water quality protection and soil conservation:

- Use of arable land in peatland and wetland areas as grassland with a long-term legal obligation to exclude re-conversion and ploughing

**Conditions for support:**

- Eligible areas: Analogous to the arable land notified by the federal states in the context of climate reporting, IPCC 2006 standard (comparable to GAEC 2)

**Level of support (guiding criteria):**

- Per hectare of change in use
- In line with legal obligation paid as a one-off payment capitalising the use restrictions in a single amount

### ***Reduction of excess nutrients***

**What is being supported:**

- Staying below the maximum allowable nutrient surplus per holding for nitrogen and phosphorous according to the Ordinance on nutrient balance flows (StoffBilV)

**Conditions for support:**

- Drawing up a nutrient flow balance according to the StoffBilV

**Level of support (guiding criteria):**

- Per hectare of total farm area
- Continuously variable payments
- More than proportionate increase in payments with increasing level of ambition (justification: moderate reductions of surpluses can be achieved with simple measures, considerable reductions require greater efforts, potentially including different management methods and investments)

### ***No synthetic chemical plant protection products on arable land and permanent crop areas***

**What is being supported:**

- Areas (ha) without use of synthetic chemical plant protection products (PPP) in the year of application on arable land and permanent crop areas
- Additional option: Multi-annual foregoing of use in connection with the eco-scheme “diversified crop rotation” (see below)

**Conditions for support:**

- No use of PPP on specific plots of land or for certain crops

**Level of support (guiding criteria):**

- Per hectare of intervention area, distinguishing between arable land (medium payment) and permanent crop areas (high payment)
- Higher payment if intervention is multi-annual (at least two subsequent years) in connection with eco-scheme “diversified crop rotation”

### ***Reducing the use of plant protection products on arable land and permanent crop areas by at least 50%***

**What is being supported:**

- Reducing the use of synthetic chemical plant protection products on the arable land and/or permanent crop areas of a holding by at least 50%, expressed as crop treatment index<sup>1</sup> of the holding in the year of application compared with the average crop treatment index of the past three years.

**Conditions for support:**

- Development of a crop treatment index following the methodology of the Julius-Kühn-Institut for all crops covered by the methodology, from which a weighted crop treatment index reflecting the share of individual crops can be derived for the holding.

**Level of support (guiding criteria):**

- Per hectare of intervention area, distinguishing between arable land (medium payment) and permanent crop area (high payment)

<sup>1</sup> See Julius Kühn Institute: Statistical data on the application of plant protection products in practice (in German): <https://papa.julius-kuehn.de>

### ***Diversified crop rotation***

**What is being supported:**

- Crop rotation with at least five main crops on the arable area of the holding

**Conditions for support:**

- Each of the five main crops covers a share of at least 10% of the arable area of the holding. If more than five main crops are used, several crops can be combined to reach the 10% minimum share.
- Maximum share of one main crop in total arable area: 30%
- At least 10% leguminous plants
- The respective shares of summer and winter crops must not exceed 70%.
- Catch cropping before at least 70% of summer crops
- Change of crops on one plot after two years at the latest (except for forage grass, clover grass, fallow land and flower strips)

**Level of support (guiding criteria):**

- Similar to agri-environment-climate measure: The annual level of support is €90/hectare of eligible land for conventional farms and €65/hectare for farms which also receive support for organic farming. If proof is furnished that the share of cultivated large-grain legumes on the eligible arable area reaches or exceeds 10%, the payment will be increased to €125/hectare of eligible land, or to €90/hectare for farms which also receive support for organic farming. The (large-) grain legumes must not be mixed with other crops in order to be eligible for the higher level of funding. A mixture in which grain legumes are predominant is not sufficient.

### ***Extensive management of permanent grassland based on indicator species***

**What is being supported:**

- Extensive management of certain permanent grassland areas in the holding to maintain species-rich grassland vegetation by furnishing proof of populations of at least 4 indicator species from a regional catalogue of indicator species (results-based measure).

**Level of support (guiding criteria):**

- Based on GAK (Joint Task for the Improvement of Agricultural Structures and Coastal Protection) measure 4.D.3

### ***Extensive grassland management with area-based livestock farming***

**What is being supported:**

- Extensive management of permanent grassland (PGL) with area-based keeping of grazing livestock (cattle, sheep, goats) with a density of between 0.3 and 1.4 fodder-consuming livestock units (RGV)/hectare main forage area and at the same time a maximum of 2.0 RGV/hectare permanent grassland, no mineral fertilisers on PGL, and application of livestock manure on PGL limited to a quantity that corresponds to a maximum livestock density of 1.4 GV/hectare agricultural land.
- Permanent grassland management with a reduction in livestock density of at least 0.3 RGV/hectare main forage area and per hectare PGL compared with the average density of grazing livestock (cattle, sheep, goats) in the past two years. Livestock density must not fall below the minimum of 0.3 RGV/hectare main forage area, no mineral fertilisers may be used on the PGL and use of livestock manure on the PGL must be limited to the quantity corresponding to the reduced livestock density or a maximum of 2.0 GV/hectare agricultural land.

**Conditions for support:**

- No use of synthetic chemical plant protection products on PGL

**Level of support (guiding criteria):**

- Extensive management of permanent grassland with area-based farming of grazing livestock based on GAK measure 4.D.1
- Lower funding for permanent grassland management with reduced livestock density

### ***Area-based pastoral stockfarming (additional module for extensive grassland management with area-based livestock farming)***

**What is being supported:**

- Permanent grassland of holdings practising area-based pastoral farming of grazing livestock (cattle, sheep, goats)

**Conditions for support:**

- Pastoral farming of all grazing animals of the holding (with the exception of bulls, sick animals, animals giving birth, and juveniles if necessary for health protection) for a period of at least four months (or on 120 days) in the year of application for at least eight hours per day with free access to a drinking system
- Maximum of 2.0 fodder-consuming livestock units (RGV) per hectare permanent grassland.

**Level of support (guiding criteria):**

- Based on GAK 4.F.1.0, but per hectare of permanent grassland