

## Submission by the International Fund for Agricultural Development ([IFAD](#))

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Preparatory process

### **Session: Protecting the planet and building resilience**

*Pursuing policies, investments and innovation to address disaster risk reduction and protect the planet from degradation*

#### **Introduction**

The 2030 Agenda is rooted in the idea that human development and wellbeing cannot be achieved without simultaneously safeguarding and investing in nature and managing disaster risk in a systemic manner—otherwise development gains will be short lived and unequally distributed. Biodiversity loss, land and forest degradation, climate change, and disasters are threatening progress toward sustainable development. Actions to advance economic and social development need to address these threats and build resilience including through nature-based solutions, sustainable consumption and production practices and accounting for the true value of nature.

The past decade—in particular the COVID-19 crisis—has revealed the systemic nature of risk and the cascading impact of disasters across all three dimensions of sustainable development. The natural environment is humanity's first line of defense against many hazards, and nature-based solutions must be scaled up to manage disaster risks, build resilience and leave no one behind. These issues are addressed directly in SDGs 12, 13, 14, and 15, but they are foundational to the entire 2030 Agenda, including poverty eradication, health, food security and inclusive economic growth and sustainable livelihoods. The current session will highlight opportunities and innovations that can build resilience and manage risk while securing livelihoods and safeguarding the planet.

#### **Guiding questions**

Please consider the 4 questions below and submit written responses totaling **2000 words or less**. (Though the average should be 500 words per question, it is fine to use more words on one question and fewer on another, to total 2000.) Please draw from your field of expertise and experience and be as concrete and tangible as possible. Please provide your responses in a Word document by **12 May** to [rambler@un.org](mailto:rambler@un.org).

##### **1. Systems transformation**

**What are the fundamental systems transformations needed to halt nature degradation, reverse loss and manage risk, while eradicating poverty, ensuring food security for a growing population, securing livelihoods and promoting resilience?**

People, Planet and Prosperity need to be co-considered if transformation is to be achieved. **Economic thinking, incentives and systems which fail to internalize polluting or degrading externalities will need to change** or the natural capital base will be eroded to the point where the people who depend directly on it for multiple SDG related local benefits will continue to suffer and migrate to cities or beyond, reinforcing a vicious cycle. On the other hand, cities can

be engines of not only growth but sustainable growth. The way that rural-urban dynamics are managed or ignored affects the fates of countries. This is overlaid by trans-national forces of supply and demand, of changing ideas and expectations, which can further undermine the sustainability of rural livelihoods and food production.

The International Fund for Agricultural Development (IFAD) agenda of sustainable rural transformation puts people at the center, with planet and prosperity as supporting systems. Local food producers, who are also local managers of the local landscapes. They connect to others via market relationships, which can create opportunities for personal and collective well-being, or can be exploitative, forcing populations into mal-adaptive coping strategies. This undermines their capacity for resilience, making them more likely to fall into poverty and further vulnerability due to either ongoing stresses or shocks linked to climate change or markets or policies or conflict, among other triggers.

Current food production models exhibit a clear and lengthy pattern of habitat destruction, species extinction, pollution, and loss of agro-biodiversity. This is driven by both need and want, expectation and habit. Most innovation in the food system is at the consumer end, as changing preferences and rewards to producers are increasingly rapidly transmitted via tele-connections in the system. These trans-national systems are intermediated by large corporations who may behave differently according to the regulatory environment. For example agro-chemicals, which are banned in the home countries, are still manufactured for use in other markets. There is clearly a need for coordination in regulation, standards, tracing and accountability.

What leads to system transformation? There are many drivers and entry points, and when there is a convergence of drivers this can result in irreversible changes. Systems can also leap to a higher level of resilience at one or more scale. Rarely can all factors be coordinated, though convergence does tend to be more likely due to a disaster or major crisis, which changes the rules of the game, challenges thinking and opens up new policy space not previously considered politically viable. A technological breakthrough can also drive transformation, though rarely on its own (for example the synthesis of inorganic fertilizer).

Given the compression of time and space through communication technology and travel, these changes can happen more quickly than in the past but requires more of the nodes in a networked system to be coordinated or to collaborate. New visions of what is necessary and what is possible need to emerge and gain momentum. We are seeing this in the current ferment around the concept of food system transformation. Consumer awareness, intentionality of demand, regulation, technology, incentives and changes in values are conspiring to create new universes of possibilities. There are overlapping ecosystems of food production, transformation and consumption and these will persist at different scales and in different geographies.

Certain supply chains for food commodities have become a rallying point for system change through multiple pressure points which represent a view of the larger food system but which are sufficiently well defined to be a "something" people can understand, governments can regulate, technologies can be applied to and consumers can direct their economic voting power either for or against. These low hanging fruit require knowledge of markets, of production options, of enabling policy environments, sometimes in the context of direct production but often of a relationship between large intermediaries who source from numerous outgrowers.

IFAD strives to improve the prosperity prospects and benefits of market access for its target smallholders, who are also landscape managers of local impacts on the planet. This has led to cooperation with large actors in the supply chain for certain commodities, policy engagement with government and organization of rural producers, local value addition and facilitating access to local financial resources in order to make productive investments.

While at the bottom of the system, smallholders produce over 50% of the world's food; farms under 2 ha produce one third of the world's food supply but on only one quarter of its area under agriculture (Ricciardi et al, 2018) and larger food system transformation therefore cannot hope to be sustainable without putting them also at the centre of it. Furthermore, research shows that as farm size increases, agro-biodiversity on average reduces but also post harvest loss. Post harvest loss is therefore a key entry point in system optimization but of course requires a number of other supporting interventions and system changes to lead to transformation of rural livelihoods towards local level prosperity with landscape health, which at sufficient scale can tip our global food systems into a more just and sustainable direction.

## **2. *Specific actions to drive transformation***

**Please describe 2-3 specific, promising actions at different levels that can drive these systems transformations. These actions could relate for instance to scaling up the use of nature-based solutions, sustainable consumption and production, or other approaches. How have these actions helped (or how *could* they help) break down siloes, support the systemic management of risk, and trigger positive changes in society? How can co-benefits between actions be maximized and the risk in trade-offs stemming from these actions (i.e. negative impacts on other aspects of the 2030 Agenda) managed?**

Building resilience through nature-based solutions - Safeguarding biodiversity and enhancing ecosystem services are integral parts of IFADs work to build the resilience of smallholder farmers to withstand climate change, pests and other disasters. The smart use of ecosystem services and nature-based solutions (NbS) are part of the strategy to build long-term resilience for smallholder farmers. The knowledge in the functioning of these systems and their intricate parts is often present among indigenous peoples and local communities. Having a system view on our productive lands can be to ensuring that pollinators have access to flowering plants throughout the season, something that can be difficult in huge monocultures, or through restoring degraded ecosystems like mangroves for the purpose of protection against hurricanes, preventing coastal erosion and securing fish spawning. NbS also bring social benefits through creating new jobs in e. g. nurseries needed for tree planting or seed enterprises.

NbS can promote synergies between biodiversity, climate and sustainable development policies with a good potential to be up-scaled. The use of NbS in agriculture is not necessarily a matter of either or, but can be used in a range of actions that can be taken between a small-scale ecological approach and a large-scale industrial approach. Public money is an important factor to push the transition, but the private sector could play a more important role. Countless businesses are depending on biodiversity and ecosystems and many incorporate it into their business case. However, policy and legislation need to level out the field of operations to move this from the goodwill of customer close businesses to include all. There are also strong

economic incentives to follow this path. The top five risks to the global economy are associated with biodiversity loss and climate change.

Efficient use of resources - Part of the efforts to improve incomes and reduce poverty, while safeguarding the environment, is using resources more efficiently and reducing waste. There are far too many examples of highly inefficient resource use (water, raw materials, wild catch from oceans, or land use) and human activities that generate unsustainable levels of pollution, including chemicals, plastics, nutrients, untreated sewage, and municipal waste. A combination of increasing agricultural productivity, reduction of waste and losses, and changes towards a less meat-intensive diet can limit the food system's environmental impacts. A holistic and "whole-of-society engagement" approach is needed in order to shift behavior and societal norms in food consumption. With this follows an increased awareness of producing better quality products.

A more circular approach to resource use would reduce the pressure on natural resources through less need for first hand raw materials. Shifting the view on waste to see it as resources requires a shift of mind. Electronic waste, for example, can contain a higher level of precious minerals than the ore from mines. An efficient use of resources should also be beneficial from both economic and energy standpoints, but can be hampered by the difficulty to separate materials in products and challenges in collecting. To think design for reuse or recycle, as well as plan for systems for collecting requires a concerted effort. This transformation needs a more holistic approach from society.

Access to sustainable energy - The lack of access to reliable and affordable sources of energy hinders the productivity and development potential of micro, small and medium enterprises in rural areas by making the use of electrical machines too expensive or impossible. A lack of access to affordable energy also prevents many smallholder farmers from developing irrigation systems that could improve their yields and increase the area of their land that is cultivated.

Financial services to facilitate investments in RETs could bring significant benefits. RETs can help rural households reduce their energy expenditure and improve their living conditions (e.g. less indoor air pollution, better quality lighting). They can enable smallholder farmers to increase the area of land that is irrigated, increase their yields, diversify their sources of revenue (e.g. different crops, grain and fruit drying, cooling, storage, processing activities) and, as a result, reduce food waste, increase their revenues and improve their resilience to climate change and shocks. Sustainable energy production practices are crucial for the transformation of the agricultural sector. Decarbonizing the world's energy system is not only an important step to reduce emissions and curb climate change, but it is also important for improving the health and well-being of people exposed to in-door air pollution.

There are also good opportunities to work with the private sector and create new jobs. Technical solution providers that distribute RETs and offer vendor finance solutions to their clients: for instance through pay-as-you-go technology allows end-users to digitally pay for their energy use in small instalments, or through the commercialization of energy as a service (e.g. battery charging, renting solar lanterns, renewable energy service companies).

### 3. ***Means of implementation and the global partnership for development (SDG 17):***

**Achieving the 2030 Agenda relies on a combination of means of implementation to catalyse action and engagement, harness synergies and reduce trade-offs. Please discuss the means of implementation, including finance, partnerships, and capacity building, needed to make the necessary transformations. How can science, technology and innovation (STI), including social innovation and local and indigenous knowledge, be mobilized to advance these transformations?**

So far the economic development has had a huge environmental cost. There are many steps to take if we shall be able to decouple economic progress from environmental destruction. To combine people, planet and prosperity financial resource needs to be mobilised on different levels. Currently there are a number of barriers to FDI (e.g. policies – or lack of - making businesses in some countries difficult, costly, risky etc) that should be addressed. Here ODA (and UN) can play an important role in facilitating the development of better regulatory systems, improve legal and policy frameworks and develop necessary capacities. Corruption is one such barrier that has reached intolerable levels in some countries. It also makes good policy just a paper product. There is a strong movement in parts of the private sector towards sustainability. It is important that these efforts are rewarded and that there is adequate policy to avoid unfair competition with unsustainable businesses.

Building better regulatory systems is needed at national, regional and global levels and can be done in partnerships between national and multilateral actors. Some model global businesses consequently apply the most rigorous policies (be it their own or country of operation) for social and environmental sustainability. More knowledge is needed for making human activities more sustainable, and research and educational co-operations between developing and developed countries, as well as South-South co-operations, in areas of common interest (NbS/indigenous knowledge, RETs, energy storage) can make way for science-based policy and sustainable trade.

Capacity building continues to be at the centre of all interventions and shared know-how and best practices can serve to spread forefront technology for countries to move directly to the latest innovations and technology in e.g. renewable energy. This continues to be important in the support to national plans and commitments. An area that can be further explored is social innovations for changing behaviour and attitudes in favour of more sustainable choices. Outcomes are depending on what choices people make. Digital innovation is another field to explore further that could affect our behaviour, as it has done in profound ways so far. We need to cross the knowledge-practice gap so that what we know starts to influence what we do.

#### **4. *Covid-19 crisis***

**What does the Covid-19 crisis reveal about the human-nature relationship and systemic risk creation? How can nature-based solutions contribute to a post-COVID-19 economic and social recovery that is more sustainable, equitable and resilient? What immediate and medium-term**

**steps are needed to ensure that the post-COVID-19 economic and social recovery is sustainable, equitable and resilient. How can we redirect financial flows and direct recovery efforts to create better outcomes for people, prosperity and planet?**

The current Covid19-crisis points to the linkages between climate change, biodiversity and human health. Up to 75% of emerging infectious diseases that affect humans are zoonotic, i. e. originating from animals, either domestic or wild. Main causes are ecosystem conversion, habitat fragmentation and the way we produce, trade and use living species for food, medicines and other products. Our activities open up areas that were once inaccessible to us, exposing us to species that are hosting viruses that are new to humans. These can be wildlife that is driven to seeking food in our orchards due to forest loss or live wildlife and domestic animals brought together in food markets. Such circumstances allow for the spill-over of viruses from wild animals, via domestic animals acting as disease-bridges, to humans or in some cases directly to humans. High-density livestock production may also promote spread of zoonotic diseases by a lower genetic diversity and subsequent less resistance.

A changing environment provides new opportunities for pathogens to interact with and infect new host species. Growing evidence suggests that outbreaks or epidemic diseases may become more frequent as climate continues to change. This is something we have to prepare for and manage. Here an intact ecosystem can help to regulate diseases by supporting a diversity of species making it more difficult for pathogens to spread rapidly or become dominant. Nature-based solutions that serve to safeguard biodiversity and enhance the functioning of ecosystems work contrary to the destructive trends. However, it requires scale.

It is important to learn from history and act from the facts we know. Immediate actions can be taken for safer animal production systems, limit antimicrobial applications, safe handling of meat and avoid bush-meat. Providers of search engines, such as Google, could be involved in an early warning system for the increase in certain search terms.

For the medium-term perspective more knowledge is needed. Ecological, evolutionary, social, economic, and epidemiological mechanisms that are affecting zoonoses persistence and emergence need to be better understood. This information should inform evidence-based policies and practices, as well as be used for targeted surveillance, prevention and control efforts. The successful implementation can be a challenge in that it requires the collaboration of many sectors, such as health scientists, ecologists, veterinarians, policy makers and others. To build trust in regulating and monitoring systems more transparency and openness is needed.