10.2 Considering the impact of human wildlife conflicts on sustainable food production and local communities, and make sure this is managed well

WWF

1.1 What, in brief, is the solution?

Repurposing agriculture from a major driver of biodiversity loss to a significant contributor to the conservation of natural ecosystems, by designing production zones to support ecological connectivity and human wildlife coexistence.

1.2 What was/were the source(s) from which this solution emerged?

Wildlife Practice, World Wildlife Fund

1.3 What problem is it trying to address within food systems?

Over 18,500 species are known to be threatened with extinction due to agriculture, which has contributed to over 100 known species extinctions to date. On the other hand, wildlife can cause enormous damage to agriculture via the consumption of crops by wild herbivores, killing of livestock by wild predators, damage to infrastructure and equipment and even farmer injury and death. It is clear that managing the relationship between agriculture and wildlife and their habitats is at the core of our ability to bend the curve of biodiversity loss whilst equitably feeding the growing human population– the challenge of our time.

1.4 How can this solution address that problem?

Taking an ecological connectivity and coexistence approach to agriculture is the solution to this challenge. It would build an interconnected relationship between agricultural areas and the broader landscapes in which they sit, broadening the scope from a focus on on-farm agrobiodiversity, to ensuring production zones have a positive impact on the biodiversity of natural habitats surrounding them.

What would this mean in practice?

- It would mean preventing the conversion of natural habitats for agriculture in ways that increase fragmentation, and ensuring land-use planning and governance processes that place agricultural areas in the landscape in ways that retain connectivity of wildlife habitats and reduce the human-wildlife interface. This will not only reduce Human Wildlife Conflict (HWC) and its significant negative impacts on both wildlife and farmers, but also reduce the risk of spillover of emerging infectious diseases such as the virus cuasing COVID-19.
- It would mean managing agricultural areas themselves in ways that allow the flow of wildlife and ecological processes through them, whilst employing holistic measures to reduce conflict. This could include the maintenance or restoration of wildlife corridors within large scale plantations, the maintenance of riverine habitats within farmland (which often act as wildlife dispersal areas), ensuring the ‘right fences in the right places’, and employing holistic measures to manage HWC and ensure coexistence. There are many exciting innovations on this front that can make such efforts more effective than ever before.

- Last but not least, it would infove focussing restoration and rebabilitation efforts in the most critical connectivity areas or hotspots of HWC.

These approaches are already being applied with great success, from small scale farmers in India managing their crops in ways that allow the movement of tigers and other wildlife through them, to oil palm concessions in Borneo reforesting major strips through their concessions to function as wildlife corridors, to tea plantations in India employing holistic measures to reduce conflicts with elephants, to sourcing companies like Nestle, who now require all farms they source from, to maintain or establish wildlife corridors. However whilst successful these approaches are far from mainstream.

Taking a connectivity and coexistence approach to food production systems to scale will deliver healthy landscapes that are more resilient to climate change, provide strengthened ecosystem services such as pollination, and ensure flourishing populations of wildlife. And in the process, give food production and sourcing companies what they are all seeking - incredible stories of how their production zones are crucial to the survival of charismatic wildlife. With a connectivity and coexistence approach to food production systems we have the potential to turn the tide from agriculture as the biggest driver of biodiversity loss, to agriculture as a driving factor in biodiversity's recovery.

1.5 Why does this solution align to the definition and criteria for a 'game changing solution' developed by the Summit?

(1) impact potential at scale[1] (including return on investment)

This solution absolutely delivers impact at scale, as its benefits will not be felt only within farm borders, but far beyond, in the natural habitats of the landscapes in which those farms exist.

In addition, the solution is scalable to almost any system. Ecological connectivity is needed everywhere - from urban environments, to the Congo Basin. Human wildlife coexistence is needed everywhere - from wolves in Europe, to elephants in Africa and primates in Asia.

(2) actionability (taking into account politics, capacity, costs)

Many solutions for ecological connectivity and human wildlife coexistence are already being implemented with success, demonstrating their actionability.

(3) sustainability (i.e., the ability to keep delivering to 2030 and beyond)

The benefits of human wildlife coexistence solutions are felt on both sides - by wildlife but also by farmers whose productivity increases. Thus the incentive for the sustainable continuation of these solutions is inbuilt.

1.6 What is the existing evidence supporting the argument that this solution will work, or at least that it will achieve the initial outcomes described above?

There are many case studies which showcase how solutions for ecological connectivity and human wildlife coexistence deliver key outcomes, which can be provided on request.

1.7 What is the current and/or likely political support for this idea?

There has never been a better time to take this approach to scale, with a rapidly growing momentum in the political, corporate and financial spheres:

Political:

- The UN General Assembly in April 2021 adopted its first ever resolution on wildlife connectivity by concensus. The resolution was co-sponsored by 60 governments.
- The emerging post-2020 Global Biodiversity Framework (GBF) of the Convention on Biological Diversity has strong content on connectivity spanning several of the Target areas of the framework. This follows the Convention on Migratory Species and its 130 government parties issuing a declaration pushing for connectivity to be a priority in the GBF.

Corporate:

- 300 fashion brands have signed the 'Fashion Pact' within which they comit to 'wildlife friendly' agricultural practices, most of which have a strong focus on human-wildlife coexistence
- The World Business Council on Sustainable Development issued a 'Call to Action on Landscape Connectivity'

Financial:

- The most widely used industry standard for financial investment (the International Finance Corporation's Performance Standard) requires projects they invest in to 'implement measures to minimize habitat fragmentation, such as biological corridors'
- Banks are increasingly taking additional measures, such as the Inter-American Development Bank's requirement for 'project design for maximum ecological connectivity'.

1.8 Are there certain contexts for which this solution is particularly well suited, or, conversely, contexts for which it is not well-suited at all?

Ecological connectivity solutions can be employed anyway, but would be particularly well-suited (or needed) in landscapes where agricultural systems heavily fragment remaining natural habitats, thus wildlife need to move through agricultural systems.

Human wildlife coexistence solutions can be employed anywhere, but would be particularly well-suited (or needed) in landscapes where human wildlife conflict hotspots occur.