THEMATIC CHAPTER 1

Considerations for the AFOLU sector for a long-term decarbonisation strategy in Argentina

This thematic document arises from and also complements the publication *Elements for a Long-Term Low-Carbon Strategy*, produced by UNICEN.

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INTRODUCTION

The Long Term Decarbonisation strategies (LTS) are an instrument of National climate policies to achieve Greenhouse Gas (GHG) Emissions reduction across a country's economy. This means that all sectors, sources and sinks have to be considered, in order to outline a path according to National circumstances.

In this regard, this document explores in a concise way the problems and opportunities existing in the second more relevant sector in Argentina's GHG National inventory: Agriculture, Forestry and other Land use (AFOLU).

Chapter one addresses the Agriculture and Livestock sector, the one with the greatest responsibility in terms of emissions, inside AFOLU and a main actor in Argentina's economy, with the fundamental role of feeding the population. In chapter two, focus is placed on Forestry and other Land Use, emphasizing the relevance of some of the main ecosystems in the country as well as the different treatments that should be taken into consideration for carbon sinks and reservoirs of biodiversity conservation.

This document tries to approach transformations that should happen in the AFOLU sector within a LTS elaboration framework. it explores ways that weren't reflected on *Elements for a long-term low carbon development strategy* document, written by UNICEN as part of a project made with FARN.

AGRICULTURE AND LIVESTOCK

MITIGATION IN THE LAND USE CHANGE SECTOR

Worldwide, the AFOLU sector generates approximately 20% of GEI emissions, and it is expected that by 2050, this will increase in 40%-50%, under a business as usual diagram (IPCC 2019). This represents a great challenge in reaching the Paris Agreement goal of limiting the global temperature increase to 1.5° C towards the end of century. Therefore, it is necessary to urgently address the mitigation in the AFOLU sector. For that, inherent complexities from the sector need to be taken into consideration while thinking in both, short and long term. It is therefore essential to include the AFOLU sector in a LTS elaboration.

In its 2019 Special Report about Climate change and Land the Intergovernmental Panel of experts on Climate Change (IPCC) highlights the importance of implementing mitigation measures in the sector, and classifies options that States can perform from the supply and demand side.

If emissions from food waste of consumers are added with grocery disposal in good state along the value chain they represent 8-10% of total global emissions (ibidem). Therefore, from the demand side, food consumption, there are different options of dietary changes that can have great impact on GEI emissions.

From the supply side, however, there are much more options for mitigation that can be applied on food production. Among them, there are integrative systems with high potential and multiple co-benefits.

ARGENTINA'S SITUATION

Agriculture sector is, without a doubt, one of the main economic engines of the country, and represents 62% of current generators of currency for exports (according to INDEC 2019a). However, it has to face more frequent interrogations for its social-environmental impacts. Below, there is a list of problems involved in the sector.

- **High use and dependency of external supplies:** since the green revolution through the introduction of transgenic modifications in the 90's, the prevailing agriculture model has been based on the use of synthetic fertilizers and agrochemicals, which volumes continue to increase. This leads to health impacts on rural residents and workers, as well as an increasing resistance of weeds, and contamination of rivers and aquifers.

- **Reduction of productive capacity of the soil:** as a product of erosion, degradation, salinization and desertification. It is also evident a loss in land's nutrients due to the lack of reposition, together with leaching and low efficiency in fertilizers use (Sarandon and Flores 2014).

- **Expansion of the agricultural frontier:** The surface area, which is intended for agriculture and livestock has been historically increased in detriment of natural ecosystems. "Pampeanization" -mainly with monoculture- outside of the productive core, implies a severe loss of species and forest ecosystems, grasslands and wetlands, regional economies and carbon sinks, together with the displacement of species whose natural habitats have disappeared. This advance is also given among native communities' territories, without recognising land tenure rights, in violation to previous, free and informed consent of native communities.

- **Increasing concentration of lands:** According to preliminary data from the National Agricultural Census (CNA 2018), farming operations decreased 25% in contrast to 2002 CNA (INDEC 2019b). This indicates a larger quantity of concentrated surface on a lesser amount of exports, a process that has deepened since CNA data in 1988.

- **High levels of GHG emissions:** According to the last National Inventory, the sector represents 37% of Argentina total emissions, and is the second, in terms of magnitude of emissions of National Matrix (SAyDS, 2011). These emissions are explained mainly by bovine enteric fermentation, deforestation, and manure management. In addition to this, the current model is increasingly more dependent on fossil fuels while the productive efficiency decreases in terms of energy (Sarandón and Flores 2014).

AGROECOLOGY AS A PATH

Social-environmental issues on Argentina's food system –and the whole world– are countless. In addition to this, it is imperative to mitigate and adapt the sector to climate change, since it affects and is affected at the same time by this global phenomenon.

In this regard, the IPCC (2019) states that there are integrated agriculture systems able to respond to both questions, performing methods which improve mitigation, resilience, and sustainability functions of the agrosystem. This is because they follow holistic approaches to achieve biophysic, socio-cultural and economic benefits for the soil system management (Sanz et al., 2017).

It is then easily understood that the agroecology concept raises as a path to reach all these targets. While there are numerous definitions, agroecology is considered a science, a social movement, and a practice altogether (Wezel et al. 2009), which is associated to historical moments of its evolution. From the science point of view, it is the use of ecological concepts and principles for agro-system's design and management (Altieri 1995). Agroecology provides resilience to systems through intensive knowledge practices, which are based on traditional agriculture methods, and co-generation of new perspectives and information through collaborative investigations of actors involved (Menendez et al. 2013).

In 2018 the Food and Agriculture Organization (FAO) published, through debates and expert's exchanges from all over the world, "10 elements of agroecology" aiming to expand and unify visions and definitions.

These elements, established through synthesis process, and based mainly on the "5 principles of Altieri" (1995) and the "5 levels of agroecological transitions" (Gliessman 2015), are part of all the dimensions that make agroecological sustainability a long-term model.

These are:

1. Diversity: of species and genetic resources, space and time.

2. Joint creation and knowledge exchange: through participative processes for formal and informal knowledge improvement.

3.Synergies: between biological processes, for example, which improve production and ecosystem services.

4. Efficiency: by improving environmental goods and biological processes, which implies a lesser need for external resources.

5. Recycling: cycle closure and reduction of system outputs as wastes, which leads to less economic and environmental costs.

6. Resilience: strongly linked to diversification. This implies a greater capacity to recover from disturbances such as, for example, climate impacts.

7. Human and social values: agro-ecological systems strengthen communities and producers, which become change agents, and allow them to fight hunger and malnutrition.

8. Alimentary culture and traditions: Support healthy, diversified, and culturally appropriate diets.

9. Responsible governance: specially needed to carry out alimentary system transitions, and that comes from different scales (local, national, global).

10. Circular and solidarity economy: which means connecting producers and consumers, and strengthening short alimentary circuits.

With regards to GHG emissions reduction, agroecological practices have direct benefits through an increase of carbon sink in soil organic matter, and through energy use reduction, among others. This is achieved, for example, by adding regularly big amounts of organic material, animal manure, compost, leaflet, cover crops and rotation of large waste-producing crops (Altieri and Nicholls 2013), with a reduction in the use of phosphorus and synthetic nitrogen fertilizers (its production is highly intensive on energy use), closing biogeochemical cycles and with reduction on fossil fuels use.

Large-scale economically viable agroecology

Perhaps, one of the main preconceptions in agroecology is that it is limited only to small and intensive productions, mainly vegetables. However, there are more and more cases of extensive agroecological productions. One of the most well-known is *La Aurora*, an establishment of 650 hectares (Southeast of Buenos Aires). With more than 25 years in agroecological management, it has achieved to stabilize and equalize wheat production, (its main crop) and bovine meat to average production value of conventional systems in the area. Unlike the conventional production, that needs greater performance over time time, -which implies greater productive pressure on the environment- to pay increasing costs (Cerdá 2014), La Aurora has achieved a significant decrease on direct costs (FAO 2016).

Also, the results obtained in agroecological cluster of the *Barrow Integrated and Experimental Farm* (which belongs to INTA), placed in Tres Arroyos, Buenos Aires, indicate that it is possible to obtain crops that present a really good profit, with greater stability on performance and decreasing productive risk than an Industrial model using agroecological base models (Zamora 2017). Studies carried out compared results from the agroecological model with the traditional industrialized model. For agroecological management, only 148 kg/ha of wheat production costs were needed to cover costs, while 2856 kg/ha were needed for the industrial system. In the same way, for every USD invested on the agroecological system, USD $2.23 were recovered; while for the industrial system, USD $1.17 were recovered on average for the three campaigns that were studied *(ibidem)*.

Previous examples seek to bring down the myths of the difficulties on economic viability of agroecology. As it is said by Aparicio et al. (2018), it is observed that in agroecological systems, direct costs are much lower than conventional systems (because of low use of external supplies) and in consequence, gross margins are increased.

AGRICULTURE AND LIVESTOCK ROLE AND RESPONSIBILITY

It is important to take into consideration the double role of agriculture as a victim and victimizer on climate issues. It is one of the most affected sectors by floods and droughts, which have increased their frequency due to the increase of GHG concentration in the atmosphere, as well as temperature modifications and increasing extreme events.

On the other hand, as the second sector with more emissions on the national economy and the source of numerous social-environmental problems the agriculture and livestock sector needs to take responsibility. This implies that decision making by the government and the private actors, in consequence, has to respond to a Holistic model not only to reduce the national emissions matrix, but also to take care of the environment and society's health. This requires a paradigm change towards a big-scale and industrial agriculture model.

In response to these issues, agroecology presents an alternative in which production can stay profitable, as the INTA experience shows; but with principles based in taking care of ecosystem goods and services, resilience and sustainability of agroecosystems on long-term, and society's health as a whole (not only for the workers in the sector, but people who consume goods and cohabit with exploitations).

It is important to differentiate the need to keep driving research and extension spaces on agroecology, to be able to continue improving sustainability indicators based on empiric knowledge. At the same time, it is fundamental to have an increasing simulation model development that reflects the diverse productions in every area, and that allow doing projections - of emissions, for example- with greater representativeness of reality.

Agroecology, unlike the conventional agricultural model, considers variables that create social, economic and environmental stability in long-term, and that without any doubts, can provide emissions reductions, in line with the Paris Agreement and preserving environmental integrity.

SILVICULTURE AND OTHER LAND USE

PATHS FOR EMISSIONS REDUCTION COMPATIBLE WITH BIODIVERSITY CONSERVATION

To achieve carbon neutrality in 2050 implies not only GHG emissions reduction in all sectors (phasing out fossil fuels and mitigating in the AFOLU sector) but also to increase the capture and storage capacity of CO_2 in an active way (IPCC SR1.5 SPM, 2018). This implies a bigger dependency on carbon sinks, meaning that they are at the center of the climate ambition.

While there are several ways to achieve a climate goal compatible with the 1.5°C global warming, it is essential to deeply analyse adverse impacts and benefits that come from different scenarios, especially in Land Use.

Some emission reduction pathways compatible with 1.5° C in this sector, (such as those dependent on CO_2 capture measures by widespread Bio-energy use, with carbon capture and storage (BECCS), or big scale forestry monoculture) can have harmful effects for biological diversity. Others pathways are however compatible with biodiversity protection and, in turn, carry multiple social, economic and cultural co-benefits.

Approaching climate change and protecting biodiversity at the same time is essential: not only it supports fundamental ecosystem services for human well-being, but also the conservation efforts contribute to adapt to the inevitable climate impacts, while they offer an important mitigation potential. Also, it is evident that increasing biodiversity degradation omits our capacity to reach ambitious climate goals (IBPES SPM 2019).

By 2030, Sustainable Development Goals (SDGs) should be achieved, as well as the targets established on the global framework for biological diversity after 2020 of the Convention on Biological Diversity (CBD), and most of National Determined Contributions (NDCs). In this way, the LTS presents a new opportunity for implemented actions under the UNFCCC[1], the CBD and other biodiversity agreements to be coherent, integrated and co-beneficial in time and at the same time, allow to achieve the SDGs.

A decarbonization strategy for 2050, which is compatible with biodiversity preservation is needed and requires:

1. A Rapid and Deep decarbonisation of the energy system, giving priority to low emission energy sources, that minimise or bring to zero the negative impact in biodiversity.

2. Promoting high mitigation potential AFOLU measures that guarantee natural ecosystem's integrity and create co-benefits for biodiversity, adaptation and local communities, taking to the minimum the deployments of those afforestation and reforestation projects with exotic species and BECCS.

3. Preventing GHG additional release (CO_2, CH_4, N_2O) from Land Use change such as deforestation and degradation of forests, wetlands and grasslands, and degraded agricultural land.

1. United Nations Framework Convention on Climate Change (UNFCCC), 1992.

4. Improve biodiversity and natural ecosystem's integrity and resilience through restoration, enhancing the sinks capacity of GHG capture and storage, on long-term and in a stable way.

5. Ensuring a legal and institutional framework of long term strategies and policies for conservation and restoration, through genuine and effective participative processes, respecting local communities and indigenous people rights.

THE IMPORTANCE OF PRESERVING NATIVE FOREST

Native forests are home to a great diversity of tree species, and accumulates large amounts of biological carbon, in a more stable way than forestry monocultures, and at the same time they give a greater stability and resilience facing extreme weather events (Cristiano et al., 2014; Liu et al., 2018; Lewis et al., 2019; Osuri et al., 2020).[2]

According to official data, which was published on Forest Reference Emission Levels (NREF in Spanish) from Argentina, total CO_2 emissions by deforestation during 2002-2013 period was 1214 $MtCO_2$. Besides GHG emissions, deforestation also impacts on multiple ways causing biodiversity, productivity, and forest's economic value loss, land erosion, alterations to the hydrological regime, migration and uprooting of rural populations.

Protecting and allowing native forests development until their maximum potential of carbon sinks, represents the most efficient, stable, and cost-effective strategy of carbon capture and mitigation for the next two critical decades for climate action (Lewis et al., 2019; Moommaw et al., 2019; Osuri et al., 2020).

Argentina has a powerful instrument for safeguarding its native forests: The 26.331 Law for Environmental Protection of Native Forests, sanctioned in late 2007. Known as the forests law, it was an unprecedented breakthrough on environmental issues in our country. While the law provides all the tools for an effective application, it still faces several implementation challenges.

All actions related to Native Forests adaptation and mitigation contributions for Argentina's change have to be according to the Forest Law precepts, regulatory standards and others. On this matter, and under LTS framework, it is essential to:

1. Stop illegal deforestation and promote an effective conservation and sustainable forest's use. Focus must be on preserving standing forest. The time and costs required for forest regeneration highlights the ecosystem's importance, the social and even the economic convenience of improving and taking care of existing forests.

2. Non-regression on the protection levels achieved, according to Native Forest Land Use Planning (NFLUP[3]), developed in a participatory manner across the country. On this matter, it is essential not to enable land recategorization systems by simple administrative procedure, nor other adjustment paths during NFLUP updating process, on detriment of protected forests or violation of legal terms.

3. Exercise a tough control and effective oversight of forest law on territory, applying sanctions for non-compliance and fiscal fines with deterrent amounts for those who transgress the law, and an effective repairment of environmental damage.

2. For example, Cristiano and collaborators (2014) concluded that subtropical rainforests in Iguazu National Park are capable of storing CO_2 in an almost regular way throughout the year, in contrast to pine and eucalyptus forests in the same region. Although forestry reaches its CO_2 absorption peak after three or four years of being planted, this value is always below the native forests.

3. Law 26331, article 9.

4. Ensure greater budget allocation for 26.331 Law funds, until 100% of the legal amount is reached. This will allow, among other things, strict conservation actions on red category land, sustainable use on yellow category land and discourage changes allowed (with previous environmental impact analysis and public audience) on green category land on NFLUP.

5. Measure instrument performance on Forest Law management and implementing a monitoring system of conservation, development and use on changing Land's Use.

6. Ensure that every restoration process of degraded forests and reforestation is done using native species, with previous strategic analysis of the ecosystem, and with effective citizen engagement.

7. Applying a precautionary approach to silvopastoral systems that are introduced as an alternative to keep up mature woody species, implementing fodder pastures, under an integral management system. Especially in the Chaco Region, most of the existing systems are basically Livestock producers, with secondary forestry components. Reality shows that "selective deforestation" is done by steamroller or bulldozer, which leads to deforestation or previous steps to it, which, in addition to exotic pasture plantation, does not ensure maintenance and regeneration of native forests.

8. Ensure full respect to public information access and citizen engagement rights, including consulting rights and free, previous and informed consent for native people.

FOREST PLANTATIONS ARE A FAKE SOLUTION FOR CLIMATE CHANGE

In order to promote Argentina's forest industry and contribute to GHG mitigation, the strategic forestry plan and forest-industrial 2030, in the context of the committee on Industrial Forest Competitiveness and the ForestAR Platform 2030[4], it is proposed to increase the planted forest area from 1-3 million to 2 million hectares by 2030 (+50), which would mean an average of almost 59000 hectares per year. For its part, the National Native Forest Restoration Plan (PNRBN in Spanish)[5] is developing a six-year program (2018-2023) to reach an 18.000 hectares goal of restored native forest by 2023.

Since they do not contribute to storage carbon in a stable way, forest plantations are a fake solution to climate change, unlike strategies that involve restoration and conservation of primary and secondary natural forests (Harmon et al., 1990; Liao et al., 2010; Lewis et al., 2019; Moomaw et al., 2019; Osuri et al., 2020).

Regular planted tree crops release stored carbon again into the atmosphere if the biomass is burned or is used for short life span products, as paper. Besides, deforestation and forest management affect weather through a great number of additional factors, including the albedo and evapotranspiration (Crisitano et al., 2015). On the other hand, natural forests continue to keep carbon from decades to hundreds of years (Poorter et al., 2016).

As for dendro energy plantations it is essential to highlight that, unlike forest biomass waste, forest crops of short-term rotation which are exclusive for raw material generation for bioenergy are not carbon neutral, but they represent a rapid increase on CO2 atmospheric concentration from decades to hundreds of years (Mckechnie et al., 2011; Holtsmark, 2013; Searchinger et al., 2018; Sterman et al., 2018; Woo y Turner, 2019). Even more, it is foreseen that the increasing production,

4. **http://www.afoa.org.ar/web/PublicacionForestales-11Dic2019.pdf**
5. **https://www.argentina.gob.ar/sites/default/files/resumen_pnrbn.pdf**

scale, and forest biomass extraction for dendro energy will increase even more CO2 emissions on short-term than fossil fuel use (Mckechnie et al., 2010, Sterman et al., 2018).

Forestry monoculture also carries on important socio-environmental negative impacts[6]. Intensive practice and the use of exotic species, which get wild fast, are really harmful for our Country's natural ecosystems, as they reduce biodiversity (Paritsis y Aizen, 2008; Trentini et al., 2017; Iezzi et al., 2018). Nowadays, forest plantations represent a severe threat, especially for grasslands and wetlands from Argentina's Northeast, which are natural sinks and are converted to GHG sources (Vicari et al., 2010). Towards this, regulations governing the forest sector are out of forecast regarding social-environmental impact prevention, derived from activity, free access to information and citizen engagement.

On the other hand, support given by 25.080 Law for investments on cultivated forests are an example of harmful incentives and subsidies to biodiversity in the CBD framework, where Argentina is a State party (24.375 Law) and according to CDB mandates it has to be stopped.

Natural ecosystem's conversion to exotic tree plantation can, not only exacerbate climate change and its impacts, but also really harmful social-environmental effects. On LTS framework, it is essential to:

1. Prioritise degraded native forests regeneration above commercial plantations within a reforestation initiative like the Bonn challenge[7], allowing degraded lands to recover reaching their maximum capacity for carbon sequestration.

2. Put an end to subsidies for plantations as they are harmful for biodiversity, redirecting public funds for conservation actions towards biodiversity and native forest sustainable use.

3. Reinforce environmental forecasts from forest activity regulation, especially in Land Use Planning, strategic environmental assessment and impact analysis (including accumulative ones), information access and citizen engagement, among others, in line with 25.675 Law for environmental principles.

WETLAND ROLE AND OTHER ECOSYSTEMS

While solutions provided by natural ecosystems are focused on forests' role to remove and store CO_2, there is considerably more carbon stored in land than in vegetation (Ciais et al., 2013). Most of the world's carbon stock on land is found in wetlands (Lal, 2008).

These ecosystems have an enormous biological, ecological and social value. They contain an exceptional biodiversity and perform a wide range of vital functions, such as fresh water supply and purification, food supply, nutrients and pollutants retention, erosion control, floods mitigation and shoreline stability (Ramsar, 2013). They are also local economy foundations, where water access provides development opportunities, both productive, and recreational/touristic.

At the same time, wetlands offer societies the conversion of atmospheric carbon dioxide into plant biomass (primary production), playing a key role in GHG mitigation. These ecosystems also increase weather resilience.

However, conversion, degradation and drainage of these types of ecosystems have important implications in its hydrology, structure and function, making organic matter on land oxidize and

6. **https://www.farn.org.ar/wp-content/uploads/2018/12/Consideraciones-ante-pr%C3%B3rroga-Ley-25080.pdf**
7. **https://www.bonnchallenge.org/content/challenge**

release big amounts of stored carbon to the atmosphere. These alterations produce, at the same time, changes in the microbial decomposition process, affecting methane (CH_4) and nitrous oxide (N_2O) emissions. Several studies show these effects on wetlands in our country (Ceballos and Jobbágy 2009; Vicari et al., 2011; Enriquez et al., 2014; Veber et al., 2017).

Among the main drivers of disappearance and wetland degradation are: agriculture, urban and industrial development, accidental or deliberate introduction of invasive exotic species, resources overexploitation, household and industrial waste, which are poorly treated; and climate change.

According to recent reports from the Ramsar Convention[8], existing natural wetlands cover only a fraction of its original surface. It is estimated that in the last 300 years, 87% of its surface has disappeared, with 35% loss since 1970, where data is available. In Argentina, wetlands represent around 600.000 km_2, representing 21.5% of the national surface (Kandus et al., 2008), and they are under great threat due to worldwide identified pressures which are causing degradation and disappearance. In spite of this, the country does not count with a National protection law.

Peatlands case

Peatlands are a kind of wetland that accumulates large amounts of organic matter throughout thousands of years. Despite their low primary productivity, and that they only represent between 3-4% of land area, they keep between 16% and 24% land's carbon, which makes them one of the biggest global reservoirs (Joosten et al., 2016).

95% of peatlands in our country are located in Tierra del Fuego province, and are mainly concentrated in the Mitre Peninsula. This Peninsula stores 315 million metric tonnes of carbon, and at the same time it houses important biodiversity, both sea and land, which is the reason to be a priority as a global conservation area (Benzaquen et al., 2017; Soto-Navarro et al., 2020).

In Argentina, commercial exploitation of this kind of ecosystem to extract peat intensively represents a risk for the climate's global system because it changes the ecosystem from a sink to an emitter. In fact, Tierra del Fuego's intensive peatland's management has a negative effect on carbon balance and N_2O-N emissions, compared to intact areas (Veber et al., 2018). Current peatland's ecosystem loss could seriously hinder national goals, and therefore it would prevent the achievement of the Paris Agreement targets.

It is essential to establish the importance and need to protect wetlands in the political agenda, at all levels, as well as to integrate these actions to Argentina's climate commitments. In this matter, it is needed to:

1. Sanction urgently a wetland's Law that allows to stop its degradation and disappearance, also to ensure its conservation and sustainable use, according to the National Constitution on its 41st article. A regulation that establishes a minimum protection standard, allowing to advance in Land Use Planning and an inventory of our wetland areas, which integrates land's vision from people who inhabit, produce and know about wetlands.

2. Use IPCC Wetlands Supplement (2013), improved in 2019[9] on GHG national inventories, to inform not only Land Use change emissions from freshwater wetlands - including peatlands

8. https://static1.squarespace.com/static/5b256c78e17ba335ea89fe1f/t/5b96cad8562fa7f1fc78f9b0/1536609000122/Ramsar+GWO+SUMMARY+SPANISH_WEB.pd

9. https://www.ipcc-nggip.iges.or.jp/public/wetlands/pdf/Wetlands_Supplement_Entire_Report.pdf
https://www.ipcc.ch/site/assets/uploads/2019/05/2019Refinment-PR-es.pdf

and saltwater wetlands- but also ecosystem's GHG sequestration. This is the first necessary step to analyse mitigation potential on ecosystems.

3. Harness wetlands mitigation potential as a part of a bigger effort to reduce carbon emissions and not to compensate for other GHG emissions in AFOLU or other sectors.

4. Ensure that efforts with regards conservation and sustainable wetland's use are not isolated, but linked to the fulfilment of the commitments contracted under multilateral environmental agreements, such as Ramsar Convention, CDB, Convention on Conservation of Migratory Species, United Nations Convention to Combat Desertification and United Nations Sustainable Development Agenda for 2030.

INTEGRATED APPROACH NEEDED

It is important to recognise we are facing an environmental crisis without precedents, due to the rise of greenhouse gases emissions and biodiversity loss, which are intimately related, and therefore, need to be addressed in an integrated manner. Natural ecosystem's degradation exacerbates climate change and this, in time, accelerates biodiversity loss in a dangerous feedback loop which needs to be identified and stopped.

Preventing natural ecosystem's degradation and loss, including forest, grasslands, wetlands and oceans, is absolutely necessary in order to preserve biodiversity, which sustains human societies and to achieve Paris Agreement goals.

However, while ecosystems based approaches can contribute in a substantial way to mitigate changes in the Land use sector - and can also give multiple and valuable co-benefits- these measures should not replace nor compensate or impair an imperative, deep and quick decarbonization of the Energy and Industry sectors.

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