



CLIMATE ACTION PATHWAY

LAND USE

Action Table

2021

ACTION TABLE STRUCTURE AND APPROACH

Land use or Agriculture, Forestry and Other Land Use (AFOLU) are major contributors to climate change, contributing about 24% of the global greenhouse gas (GHG) emissions including through loss and degradation of forests and other ecosystems as well as agriculture activities. At the same time the sector is in the front line of defence against climate extremes and weather variabilities, contributing to disaster risk reduction and enhancing resilience of food security and livelihoods. Therefore, the sector can provide key solutions to achieve the goals of the Paris Agreement and the 2030 Agenda for Sustainable Development. The complex nature of the AFOLU sector, its interrelations and interactions are structured into four sub-sectors that respond to the classification of the IPCC Special Report on Climate Change and Land (IPCC, 2019):

- i. Protect;
- ii. Restore;
- iii. Produce; and
- iv. Supply chains, consumption, diets and waste.

Seven impact areas addressing adaptation and mitigation actions were identified under these four sectors. Impact areas under sectors i) and ii) are straightforward, while sectors iii) and iv) are divided in a number of impact areas responding to the diversity of actions that need to be undertaken depending on the area's focus. The overview sector structure provides additional details on the content of each impact area.

CONTRIBUTIONS

Under the leadership of the High-Level Champions and through the Marrakech Partnership for Global Climate Action, the development of this Climate Action Pathway was led by the International Union for Conservation of Nature (IUCN) and by the Food and Agriculture Organization of the United Nations (FAO) in consultation with more than 120 representatives from the following organizations: Action Aid, Basque Centre for Climate Change, Business for Nature, Carbon Trust, CAT, CDP, CGIAR, Climate Advisers, Climate Focus, Climate Land Ambition and Rights Alliance, Climate Law and Policy, Conservation International, Danone, WAT, Emergent, Environmental Defense Fund, Equilibrium Research, Fundación para la Promoción del Conocimiento Indígena, Global Forest Coalition, Green Peace, Griffith University, Humana Brasil, ICLEI, IETA, IFAD, ILEPA Kenya, Imaflores, Indigenous Peoples Major Group on Sustainable Development, ITTO, Moja Global, N4C, National Farmers Union, National Wildlife Generation, Nepal Federation of Indigenous People, Rainforest Australia, Systemiq, The Nature Conservancy, Thünen Institute, Tropical Forest Alliance, the United Nations Development Programme (UNDP), University of Melbourne, WBCSD, WEF, WFP, Wild Heritage, World Bank, World Farmers Organization and World Resources Institute.

Stakeholders who provided inputs include: Basque Centre for Climate Change, Biovision, CDP, CGIAR, Climate Advisers, Climate Focus, Climate Law and Policy, EAT, Emergent, Environmental Defense Fund, ICLEI, IETA, Moja Global, National Farmers Union, ProVeg, The Nature Conservancy, Thünen Institute, UNDP, WEF, WRI, World Farmers' Organization, and WWF. This document does not represent a consensus view.



OVERVIEW – SECTOR STRUCTURE

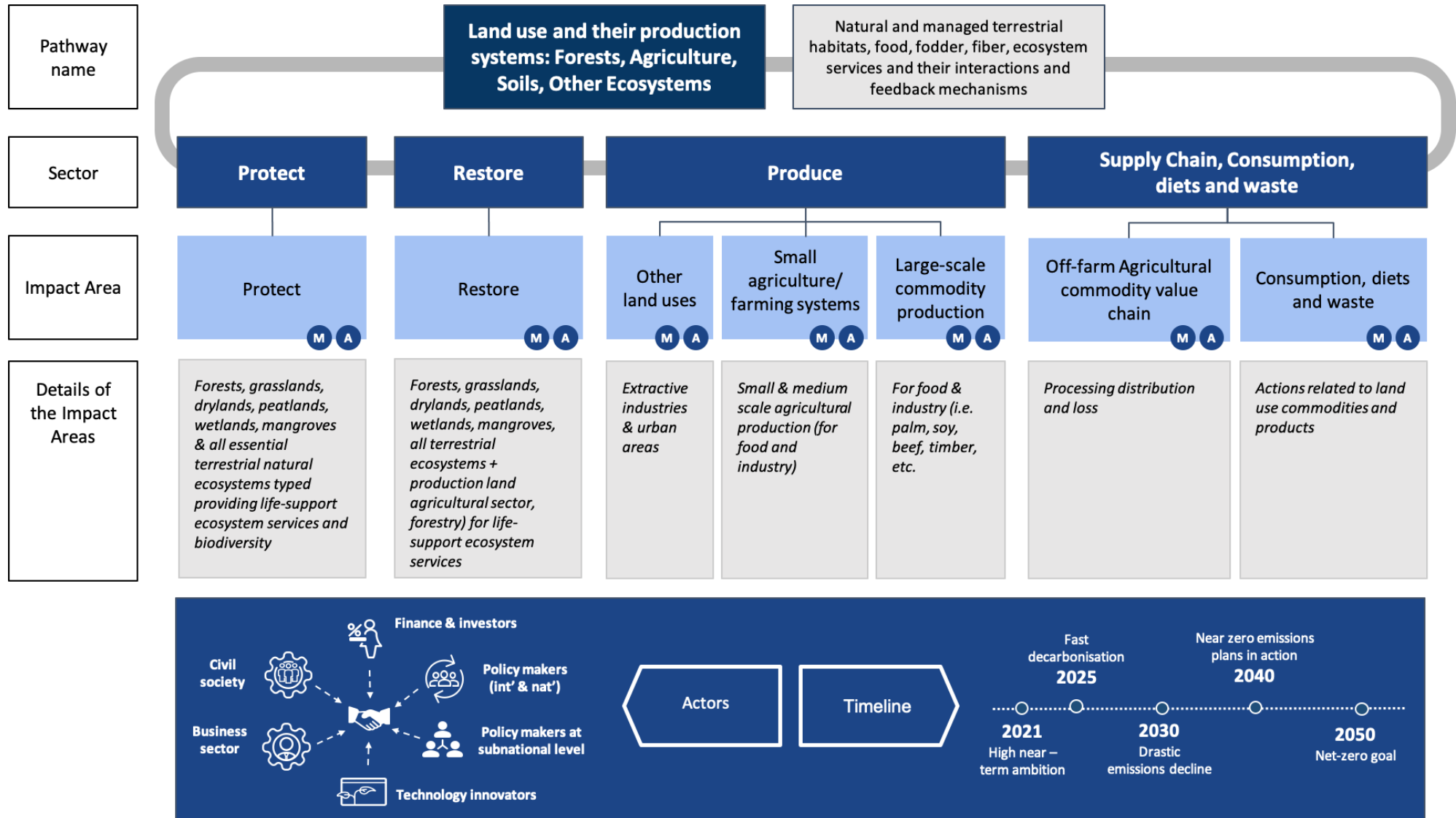


TABLE OF CONTENTS

Action Table Structure and Approach	2
Contributions.....	3
Overview – Sector Structure	4
Introduction to the Land Use Sectors	6
Land Use Sector Change Levers.....	9
Land Use Sector System Maps and Campaign Summary	12
1. Impact Area- Protect.....	18
2. Impact Area- Restore	28
3. Impact Area - Production – Other Land Uses	35
4. Impact Area - Small-scale Agriculture/ Farming Systems.....	46
5. Impact Area - Large Scale Commodity Production	56
6. Impact Area - Off-Farm Agricultural Commodity Value Chain	67
7. Impact Area - Consumption, Diets & Waste.....	76
Bibliography.....	81

INTRODUCTION TO THE LAND USE SECTORS

i. Protect

Nature's contributions to every aspect of human life and to the fight against climate change are undeniable – however the capacity of nature to deliver these is in peril as biodiversity rates are declining in ways we have not seen before, particularly in areas with the highest biodiversity richness in the global south. 8 million hectares of natural forest have been lost each year in 2010–2020 (FAO, 2020). Forestry and Other Land Use (FOLU) emissions including deforestation, forest degradation and forest management as well as biomass fires including peatland fires and drained peatlands accounted for about a 13% of emissions during 2007-2016 (IPCC, 2019). To limit global warming to at least 2 °C there needs to be expanded land-based mitigation responses, with reduced deforestation at the centre of the solutions. As humanity relies on nature for their future, ambitious actions need to be taken to flatten, and reverse, the loss of nature through effective conservation action, paired with transformational changes in our production and consumption systems (WWF, 2020). Globally there has been limited and insufficient progress to reduce deforestation and associated emissions and we are not on track to stop them by 2030, as envisioned in several global declarations and commitments (FAO, 2020, NYDF Assessment Report 2020). Due to the inextricable nexus between the Land Use, Water and Oceans Climate Action Pathways, it is relevant to review these three action pathways in parallel.

Under the Land Use Climate Action Pathway, actions to conserve and protect terrestrial ecosystems, above and below ground, involve the design, implementation and enforcement of comprehensive policies that not only promote conservation but avoid impacts on natural ecosystems, with adequate implementation of monitoring systems that inform progress or pitfalls as they happen. It also stresses critical actions for the adequate recognition of indigenous peoples' and local communities' rights as guardians of forests and nature. Key actions also include transparency and disclosure from the finance and private sector regarding their impacts to nature, as well as the implementation of transformative business strategies to decarbonize and halt deforestation and habitat loss from operations, the importance of increased investment in Nature-based Solutions (NbS)¹ including carbon pricing and the role of civil society organizations as a support network to generate knowledge, expand capacities and facilitate and support implementation. Extractives sectors as well as transport and energy need to avoid further impact to natural ecosystems and integrate environmental impact assessments in all their planning processes – cross cutting actions have been included in the Energy and Transport Action Pathways.

ii. Restore

¹ There is no agreed definition of NbS under the UNFCCC. For the purposes of this document the IUCN definition is used. Nature-based Solutions are defined as "actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits (IUCN, 2016).

Land degradation and ecosystem loss by human activities is negatively impacting the well-being of at least 3.2 billion people, costing more than 10% of the annual global gross product in loss of biodiversity and ecosystem services (IPBES, 2018). There is a direct connection between land degradation and increased carbon emissions as well as the diminished capacity of ecosystems to act as a carbon sink and resilient ecosystems. It is necessary to do a major overhaul to the dominant and unsustainable land use practices to avoid more land to be degraded, as well as to restore the ecological integrity of these ecosystems. On average, the benefits of restoration are 10 times higher than the costs, which gives a strong signal on the fact that investing on restoration is a win-win situation (IPBES, 2018). There are many efforts in place to implement terrestrial ecosystem restoration, including the Land Degradation Neutrality as well as country-led voluntary initiatives such as the Bonn Challenge, The New York Declaration on Forests and the Great Green Wall. With the adoption of the UN Decade on Ecosystem Restoration 2021 – 2030 there is a renewed force to take up on the challenge and implement restorative activities across ecosystems, including terrestrial. Under the Land Use Climate Action Pathway, actions to restore terrestrial ecosystems start with accelerating implementation of restoration pledges, expand them and implement actions at scale. For this it is necessary to address policy and governance challenges which are acknowledged as cross-cutting enabling conditions for the success of restoration efforts. Monitoring systems and wide-spread technologies can help making decisions and ensure that restoration actions are effective and long-term. Actions to increase sustainable investment from public and private funding sources to incentivize change in unsustainable practices is also key. The application of landscape approaches and integrated planning needs to be the new norm, where sustainable land use is coupled with active restoration. At the same time, the civil society plays an important role raising awareness, building capacities, facilitating partnership and generating technologies and knowledge that allows the scaling up ecosystem restoration. In these contexts, many cross-cutting actions and synergies exist with the Water and Ocean Climate Action Pathways, particularly due to the interactions between freshwater, coastal and marine ecosystems and land use, as well as the interdependencies of land to ocean systems.

iii. Produce

The global production systems relying on land use sectors are at the crossroads. They must meet the challenges of the demand for food and other land use related commodities, increase of hunger, malnutrition and poverty as well as urban and rural interconnections, against a backdrop of population growth, increased pressure on natural resources including soils and water, the loss of biodiversity, and the uncertainties associated with climate change. A transition is needed to more sustainable land use production systems– systems that produce more, that are resilient towards impacts of climate change, with more socio-economic benefits and with less environmental consequences. Under the Land Use Climate Action Pathway, Production aims to cover every factor in the ways land is used, covering impact areas of Other Land Use, Small Scale Agriculture and Farming Systems and Large-Scale Commodity Production.

Other Land Use lists actions to be considered by extractive industries, urban environment and cities. The impact areas of the *Small-Scale Agriculture and Farming Systems* and *Large-Scale Commodity Production* are embracing social, political, economic, and environmental systems that influence and are influenced by those activities. These impact areas cover upstream and midstream agricultural, food and timber production. Food from aquatic systems, marine, and freshwater, is considered under *Small*

*Scale Agriculture and Farming Systems and Large-Scale Commodity Production*², as fish (wild and farmed) accounts for a significant share of the protein in human diets and this share will potentially increase. The separation between small-scale agriculture systems and large-scale commodity chains is made due to the social, economic and climate change caused vulnerabilities and needs that are different between large-and small-scale production. While actions related to policy alignment and reforms, shift from agricultural subsidies to payments for ecosystem services, access to climate information, knowledge and capacity building on regenerative and resilient farming practices³, technology and innovation are important to transform agricultural and land use commodity systems, there are actions that are differentiated. For example, access to services on finance, insurance, social protection, local and regional markets, as well as knowledge, innovation and technology are critical for farmers to be able to transform the small-scale agricultural systems. The large-scale commodity producers can exert leadership rooted in achieving the Paris Agreement and increase transparency and appropriate management of their value chains, commit to deforestation free commodities, conserve and enhance soil carbon stocks, improve water resource stocks, implement low carbon livestock practices, reduce use of synthetic fertilizers and nutrients polluting the ocean and freshwater systems.

iv. Supply Chain, Consumption, Diets and Waste

Supply Chain, Consumption, Diets and Waste covers every step in which the food and land use commodities are produced, stored, packed, processed, traded, distributed, marketed, consumed and disposed. The sector is divided into two impact areas representing *Off-farm agricultural Commodity Production* which compiles actions related to downstream production of food systems, and impact area of *Consumption, Diets and Waste* which goes beyond direct land use related activities but still has high environmental and climate change impact. About 34 % of GHG emissions associated with the food systems comes from supply chain activities: retail, transport, consumption, fuel production, waste management, industrial processes and packaging. Therefore, actions under the impact area of the *Off-farm agricultural Commodity Production*, calls for actions related to shorter value chains to reduce transportation emissions, use of renewable energy sources, especially bioenergy that is produced from residues and manure, reduction of food loss, access to innovation and technology as well as processing and packaging in order to transform food value chains. Policymakers and companies should increase transparency of the food and land use commodity value chains and become legally accountable for their climate and environmental impacts, as well as social and human rights violations.

Human behaviours linked to the *Consumption, Diets and Waste* are critical to transform not only food and agriculture systems but also other land used commodities. This is due to the consumption patterns, especially the ones linked to the diets of nearly eight billion people, which are critical factors for shaping how food and land related systems would transform in the future. Therefore, the impact area is focusing on actions by all levers to empower consumers to make better-informed decisions that are healthier and more sustainable for them and for the planet.

² Further actions can be found in the Oceans and Coastal Zones Pathway.

³ Further actions on climate risk and resilience can be found in the Climate Action Pathway on Resilience.

LAND USE SECTOR CHANGE LEVERS

Policymakers at the local, sub-national, national and international levels have a key role to play in:

- Pledging to protect 30% of natural terrestrial ecosystems by 2030 (with incidence in tropical forests), committing and putting under restoration 350 million hectares of degraded land including through the Leaders Pledge for Nature.
- Redoubling efforts and rapidly moving from commitment to action on existing commitments and declarations to end deforestation. Deforestation needs to decrease by nearly 1 million hectares per year to achieve the 2030 target of ending deforestation.
- Recognize, respect and protect indigenous peoples' rights to the land and resources, as well as key stakeholders in decisions pertaining solutions to climate change.
- Setting and maximizing targets on NbS in Nationally Determined Contributions (NDCs) and Long-Term Emission Reduction Strategies, including targets aiming to implement NbS, reduce deforestation and biodiversity loss, and to transform food systems.
- Strengthening high integrity carbon markets and introducing carbon pricing, to ensure the externalities of greenhouse gas emissions are internalized in market transactions throughout agriculture, forest and other land use systems, and, potentially, to reinvest the funds in ways that support NbS.
- Encouraging the transition to healthy, inclusive, resilient and sustainable diets by issuing strong, clear guidelines for healthy consumption and promoting them vigorously through the education system and public health system.
- Supporting farmers and agribusinesses with the transition to sustainable, resilient and regenerative agriculture through incentives for sharing knowledge, innovation and tools, and equipment.
- Repurposing agricultural subsidies and market support mechanisms to encourage farmers to deliver a diversity of nutritious food and environmental benefits. Increase the share of these incentives that flow to smaller farmers to promote inclusion.
- Agreeing on collaborative principles that shift global commodity markets towards sustainability, including a shared roadmap on sustainable land use that activates action to protect forests, while promoting development and trade that enhance people's livelihoods and support economic development and food security.

While none of these interventions are new, many are politically challenging. Therefore, Government leaders must work with all key stakeholders to develop national agriculture, forest and other land use pathways rooted in science and consistent with the Paris Agreement and the Sustainable Development Goals.

Financial institutions. Being able to respond to the impacts of climate change will require a transformation of land-use sectors as well systems that are highly dependent on land-related resources, such as agriculture and food systems. This change has a cost, which cannot be paid by small-scale farmers, fisherfolk, foresters, and indigenous communities that, on one hand, rely on land-related natural resources for their income and livelihood and, on the other hand, are often protecting natural ecosystems and biodiversity and preserving agroecological and regenerative practices.

Therefore, access to insurance, national, international and private sector finance is crucial in the long-term transition to climate-resilient development pathway for land use and its related commodities. Some of the key transitions that need to be achieved by financing institutions include the following:

- Working with governments to improve financial markets oversight, enabling financial regulations for climate finance and investment in transformative actions for land-use sectors.
- Developing guidance for public and private investors to drive into asset classes and instruments needed to transform land-use sectors and systems relying on land use, including deforestation free commodities.
- Developing a set of core financing principles for responsible investment in land use sectors and NbS, that are based on achieving the Paris Agreement and Sustainable Development Goals.
- Strengthening financing for NbS through more ambitious commitments, including results-based payments; 20% of major asset owners and asset managers by assets under management commit to land-conversion free portfolios by 2023; accessing resources to halt destruction of habitat particularly in tropics; promote long term NbS capital investment for farmers and business.

Technology providers and innovators can transform land use sectors and offer solutions to the current climate emergency by sustainably increasing food productivity while building resilience to climate change and protecting forests, natural ecosystems, and biodiversity. Innovation is a key driving force to achieve the goals of the Paris Agreement and Sustainable Development Goals and has great potential to enhance access to clean water, energy and food, as well as providing knowledge and tools.

Businesses and service providers. Responsible business leadership requires to understand and act on the inefficiencies, hidden costs, risks and opportunities in food and land use systems. This means allocating risk (market, weather, production) so that farmers do not carry most of it, while receiving the least of the returns, protecting their tenure and enabling them to make longer-term investments, improving opportunities for women and younger farmers, and providing access to knowledge, technology and innovation to accelerate the critical transitions for land use sectors.

- Major food supplier and forestry companies set science-based targets to make business strategies compatible with the SDGs, the Paris Agreement goals and global targets on ecosystems and biodiversity. For example, by joining Race to Zero, decarbonizing supply chains and minimizing biodiversity impact that can be easily monitored, setting targets that embrace health, nutrition and inclusion factors and NbS.

- Establish full transparency and ban deforestation and other ecosystem conversion, crime, land grabs and exploitation throughout land-related, especially food and wood, supply chains.
- Farmer unions and organizations commit to global restoration goal and sustainable food production.
- Invest in closing the “last-mile” gap between the producers of climate services and the intended users, the small-scale agricultural producers.
- Strengthen disaster risk reduction and climate change adaptation agriculture practices at farm and community level, including livelihood diversification and alternatives.

Civil society can support the transformation agenda by helping to shape government and private sector actions and holding all stakeholders accountable. Civil society can also raise awareness, build capacities particularly in low and middle-income countries, facilitating partnerships and generating technologies and knowledge that allows the scaling up of ecosystem protection and restoration, supporting innovation and companies supporting nature and green technology, as well as changing consumption patterns by choosing locally produced commodities and shifting towards healthier and more sustainable diets. Some of the actions include the following:

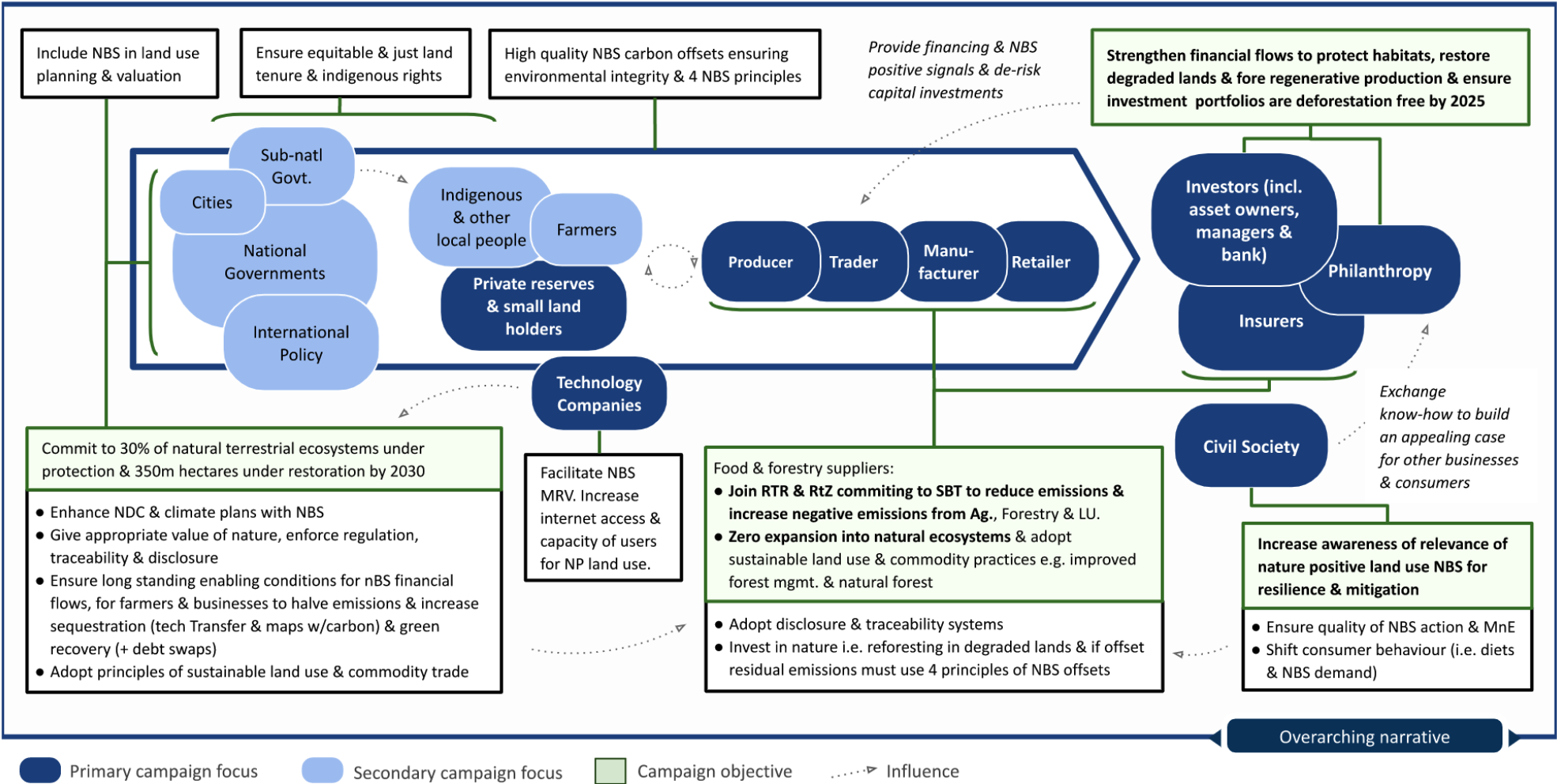
- Facilitating the shift to more financial resources towards nature, land use and food system transformation.
- Promoting improved livelihoods and social protection for small-scale agriculture producers and forest owners.
- Supporting powerful communication campaigns on sustainable production and consumption.
- Demanding for transparency and accountability from large scale commodity producers.
- Developing research to support the technological development and building understanding around challenges and bottlenecks.

LAND USE SECTOR SYSTEM MAPS AND CAMPAIGN SUMMARY

The system maps below show how the actions listed across the impact areas will precipitate two overarching objectives. **The first objective** aims to halt the loss and degradation of critical natural ecosystems, retain and restore their ecological integrity and bend the curve towards having more biodiversity by 2030. In turn, nature and NbS will be able to support life, biodiversity and play a critical role in making the AFOLU sector carbon negative by 2050. The Marrakech Partnership for Global Climate Action (MPGCA) campaign, led by the High-Level Champions (HLC), is promoting actors' commitments on different fronts that include protection, restoration, NbS investment and deforestation-free portfolios, starting with supporting existing restoration goals by increasing the amount of hectares pledged to be under restoration by COP26 to a total of 250 million hectares, by 2030 increase this pledge number 200 million hectares more as compared to 2021 pledges, and to exponentially increase implementation of these commitments to end deforestation and land degradation. The ultimate goal will be to have 350 million hectares of land fully restored and accruing climate, social and biodiversity benefits by 2050. The MPGCA campaign also aims to bring in 2021 at least 100 countries on board of the Leaders Pledge for Nature to protect 30% of land by 2030, promote sustained investment and enforce regulatory frameworks (traceability & disclosure) and 20% of the forestry producers to join Race to Zero goals and implement nature-positive vision across their operations. Under the parties' guidance and agreement at COP26, high-quality NbS carbon credits could be used to support (not replace) ambitious decarbonization pathways. The finance sector has a critical role to ensure deforestation-free investment portfolios by 2025, and in the short term the finance sector is being called to commit \$250M of private funding for protection and conservation action in Amazon and Congo basin forest basins by COP26.

The second objective is focused on resilient, sustainable and regenerative food and agriculture systems, covering impact areas four to eight (Resilient and Regenerative Agriculture/Farming Systems and Consumption, Diets and Waste). Accelerated and concerted action in these areas aims to remove up to 50GT CO₂eq by 2030 through resilient, sustainable and regenerative practices, reduction of food loss and waste along the food value chain and shifting towards more sustainable and healthier diets. For this, the HLC campaign is aiming in 2021 to bring 30 major investors to commit to deforestation-free investment portfolios by 2025 and to have at least 20% of food supply companies (from total global industry revenue) adopting net-zero and resilient verifiable commitments, which implementation will be supported by enhanced agency of farmers, business cases, civils society and research on drawdown potential of resilient, sustainable and regenerative food and agriculture systems. By 2023, deforestation-free investment is mainstreamed and becomes a condition for development banks. After reaching the removal of 50GT CO₂eq from food and agriculture systems by 2030 the world will be on a pathway to double regenerative and resilience practices in food and agriculture systems by 2040, transforming them into carbon negative by 2050.

Objective 1 | Nature-positive land use by 2030 and carbon negative by 2050



NBS Campaign Summary 1 | Strengthen financial flows for NBS land use and deforestation free investments

1 HLC headline sector targets

- **COP26:** 20% major food suppliers join Race to Zero with front runners also committing to deforestation free supply-chains and 30 major investors commit to deforestation-free investment portfolios by 2025 as part of the RtZ; X business join nature positive campaign; at least \$250M from private resources committed to NPLU in key basins & 100 countries join [Nature's Leaders Pledge](#) ideally USA, Indonesia & India.
- **2023 Global Stocktake:** Deforestation-free investment is mainstream becomes a condition for development banks
- **2030: 50 GT CO2eq are mitigated by food, agriculture and land use practices and reducing inputs and waste**
- **2050:** Food, agriculture and land use (FALU) is carbon negative

2 Challenges and Opportunities

Starting point	Challenges	Opportunities	Near term key actions
Policy ●	<ul style="list-style-type: none"> • Subsidies create unsustainable LU • Producer economies slow to require disclosure & enforcement • Poor consideration of ecosystem value in decision making • Land tenure and IP rights overlooked 	<ul style="list-style-type: none"> • Socialize best practices to operationalize Leaders Pledge for Nature joined by 84 countr. • Green recovery, debt swaps, new climate finance derisk capital investment for NBS • Increasing awareness and demand for increased regulations and disclosure 	<ul style="list-style-type: none"> • Drive agreement on principles, taxonomy and disclosure for FACT & EU Sust. Finance • Ensure NBS are in NDC & LTLES • Adopt target to reverse biodiversity loss • Facilitate de-risk investment in NBS to attract capital.
Finance ●	<ul style="list-style-type: none"> • Lack of common taxonomy, methodology, and principles • Emerging economies banks slow to disclose. • Atomized NBS Bankable projects 	<ul style="list-style-type: none"> • Increasing body of evidence that ESG-integrated inv. outperform market • Disclosure gaining momentum (TCFD, TNFD) • Existing investor-corporate engagement to curb deforestation & awareness 	<ul style="list-style-type: none"> • Define asks to scale up NBS & result-based payments. • Co-develop buy-side principles for credible offsets under HADA • Introduce deforestation free commitments 2 NZ alliances.
Supply ●	<ul style="list-style-type: none"> • Lack of clarity of environmental integrity & economic benefits of NBS offsets & investments • Material risks of unsustainable LU not widely accepted • Commodity supply chains drive 5 M.has. of deforestation annually • Nascent deforestation disclosure 	<ul style="list-style-type: none"> • Net zero commitments facilitate greater attention to land use-related GHG impacts • Disclosure on deforestation & biodiversity gaining momentum (e.g. CDP, TCFD) & attracting demand (e.g. by retailers) • Companies disclose on deforestation & change of habitat 	<ul style="list-style-type: none"> • Campaign on key conditions to de-risk investment in NBS to attract capital. • Campaign to facilitate offset environmental integrity • Make economic case for deforestation-free commitments
Civil Society ●	<ul style="list-style-type: none"> • Ineffective efforts due to myriad of atomized stakeholders and lack of common taxonomy & principles • Scarcity of bankable NBS for inv. 	<ul style="list-style-type: none"> • IUCN NBS Std facilitating quality assurance • Although atomized, increased demand for deforestation-free inv. and supply chains by consumers (esp. youth) • RtZ opportunity to invest in creating pipeline of bankable projects. 	<ul style="list-style-type: none"> • Support mechanisms aggregating bankable projects & tech. • Unify messaging and narrative for companies & investors • Support inno. start up to merge nature & green tech. (WEF-N4C)

● On track for 1.5°C
 ● Limited compatibility with 1.5°C
 ● Currently incompatible with 1.5°C
 LU = Land use; FACT = Food & ag commodity trade

3 Changemakers/leaders

- **Potential early adopters:** AXA, Rabobank, BNP Paribas, Mirova, OP2B members, Amazon, Microsoft
- **Policy makers and leading countries:** SJO principle countries, Central African Initiative, Indonesia, EU, China
- **Civil Society & coalitions:** CDP, TRASE, Global Canopy, N4C, Forest 500, Business for Nature, WWF, UNEP FI, CA100+, PRI/Vivid Economics, FAIRR Initiative, GAUC (TBD), WEF Uplink
- **Philanthropy:** CLI, CIFF, Bezos Foundation, Gates Foundation, Audacious-TED, Generation Foundation
- **NBS Offsets:** HADA-VCM, Voluntary carbon markets taskforce, CDP, Systemiq, WEF NCS taskforce

4 Key ongoing initiatives

- **Ongoing processes:** Forest Ag & Commodity Trade dialogue; COP26 Nature campaign, UNFSS, nature positive LU
- At Marrakesh Partnership level: deforestation is clearly inserted in climate action pathways.
- **At institutional investors level:** TNFD, development banks, PRI, Root capital, NZAOA and NZAMA
- **At business level:** OP2B, BCorp, Business4Nature, WBCSD
- **At civil society level:** PEP, TFA, Finance4Nature, FOLU, Vatican & Church of England
- **TED Countdown** (including philanthropy role)

5 Key external sector milestones 2020-2021

- IMF/ WB Spring meetings, Apr 16
- World Environment Day, Jun 5
- IUCN World Conservation Congress, Sep 3-11
- UN Food System Summit, Sep (& pre-event in Jun - TBC)
- TED Countdown, Oct 21
- WEF Annual, Aug 17-20
- G7 & G20
- CBD COP15

NBS Campaign Summary 2 | Increasing land under restoration generating climate, social and economic benefits

1 HLC headline sector targets

- **COP26 (2021):** Globally, commit to restore at least 250 million hectares of degraded and deforested lands in biomes around the world, landscapes and forests and set out the use of monitoring systems (increase of 30m ha by COP26)
- **COP27 (2022):** 50% increase in land restoration investments
- **2030:** 200m ha increase in the area under landscape restoration as compared to 2021 COP26 pledges
- **2050:** 350m has of land restored and accruing climate, social and biodiversity benefits

2 Challenges and Opportunities

Starting point	Challenges	Opportunities	Near term key actions
Policy ●	A lack of understanding and engagement of the forestry sector in how it can support restoration action, engage through mass timber initiatives and provide TA	WBCSD Forest Solutions Group & CBA have identified the timber sector as a key climate and land restoration actor and aim to enhance sector engagement; mass timber initiatives gaining traction with cities and built environment sector	With CBA an alliance of the key 10 timber companies is developed to provide restoration and climate benefit by COP26
Finance ●	Global north (private sector) and government pledges have not fully engaged or have buy in from key land managers (local communities)	Farmers are a key delivery mechanism for restoration actions and have been identified as a key stakeholder for COP26 under the JRT.	+10 farmer organisations commit / contribute formally to meeting global restoration targets
Supply ●	Piecemeal and uncoordinated public and private finance streams results in fragmentation of effort; lack of broader land use sector engagement – such as agriculture.	Regional initiatives are integrating broader sectoral engagement from offsetting and security of services (yields / supply) perspective; finance institutions looking for high quality / environmental & social impact investments	HLC team to drive and amplify the benefits and generate new investments into land restoration in Africa including business engagement
Civil Society ●	A range of initiatives and lack of enabling policies to ensure restoration actions deliver cross sectoral benefits – a siloed approach	New momentum on restoration with initial capital funding available (BC & 1T) underpinned by renewed momentum on NBS, including tools to help drive quality assurance.	Application of NbS standard to demonstrate quality of restoration actions: Increase in commitments from governments for COP26

● On track for 1.5°C
 ● Limited compatibility with 1.5°C
 ● Currently incompatible with 1.5°C
 LU = Land use; FACT = Food & ag commodity trade

3 Changemakers/leaders

- **National and sub-national governments:** the 60+ countries who have committed to Restoration initiatives
- **MDBs and donors:** World Bank, UK, Germany lead donors
- **Land managers:** Smallholder farmers, family forestry and Indigenous Peoples
- **Private sector:** from both an offset and supply chain security perspective (WBCSD and GAA key actors)
- **Civil society & coalitions:** Global partnership on restoration, Global restoration observatory, WEF, WBCSD

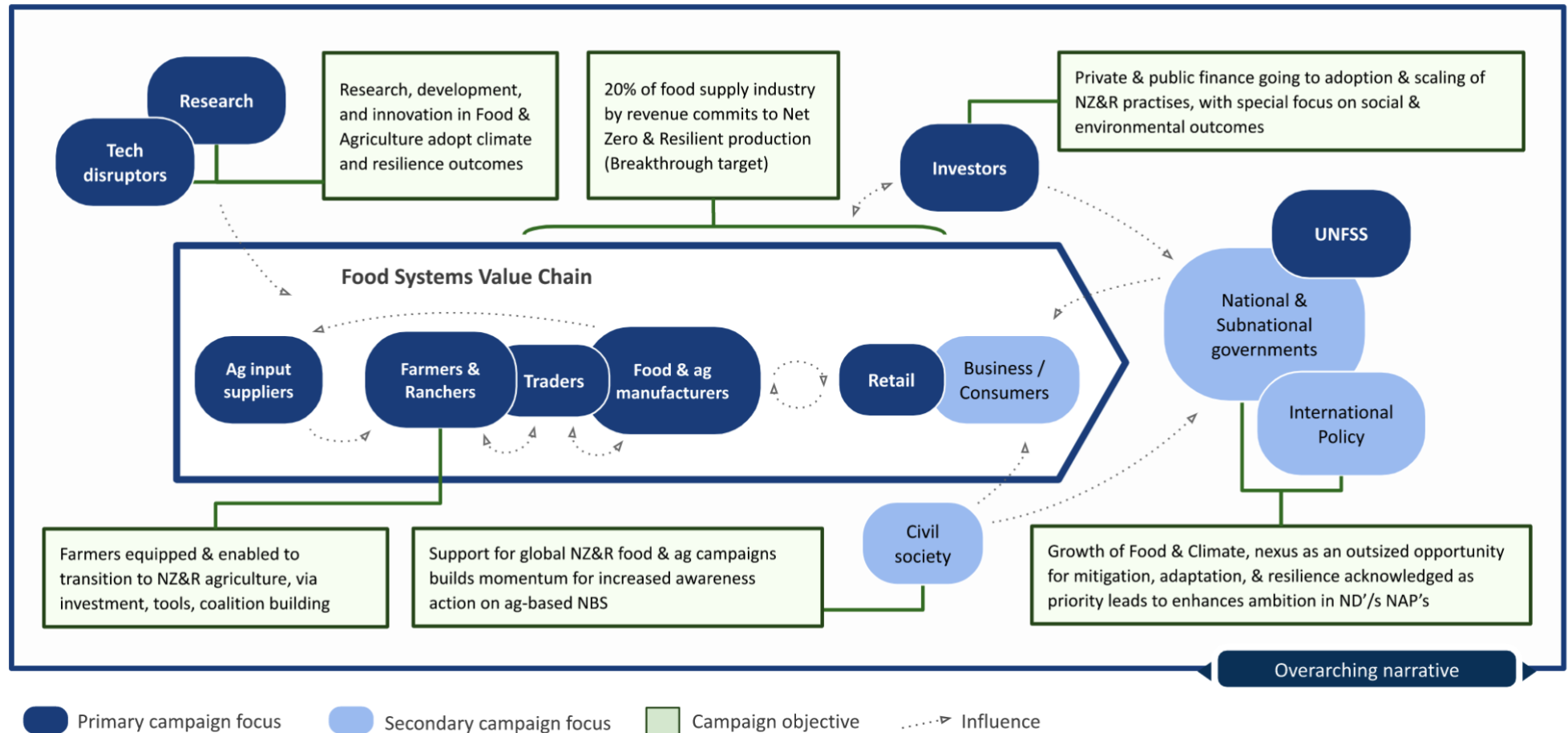
4 Key ongoing initiatives

- **Implementation platforms:** Bonn Challenge, 1T, AFR100, LAC 20X20 ECCA30x30, Great Green Wall
- **COP26 campaigns:** Just Rural Transition, finance stream; high Ambition Market Accelerator, Partnerships for Forests
- UN Decade of ecosystem restoration; Land Restoration implementation hub, Circular Bioeconomy Alliance (SMI)
- Global Agribusiness Alliance, WBCSD nature and food stream, Forest Economy Coalition
- **At civil Society level:** Forest and Farm Producer Organisations, IOs and NGOs (WWF, WRI, IUCN, CIFOR / ICRAF, amongst many GPFLR partners)

5 Key external sector milestones 2020-2021

- Commonwealth Heads of Government June 2021
- UN Food System Summit, Sep 21 (& dialogues)
- IUCN World Conservation Congress, Sept 2021
- CBD COP15, Oct 21

Objective 2 | Remove up to 50GT CO₂eq by 2030 by Net Zero & Resilient food & agriculture systems



Campaign summary | Net Zero and resilient food & agriculture systems

1 HLC headline sector targets

- **COP26 (2021): 20% of food supply industry** by revenue has adopted NZ&R verifiable commitments, supported by enhanced agency of farmers in NZ&R, business cases, civil society, and research on drawdown potential of regenerative food and agriculture (breakthrough). Strategic partnership with UNFSS
- **2030:** 50* GT CO2eq removed from the atmosphere through ag-based NBS (*final GT # tbd by COP26)
- **2040s:** Regenerative and resilience practices in agriculture doubled and mainstreamed. Farm expansion into natural areas stopped. Top soil loss mitigated. Agriculture goes from a net source to a net sink of carbon emissions.

2 Challenges and Opportunities

Starting point	Challenges	Opportunities	Near term key actions
Business ●	Lack of alignment on standards to follow. Data not always reliable. Uncertain reward for transitioning methods of production. Innovation not scaled. Contradictory public policy.	Food supply chain has largest potential for mitigation, via NBS, avoided FLW, and renewable energy. Scope 3 emissions reductions far reaching and low impact on final price.	System level entrepreneurship to clarify accredited practices and metrics.
Finance ●	At present, investment not commensurate with potential of ag-based NBS. Lack of instruments to deliver it at scale.	Commitments to NZ&R create demand and pipeline. Roadblocks solvable (eg. cost of MRV).	Deploy capital at scale, with verifiable outcomes. Combine Nature Protection.
Farmer ●	Farmers disproportionately burdened, sidelined from climate policy. Disparity between farming needs in North and South, large and small. Unmet needs of capital and tools.	Increasing momentum of farmer organizations towards climate efforts. Regenerative agriculture brings multiple co-benefits for all farmers.	Farmers equipped and enabled to transition to NZ&R agriculture, via investment, tools, coalition building.
Policy barriers ●	Repurposing ag subsidy is highly complex and politically charged. Policy silos work against regeneration.	~ \$600 Bn/annum that can be repurposed to provide social and environmental for farming. UNFSS key moment in 2021	Support coalitions for JRT in food & ag. Strategic partnership with UNFSS.
Innovation ●	Ag R&D funding and technical assistance seldom has climate goals.	Considerable public and private R&D budgets can be leveraged for climate outcomes	Catalyze public private partnerships in climate resilient food systems

● On track for 1.5°C ● Limited compatibility with 1.5°C ● Currently incompatible with 1.5°C

3 Changemakers/leaders

- **Businesses coalitions:** WBCSD Agriculture for 1.5, Imagine Food Collective, OP2B, IWCA, Impossible Foods other
- **Financial institutions** investing in supply chain transformation. Rabobank, World Bank, others.
- **Early adopter farmer associations:** NFU, USFRA, WFO.
- **Policy makers** like EU ('Farm to Fork'), UK Nature Campaign, JRT and subsidy reform campaign. UNFSS.
- **Research institutes.** CCAFS global campaign for 1.8 trillion investment in climate resilient food systems

4 Key ongoing initiatives

- **At food systems level:** Important coalitions raising awareness about the link between food and climate - FOLU, WRI, EAT Lancet, Just Rural Transition, Exponential Roadmap, IUCN.
- **At Marrakesh Partnership level:** Food & Ag. clearly inserted in climate action pathways.
- **United Nations Food Systems Summit** will harness momentum on the issue in 2021, and provide momentum into COP26.
- **Strong interlinkages** to Race to Resilience, water, finance, other NBS, Innovation (commodity genome), possibly energy and chemicals.

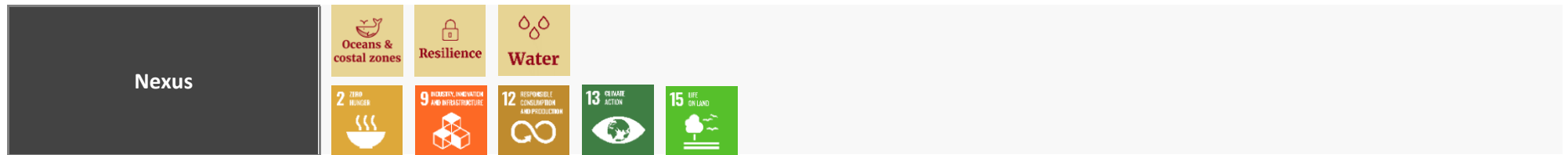
5 Key external sector milestones 2020-2021

- Forum for the Future of Agriculture. March.
- US Earth Day Climate event. Apr 22. CBD COP15, May 21
- UNFCCC regional climate weeks (May-Jul)
- UN Food System Summit, Sep 21 (& dialogues)
- UNGA & CW's, Aug.-Sept 21
- G7 (Jun 21) & G20 (Oct 21)
- TED Countdown, Oct 21

Impact
1

PROTECT

PROTECT | MITIGATION & ADAPTATION/RESILIENCE



1 Protect	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<p><u>Terrestrial ecosystems protection</u></p> <ul style="list-style-type: none"> Establish enhanced protective measures for standing natural forests and other natural terrestrial ecosystems such as mangroves, peatlands, grasslands and savannas, and accelerate implementation of strategies to avoid further conversion of natural ecosystems, reduce deforestation and forest degradation, and conserve and enhance forest carbon stocks, including REDD+, with the involvement of indigenous peoples and local communities. (Water and Oceans Pathways). Set out action plans to address implementation gaps in habitat protection policies and address them in the short term. Establish adaptive response for DRR and adaptation. (Water, Resilience and Ocean Pathways). 	<p><u>Terrestrial ecosystems protection</u></p> <ul style="list-style-type: none"> End of net deforestation and terrestrial ecosystem loss through the implementation of coherent policy frameworks that address drivers, transform unsustainable practices and enforces illegal deforestation. Implement policy frameworks that enable full-implementation of sustainable practices for land-use demands for food, biofuels and other land-based materials. Proportion of intact, primary and natural forests and other natural terrestrial ecosystems covered by protected areas is expanded, securing protection of carbon pools (SDG 15.1). Mainstream ecosystem-based adaptation action to promote conservation and benefit livelihoods. Include NbS in all land use planning and valuation of policy decisions. 	<p><u>Terrestrial ecosystems protection</u></p> <ul style="list-style-type: none"> End of gross primary forest loss and other terrestrial natural ecosystems including mangroves, peatlands, grasslands and savannas. Enhance integrity, connectivity and resilience of natural forests and other terrestrial ecosystems from 2020 baseline Ensure the conservation of terrestrial ecosystems to enhance their capacity to provide mitigation and adaptation benefits essential for sustainable development (SDG 15.4) <p><u>Investment policies</u></p> <ul style="list-style-type: none"> Ensure natural capital is quantified and considered as part of national budgets for policy implementation. 	<p><u>Terrestrial ecosystems protection</u></p> <ul style="list-style-type: none"> Expand protected forest areas and areas under sustainable management in the scale needed to achieve the 1.5 C goal. Maintain and improve ecological integrity of all remaining natural forests and terrestrial ecosystems of the world, avoid further fragmentation and restore ecological connections where areas have been fragmented. <p><u>Forest and land use governance and rights</u></p> <ul style="list-style-type: none"> Complete harmonization of cross-sectoral institutional, legal and regulatory frameworks to implement forest conservation and sustainable forest management with no conflict with other national developmental priorities.



1 Protect	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<ul style="list-style-type: none"> Ensure a clear pathway of actions to address major drivers of forest and other terrestrial ecosystem loss and degradation. Include NbS in land use planning and valuation of policy decisions. <p><u>Forest and land use governance and rights</u></p> <ul style="list-style-type: none"> Strengthen forest governance frameworks and expand law enforcement policies and resources. Outlining strategies and pathways to fully recognize and formalize indigenous and local community forest tenure and rights, recognizing their role in protecting forests. <p><u>Monitoring systems</u></p> <ul style="list-style-type: none"> Improve national monitoring systems with a commonly applied monitoring structure, baseline and indicators of progress. Introduce as part of the national monitoring systems spatially explicit MRV frameworks that measure all sources and sinks of GHG emissions Establish a framework for harmonizing project level mitigation results into national carbon accounting that achieves high-integrity emission reductions. 	<p><u>Forest and land use governance and rights</u></p> <ul style="list-style-type: none"> Ensure forest and land-use governance frameworks, national planning and country strategies are in place in all countries, jurisdictions and indigenous territories to promote integrated and sustainable land and forest management Accelerate the recognition and formalization of indigenous and local community forest tenure and rights, as protectors of forests and other natural terrestrial ecosystems. <p><u>Investment policies</u></p> <ul style="list-style-type: none"> Increase policy measures to ensure mandatory corporate disclosure and due diligence requirements of companies operating on forest risks commodity markets. Adopt regulations for publicly available forests safeguard policies to ensure lending does not drive deforestation. Forest and other terrestrial ecosystems values are internalized in political and financial decisions. Remove governmental barriers and establish an enabling environment for financing and investment in forests, including through scaled-up incentives and de-risk for reduced deforestation and increased restoration. 	<p><u>NDC and transparency enhancement</u></p> <ul style="list-style-type: none"> Update NDCs to maximize the contributions of forest and land use related, NbS with progressive and increased ambitious targets, compared with previous NDC iteration. Implement actions according the Enhanced Transparency Framework. Include NbS actions as part of countries' long-term emission reduction plans 	<p><u>NDC enhancement</u></p> <ul style="list-style-type: none"> Update NDCs to maximize forest and land use related NbS with progressive and increased ambition, compared with previous NDC iteration.



1 Protect	By 2021	By 2025	By 2030	By 2040
1. Policymakers (national, subnational, local levels)	<u>Carbon markets</u> <ul style="list-style-type: none"> Support the strengthening of high integrity carbon markets and the development of carbon pricing systems and enabling environments for public and private climate finance and investments in REDD+, for both national and subnational jurisdictions. Establish accounting systems that track all carbon flows and ensures environmental integrity in future transactions. Explore the inclusion of NbS including REDD+ in current and future emissions trading systems. Developed countries set aside adequate funding for REDD+ and emission reductions from restoration investment 	<u>Monitoring Systems:</u> <ul style="list-style-type: none"> Establish frameworks to project impacts of policies on mitigation, biodiversity and development outcomes. Establish plans to adopt systems of independent verification of public and private carbon accounts. <u>Carbon markets</u> <ul style="list-style-type: none"> Introduce carbon markets or taxes that put a meaningful price on emissions. These systems should incorporate flexibility mechanisms that place a value on removals through the landuse sector. <u>NDC enhancement</u> <ul style="list-style-type: none"> Update NDCs to maximize contributions of forest and land use related, NbS with increased ambitious targets, compared with previous NDC iteration. 		
2. Financial Institutions	<u>Increase investment and finance</u> <ul style="list-style-type: none"> Increase investment in generation of high-quality emission reductions from NbS in the forest and land use sector, including REDD+, based on experience gained through the FCP, GCF, etc. Significantly increase climate finance allocated to the AFOLU sector in order to accelerate implementation of national REDD+ strategies, restoration and national adaptation plans. Increase financial resources to conserve and sustainable use forests ecosystems and their biodiversity (SDG 15.A) 	<u>Increase investment and finance</u> <ul style="list-style-type: none"> Set out the market architecture to enable high-volume of high-quality NbS carbon credits trade Ensure greater access of developing countries to private and public climate finance. Ensure greater access of developing countries to the post-2020 UNFCCC financial mechanisms. Ensure countries have in place investment frameworks to channel multiple sources of investments and results-based payments. 	<u>Increase investment and finance</u> <ul style="list-style-type: none"> Secure climate finance for the implementation of forest and land-use targets within enhanced NDCs. <u>Transparency</u> <ul style="list-style-type: none"> Establish clear compliance mechanisms to ensure that investors and lenders do not support unsustainable forest and land-use practices or loss of biodiversity. Increased number of FIs annually disclosing forest /climate metrics. 	<u>Increase investment and finance</u> <ul style="list-style-type: none"> Align financial priorities and investments across sectors with the protection of standing natural forests, reforestation and landscape restoration.



1 Protect	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
<p>2. Financial Institutions</p>	<ul style="list-style-type: none"> • Finance and incentivize sustainable forest management, mobilizing significant resources from all sources and at all levels and providing adequate incentives to developing countries to advance SFM (SDG 15.8). • Scaled up ambitious public-private partnerships and finance for increased agricultural productivity aligned with forest protection and restoration. • Develop consistent investor guidance on how institutions can invest in the land sector through carbon markets. • Establish a plan to Incorporate ecosystem services and biodiversity economic value in all investment decisions across the finance sector <p><u>Transparency</u></p> <ul style="list-style-type: none"> • Increased data and insights sharing by financial institutions. 	<ul style="list-style-type: none"> • Finance and incentivize sustainable forest management including the protection of natural, primary and intact forests, mobilizing significant resources and providing adequate incentives to developing countries to advance SFM (SDG 15.8). • Incorporate ecosystem services and biodiversity economic value in all investment decisions across the finance sector • Increase financial flows to protect habitats, restore degraded land and ensure that portfolios are deforestation-free. • Deforestation-free investments become a condition for development banks <p><u>Carbon markets</u></p> <ul style="list-style-type: none"> • A global carbon market exists and consideration is given to trades high-quality NbS credits, including from REDD+ • Price for ton of carbon responds to direct/indirect cost • The recognition of and alignment on the role of offsetting by corporations and investor alliances as an essential means to scale the market, which in turn can make NbS an investable asset class, generating the level of funding needed to plug the finance gap 		



1 Protect	By 2021	By 2025	By 2030	By 2040
2. Financial Institutions		<p><u>Transparency</u></p> <ul style="list-style-type: none"> Financial institutions set and implement sustainability targets. Deforestation risks identified in increased number of FI portfolios. Harmonize monitoring and verification tools with governments and project developers 		
3. Technology Providers and Innovators	<ul style="list-style-type: none"> Increase the use of flexible, open access technologies for agriculture forest, land use, land use change monitoring and national forest inventories. Provide tools to support transparent, timely and consistent report of the state and change of protected areas Build capacity and access to technology to stem illegal logging operations, increase transparency and strengthen governance. Facilitate implementation of open access tools for monitoring forests and land use to carry out rapid, reliable and transparent assessments. Disseminate good practices to inform and guide implementation. Apply new technologies to the challenge of measuring sources and sinks of emissions from the land sector, in a spatially explicit manner Establish accuracy of monitoring tools through transparent scientific frameworks 	<ul style="list-style-type: none"> Ensure open access tools for monitoring forests and land use to carry out rapid, reliable and transparent assessments which can be widely used also by developing countries. Establish systems for swift and continuous improvement of the tools in line with evolving science and (international) policy frameworks. Develop tools to project impact of policies on emissions from all land uses, biodiversity and development outcomes. Create and apply technologies to measure sources and sinks of emissions from the land use sector on a landscape scale (improving accuracy, scale and frequency of measurements) that will reduce monitoring costs, an important barrier to scaling carbon markets. Scale up technological innovations toward sustainable technologies 	<ul style="list-style-type: none"> Ensure monitoring tools and new technologies are used by policy makers, project developers, verifiers and investors to inform sustainable forest and land-use decisions Ensure tools are available to all stakeholders to facilitate civil society independent verification and productive feedback from all stakeholders. 	<ul style="list-style-type: none"> Ensure monitoring tools and new technologies are used by policy makers and investors to inform sustainable forest and land-use decisions



1 Protect	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
4. Business and Service Providers	<ul style="list-style-type: none"> • Examine and disclose company’s forest footprint and work to eliminate supply-chain driven deforestation. • Invest in removal/sequestration of GHG including through REDD+ and ecosystems’ protection including benefit sharing and returns. • Set net-zero emission targets that ensures no further loss of natural ecosystems. • Working with civil society, develop guidance on the role the land use sector will need to play in delivering corporate net zero strategies 	<ul style="list-style-type: none"> • Expand implementation of zero-net pledges, following widely accepted applicable criteria of reduction and compensation measures. • Establish company-wide targets to avoid/reduce, report and compensate emissions, the latter through investment in carbon markets at scale. • Private sector actions and contributions are recognized as contributing to NDCs • Adopt disclosure and traceability systems that support transparency and implementation of decarbonization and reduced impact to ecosystems and biodiversity across operations. 		
5. Civil Society	<ul style="list-style-type: none"> • Keep improving monitoring reporting and technology tools. • Raise awareness of forest conservation, including primary forests, land restoration and sustainable land management, and their importance for climate change mitigation and adaptation. • Raise awareness of the importance of jurisdictional-scale accounting (as opposed to project-scale accounting) for REDD+ activities in order to ensure credit integrity, scale at the speed necessary and avoid double counting. • Facilitate the flow of information, capacity building, partnerships to accelerate forest conservation, land restoration & sustainable land mgmt. 	<ul style="list-style-type: none"> • Assist in the establishment and implementation of inclusive frameworks for public–private-civil society action that maintains the integrity and advances the goals of the Paris Agreement, and support those stakeholders who most need it (indigenous peoples and local communities). • Develop the capacity to use open access tools to provide independent assessments of progress and develop policy 	<ul style="list-style-type: none"> • Develop sufficient capacities through partnerships by sharing best practices and knowledge, notably through collaborative initiatives under the NAZCA Platform. 	<ul style="list-style-type: none"> • Support and facilitate high-impact action at all levels, building on wealth of knowledge, information and capacity generated to date, targeting gaps and bottlenecks that could limit the achievement of the goals of the Paris Agreement.



1 Protect	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
5. Civil Society	<ul style="list-style-type: none"> • Work with business to develop guidance on the role of the land use sector in corporate net zero strategies • Work to implement safeguards to ensure land-based carbon credits are high quality. • Increase exchange of knowledge and know-how to build the business case to invest and engage in protection and restoration to traditional investors and consumers. 			

EXISTING INITIATIVES

New York Declaration on Forests	<p>Ten goals, including to halve the loss of natural forests globally by 2020, end forest loss by 2030 and remove commodity-driven deforestation from all supply chains by 2020</p>
Balikpapan Statement	<p>Launched by the Governors’ Climate and Forests Task Force, the Balikpapan Statement is a partnership of 35 states and provinces from nine countries committed to reducing tropical deforestation.</p>
Central Africa Forest Initiative	<p>Fight climate change, protect forests, reduce poverty and contribute to sustainable development in Central Africa.</p>
Protect and sustainably manage 400 million hectares of forests in the Amazon, Central America, the Congo Basin and Indonesia.	<p>Protection of 400 M hectares of forest by indigenous peoples. NAZCA action submitted by COICA</p>
Friends of Ecosystem-based Adaptation	<p>Informal network of organizations that promote collaboration and knowledge-sharing on ecosystem-based adaptation (EbA) through joint events and initiatives, as well as develop position papers and technical documents on EbA.</p>
Climate Resilience Initiative A2R	<p>Promote three key capacities for climate resilience as a common frame for climate resilience in the United Nations system and to help its partners to understand and manage climate risks and hazards at scale</p>
Forest for Life Partnership	<p>The Forests for Life Partnership aims to halt and reverse forest degradation across 1 billion hectares of the most intact forests worldwide</p>
Natural Climate Solutions Alliance	<p>The Natural Climate Solutions (NCS) Alliance aims to scale up affordable natural climate mitigation solutions for achieving the goals of the Paris Agreement on climate change. These include; reforestation protection and conservation, livestock, animal and land management, and coastal wetland and peatland restoration, among a wide array of cost-effective solutions.</p>
Global Mangrove Alliance + Save Our Mangroves Now!	<p>“Save Our Mangroves Now!” is an international initiative that mobilizes political decision makers and supports other actors towards halting and reversing the loss of mangroves, both globally and with a specific focus on the Western Indian Ocean.</p>

Global Peatlands Initiative	<p>The Global Peatlands Initiative is an effort by leading experts and institutions formed by 13 founding members at the UNFCCC COP in Marrakech, Morocco in 2016 to save peatlands as the world’s largest terrestrial organic carbon stock and to prevent it being emitted into the atmosphere.</p>
Green Gigaton Challenge	<p>A new global effort to catalyse funds to transact one gigaton of high-quality emissions reductions annually from forest-based natural climate solutions by 2025. The Challenge brings together a coalition of public, private and philanthropic partners on a scale never seen before to channel funds into efforts led by national and subnational governments to arrest deforestation, while helping companies complement their internal emissions reductions with the purchase of high-integrity carbon credits</p>
Task Force on Nature-related Financial Disclosure (TNFD)	<p>A Taskforce on Nature-related Financial Disclosure will provide a framework for corporates and financial institutions to assess, manage and report on their dependencies and impacts on nature, aiding in the appraisal of nature-related risk and the redirection of global financial flows away from nature-negative outcomes and towards nature-positive outcomes. Formed by a coalition of partners including Global Canopy, UNDP, UNEP Finance Initiative and WWF, supported by financial institutions and additional +60 members art of an informal working group.</p>
Leader’s Pledge for Nature	<p>Political leaders participating in the United Nations Summit on Biodiversity in September 2020, representing 84 countries from all regions and the European Union, have committed to reversing biodiversity loss by 2030. By doing so, these leaders are sending a united signal to step up global ambition and encourage others to match their collective ambition for nature, climate and people with the scale of the crisis at hand.</p>
Lowering Emissions by Accelerating Forest finance Coalition (LEAF)	<p>Launched at the Leaders Summit on Climate in April 2021, LEAF is an ambitious new public-private initiative designed to accelerate climate action by providing results-based finance to countries committed to protecting their tropical forests. This initiative aims to mobilize at least \$1 billion in financing, kicking off what is expected to become one of the largest ever public-private efforts to help protect tropical forests, to the benefit of billions of people depending on them, and to support sustainable development. Amazon, Airbnb, Bayer, Boston Consulting Group, GlaxoSmithKline, McKinsey, Nestlé, Salesforce and Unilever - these nine big companies would work with the United States, Norway and Britain to invest at least \$1 billion in the plan before year end and substantially more in following years.</p>
Voluntary Carbon Markets Integrity Initiative - VCMI	<p>The VCMI will be a multi-stakeholder platform that provides clear and authoritative guidance on how voluntary carbon credits can be used by corporates and other non-state actors in science-based net-zero decarbonization strategies. With funding from the Children’s Investment Fund Foundation and the UK Business, Energy, and Industrial Strategy Department, led by the Meridian Institute</p>

<p>Forest Carbon Partnership Facility</p>	<p>The Forest Carbon Partnership Facility (FCPF) is a global partnership of governments, businesses, civil society, and Indigenous Peoples focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries, activities commonly referred to as REDD+. The FCPF works with 47 developing countries across Africa, Asia, and Latin America and the Caribbean, along with 17 donors that have made contributions and commitments totalling \$1.3 billion. The FCPF supports REDD+ efforts through its Readiness and Carbon Funds.</p>
<p>UN-REDD Programme</p>	<p>The UN-REDD Programme was launched in 2008 to support nationally-led REDD+ processes and promote the informed and meaningful involvement of all stakeholders, including indigenous peoples and other forest-dependent communities, in national and international REDD+ implementation. Led by UNEP, UNDP and FAO. The UN-REDD Programme works with 65 partner countries across Asia and the Pacific, Africa and Latin America and the Caribbean, supporting countries that are leading the path to achieve reductions in emissions from deforestation.</p>
<p>REDD Early Movers</p>	<p>The REDD Early Movers (REM) programme was officially launched at the Rio+20 Conference in June 2012 by the Federal Ministry for Economic Cooperation and Development (BMZ). This initiative rewards pioneers of forest protection and climate change mitigation and targets countries or regions that have already taken measures to protect forests. It provides performance-based payments for verified emission reductions from deforestation prevention, thereby managing REDD+ in line with the decisions agreed to in the context of the UNFCCC. So far, the REM programme has been implemented in three countries: in the Brazilian states of Acre and Mato Grosso, in Colombia and in Ecuador.</p>
<p>Green Climate Fund REDD+ result-based payments pilot programme</p>	<p>Beginning October 2017, GCF has started to pilot REDD+ results-based payments, consistent with the Warsaw Framework for REDD+ and other REDD+ decisions under the United Nations Framework Convention on Climate Change (UNFCCC). Countries that have completed the first two phases of REDD+ for results generated from the end of 2013 to the end of 2018 are eligible to apply for phase 3 funding through this pilot programme. This request for proposals runs from the end of 2017 until the last GCF Board meeting in 2022.</p>

Impact
2

RESTORE

RESTORE | MITIGATION & ADAPTATION/RESILIENCE



2 Restore	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<p><u>Restoration action</u></p> <ul style="list-style-type: none"> Establish enhanced measures to accelerate implementation of carbon removal activities including SFM, enhancement of forest and other terrestrial ecosystems carbon stocks (peatlands, mangroves, grasslands, etc), afforestation/reforestation, agroforestry, restoration of peatlands and coastal areas and other restorative activities under a landscape or jurisdictional approach. (Water and Oceans Pathway). Include NbS in land use planning and valuation of policy decisions. <p><u>Increase targets</u></p> <ul style="list-style-type: none"> Countries to set up national restoration targets in degraded ecosystems and identify measures to achieve them with plans to 5, 10 and 15 years. 	<p><u>Restoration action</u></p> <ul style="list-style-type: none"> Increase the rate of implementation of restoration targets. Implement activities according to the Strategy of the UN Decade on Ecosystem Restoration 2021-2020 Expand implementation of the forest landscape restoration approach that helps with integral landscape planning, therefore to reduce the pressure and demand for land. Increase the quantity, quality and resilience of forests and other natural terrestrial ecosystems against climate change threats and ensuring biodiversity outcomes. Include NbS in land use planning and valuation of policy decisions. 	<p><u>Restoration action</u></p> <ul style="list-style-type: none"> End desertification and achieve a land degradation-neutral world (SDG 15.3). Increase the area under landscape restoration to at least an additional 200 million hectares from what was pledged in 2020. <p><u>Address policy, governance & rights gaps</u></p> <ul style="list-style-type: none"> Ensure forest and land-use governance frameworks are in place in countries, jurisdictions and indigenous territories to promote integrated and sustainable land management. <p><u>NDC and transparency enhancement</u></p> <ul style="list-style-type: none"> Update NDCs to include forest-related, NbS and progressively increased ambition. Implement actions according the Enhanced Transparency Framework 	<p><u>Restoration action</u></p> <ul style="list-style-type: none"> Stop land degradation and increase areas under sustainable land management. Ensure and enforce measures to maintain and improve ecological integrity of all remaining natural forests and terrestrial ecosystems (wild areas) of the world, avoid further fragmentation and restore ecological connections where areas have been fragmented.



2 Restore	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
<p>1. Policymakers (national, subnational, local levels)</p>	<ul style="list-style-type: none"> Globally, pledge to restore at least 250 million hectares of degraded and deforested lands in biomes around the world, landscapes and forests and set out the use of monitoring systems. <p><u>Address policy, governance & rights gaps</u></p> <ul style="list-style-type: none"> Identify implementation and regulatory gaps that hinder progress on restoration and establish action plans to overcome them. Strengthen forest governance frameworks and law enforcement and enhance integrated landscape planning. Planning where restoration could/should be a priority, calculate the economic value of restoration and design mechanisms to public finance restoration (e.g., payment for ecosystem services) Clarify and formalize indigenous and local community forest tenure and rights, recognizing their role in protecting forests. Remove governmental barriers and establish an enabling environment for financing and investment in forests, including through scaled-up incentives for reduced deforestation and increased restoration. <p><u>Monitoring systems</u></p> <ul style="list-style-type: none"> Set out a commonly applied monitoring structure for forest landscape restoration, baseline and indicators of progress. 	<p><u>Address policy, governance & rights gaps</u></p> <ul style="list-style-type: none"> Expand policies and measures for sustainable land management including sustainable forest management to accelerate the reversal of land and forest degradation Design and implement long-term forest fire management policies and policies to address other disturbances (flood, drought, pest outbreaks, etc). Have clear policies to restore soil health and increase soil carbon content. Promote agroforestry systems for agricultural production Mainstream improved governance for the restoration of ecosystems and provide public finance programmes that enable implementation of restoration actions (e.g., payment for ecosystem services, carbon compensation quotas, cap and trade systems, carbon tax, etc). Ensure natural capital is quantified and considered as part of national budgets for policy implementation. <p><u>Monitoring systems</u></p> <ul style="list-style-type: none"> Map and monitor restoration progress including assessing information on benefits (ecosystem services, climate change mitigation, adaptation, etc.). <p><u>Cooperation</u></p> <ul style="list-style-type: none"> Establish mechanisms to provide implementation support for developing countries as well as south-to-south cooperation to scale up restoration. 		

2 Restore	By 2021	By 2025	By 2030	By 2040
1. Policymakers (national, subnational, local levels)	<u>NDC enhancement</u> <ul style="list-style-type: none"> Increase the role of forest landscape restoration as a nature-based solution in NDCs, showing increased ambition. 	<u>NDC enhancement</u> <ul style="list-style-type: none"> Increase the role of forest landscape restoration as a nature-based solution in NDCs, showing increased ambition 		
2. Financial Institutions	<u>Increase investment and finance</u> <ul style="list-style-type: none"> Increase generation of high-quality emission reductions from NbS in the forest and land use sector, incl. REDD+, learning from experiences with the FCPF and the GCF REDD+ result-based payment programme, among other experiences. Action plans laid out to kick-start massive businesses transition to nature-positive models in the AFOLU sector. Increase number of investment funds for the design and implementation of projects focused on restoration and forest conservation/management at landscape scale. Significantly increase climate finance allocated to the forest & land use sector in order to accelerate implementation of national REDD+ strategies, restoration & national adaptation plans. Scaled up ambitious public-private partnerships and finance for increased agricultural productivity aligned with forest protection and restoration. Ensure access to financing/ funding for smallholders/ small-scale actors. 	<u>Increase investment and finance</u> <ul style="list-style-type: none"> Support countries' efforts to have in place national investment frameworks to channel multiple sources of investments and results-based payments. Increase financial flows to protect habitats, restore degraded land and ensure that portfolios are deforestation-free. 	<u>Transparency</u> <ul style="list-style-type: none"> Establish clear compliance mechanisms to ensure that investors and lenders do not support unsustainable forest and land-use practices or loss of biodiversity. Improved access of developing countries to climate finance. Improve access of developing countries to the post-2020 financial mechanisms of the UNFCCC. Secure climate finance for the implementation of forest and land-use targets within enhanced NDCs. 	<u>Increase investment and finance</u> <ul style="list-style-type: none"> Align financial priorities and investments across sectors with the protection of standing natural forests, reforestation and landscape restoration.

2 Restore	By 2021	By 2025	By 2030	By 2040
3. Technology Providers and Innovators	<ul style="list-style-type: none"> • Increase the use of flexible, open access technologies for restoration monitoring. • Build capacity and access to technology to stem illegal logging operations, increase transparency and strengthen governance. • Facilitate implementation of open access tools for monitoring forests and land use to carry out rapid, reliable and transparent assessments. • Where possible ensure consistency by using the same tools for reforestation, landscape restoration, agriculture, livestock, biodiversity and livelihoods 	<ul style="list-style-type: none"> • Ensure all governments, civil society and companies can easily use open access tools for carrying out rapid, reliable and transparent assessments of activities in the AFOLU sector and their impact on emissions, biodiversity, and development outcomes. • Establish systems for swift and continuous improvement of these open access tools in line with evolving science and (international) policy frameworks. • Develop tools to project impact of AFOLU policies on emissions, biodiversity and development outcomes 	<ul style="list-style-type: none"> • Invest in developing in-country capacity through sharing technological know-how aimed at the development of restoration strategies and quantification of estimated climate change benefits and co-benefits (e.g. biodiversity). • Ensure open access tools for monitoring forests and land use to carry out rapid, reliable and transparent assessments can be widely used by developing countries. 	<ul style="list-style-type: none"> • Ensure monitoring tools and new technologies are used by policy makers and investors to inform sustainable forest and land-use decisions
4. Business and Service Providers	<ul style="list-style-type: none"> • Clear rules and processes on how company can contribute and invest in restoration with clear rules on benefit sharing and returns. • Set up land-based operations that include restoration plans and apply a landscape approach • Develop monitoring and carbon accounting systems that can be nested into the public accounts. 	<ul style="list-style-type: none"> • Stabilize and reduce the footprint of agriculture and forestry on ecosystems while concurrently restoring degraded ecosystems. • Expand land-based operations that apply a landscape approach in order to avoid further degradation and restores landscapes. • Accelerate implementation of public-private partnerships to allow comprehensive restoration actions. • Invest in ecosystem restoration activities within the companies' operations and elsewhere, in support of the Decade on Ecosystem Restoration. • Adopt disclosure and traceability systems that supports transparency and implementation of decarbonization and reduced impact to ecosystems and biodiversity across operations. 	<ul style="list-style-type: none"> • Business operations include restoration as a requirement and actions to support LDN targets. • Invest in ecosystem restoration activities within the companies' operations and elsewhere, in support of the Decade on Ecosystem Restoration. 	



2 Restore	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
5. Civil Society	<ul style="list-style-type: none"> • Develop accessible certification/verification of restoration projects • Raise awareness of forest conservation, including primary forests, land restoration and sustainable land management, and their importance for climate change mitigation and adaptation. • Facilitate the flow of information, capacity building and partnerships to accelerate forest conservation, land restoration and sustainable land management. • Increase exchange of knowledge and know-how to build the business case to invest and engage in protection and restoration to traditional investors and consumers. 	<ul style="list-style-type: none"> • Strengthen regional networks and initiatives of productive forest landscape restoration 	<ul style="list-style-type: none"> • Assist in the establishment and implementation of inclusive frameworks for public-private-civil society action that maintains the integrity and advances the goals of the Paris Agreement, and support those stakeholders who most need it (indigenous peoples and local communities). • Develop sufficient capacities through partnerships by sharing best practices and knowledge, notably through collaborative initiatives under the NAZCA Platform. 	<ul style="list-style-type: none"> • Support and facilitate high-impact action at all levels, building on wealth of knowledge, information and capacity generated to date, targeting gaps and bottlenecks that could limit the achievement of the goals of the Paris Agreement

EXISTING INITIATIVES

Bonn Challenge	Restore 150 million hectares of the world’s deforested and degraded lands by 2020 and 350 million hectares by 2030.
The Restoration Barometer	A universally applicable, systematic framework for identifying, assessing and tracking action on global restoration commitments.
AFR100	AFR100 (the African Forest Landscape Restoration Initiative) is a country-led effort to bring 100 million hectares of land in Africa into restoration by 2030
Initiative 20x20	So far, 17 Latin American and Caribbean countries and three regional programs have committed to begin restoring more than 50 million hectares (or about 124 million acres, an area roughly the size of France) of degraded land by 2020 through Initiative 20x20.
ECCA30	Called ‘ECCA30,’ the initiative aims to hasten implementation of the Bonn Challenge, the Paris Agreement on climate change, and the 2030 Agenda for Sustainable Development, especially SDG target 15.3, which calls on countries to achieve a land degradation neutral (LDN) world by 2030. The Bonn Challenge calls for the restoration of 150 million hectares of the world’s deforested and degraded land by 2020, and 350 million hectares by 2030
Great Green Wall for the Sahara and the Sahel Initiative	The GGW particular mission is “to take effective and urgent actions to end or reverse land degradation, loss of biodiversity in African drylands and to ensure that ecosystems are resilient to climate change, continue to provide essential services and contribute to human well-being and the elimination of poverty and hunger”.
Natural Climate Solutions Alliance	The Natural Climate Solutions (NCS) Alliance aims to scale up affordable natural climate mitigation solutions for achieving the goals of the Paris Agreement on climate change. These include; reforestation protection and conservation, livestock, animal and land management, and coastal wetland and peatland restoration, among a wide array of cost-effective solutions.
UN Decade on Ecosystem Restoration 2021 – 2030	Led by the United Nations Environment Programme and the Food and Agriculture Organization of the United Nations, The UN Decade is building a strong, broad-based global movement to ramp up restoration and put the world on track for a sustainable future. That will include building political momentum for restoration as well as thousands of initiatives on the ground.
1t.org	1t.org is a World Economic Forum initiative, designed to support the UN Decade on Ecosystem Restoration 2021-2030. 1t.org offers a platform for leading governments, businesses, civil society and ecopreneurs committed to serving the global trillion trees community.



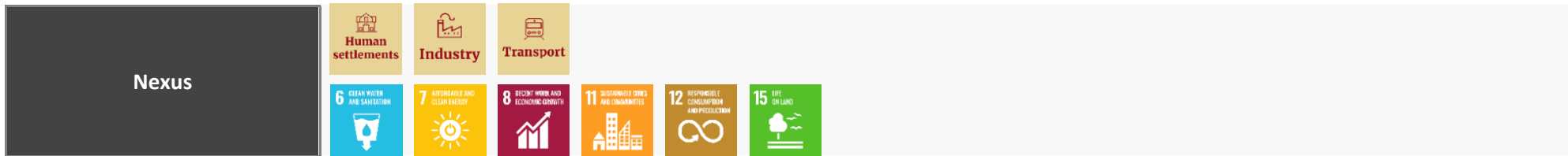
1 Thousand Landscapes for 1 Billion People (1000L)

1000L is a radical collaboration of change agents working together to accelerate landscape efforts to sustain and restore ecosystems, build rural prosperity and confront climate change. Convened by EcoAgriculture Partners, and co-led with Rainforest Alliance, Commonland, Conservation International, the United Nations Development Programme, Landscape Finance Lab, and information technology leader Tech Matters. Another 20+ partners are sharing technical and financial expertise, and 12+ Landscape Partnerships are co-designing the initiative. Together, these organizations already engage with over 250 Landscape Partnerships worldwide and are positioned to provide a strategic bridge with international and national programs championing Landscape Partnerships.

Impact
3

PRODUCTION – OTHER LAND USES (I.E. URBAN, ENERGY, EXTRACTIVE INDUSTRIES)

PRODUCE | MITIGATION & ADAPTATION/RESILIENCE



3 Produce	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> Establish and improve policies, plans and ordinances to increase urban tree canopies, expand urban green spaces and increase the utilization of green infrastructure. Maximize the use of NbS within city boundaries to improve climate mitigation, adaptation and resilience. Streamline policies that support the Sustainable Development Goals (SDGs) and NDCs to ensure greater alignment and contribution towards common goals, especially related to the suite of benefits that NbS can offer cities and their residents. Strengthen inclusiveness of city planning and implementation by ensuring that new urban green spaces engage, involve and are accessible to low-income and underserved communities. Contribute to the fight against food insecurity among urban communities by 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> Ensure that new urban green spaces are designed to provide a variety of municipal benefits, including increased habitat for biodiversity, increased space for recreation, reduced effects of the urban heat island effect, and improved water management, among other benefits. Impose requirements to establish green urban ecosystems as urban spaces grow. All cities count with urban greening plans and there are policy and regulatory tools that enable their implementation. Improve land value through the expansion of urban green areas and leverage income for conservation/restoration. Develop inclusive, accessibility-oriented, compact and resilient cities to reduce trip lengths and the need for motorized travel by personal vehicles by integrating 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> Ensure that urban green infrastructure is given equal weight as traditional built infrastructure with regard to city planning and city investments. Enhance advanced capital planning amongst city agencies to increase scale and impact of urban green infrastructure. Monitor, quantify and incorporate the carbon and adaptation benefits of urban tree canopies and other vegetation into NDC commitments and progress. Ensure that total urban green spaces are equally distributed across residential neighbourhoods, especially in underserved low-income communities Develop robust strategies to ensure that urban green spaces are managed sustainably, maintaining ecological function and structure while meeting the needs of urban residents. 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> Connect urban green spaces to create green corridors across the city, offering landscape-level impacts such as increased habitat, increased space for recreation, reduced effects of urban heat island effect, and improved water management, among other benefits. Ensure that the quality of urban green space is maintained across different neighbourhoods, including biodiversity and ecological function. End food insecurity among urban communities through a variety of food centred policies, including urban farming.



3 Produce	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<ul style="list-style-type: none"> [...] incorporating urban farming, community gardening, and systems to aggregate/distribute surplus food into city planning. Integrate legal, policy and institutional frameworks for effective climate-risk assessment and adaptation planning for transport into land use planning. <p><u>Extractive industries</u></p> <ul style="list-style-type: none"> See the Industry Pathway for specific action across industries Establish plans for sustainable use of biomass for energy. Review biofuels impact on land use change and establish a phase out plan by 2030. Conduct stock-take of direct and indirect impacts of extractive industries and infrastructure (in particular mega-projects) on ecosystem services and biodiversity. Indirect impacts refer to the pull effect of development that leads to migration and new settlements. Assess mitigation options for the direct and indirect impacts of approved or ongoing extraction and infrastructure activities through restoration and reclamation of mined or additional offsets. Where activities have triggered poverty-driven deforestation from migration, consider policy options that promote alternative livelihood options while improving the protection of forests. 	<ul style="list-style-type: none"> [...] land-use and transport planning processes, and by adopting mixed land-use planning to connect residential, industrial and commercial areas. <p><u>Extractive industries</u></p> <ul style="list-style-type: none"> Increased policy measures to ensure mandatory corporate disclosure and due diligence requirements of companies operating on forests risks commodity markets. Align cross-sectoral coordination and take on jurisdictional approach to sustainable infrastructure and land use. Ensure that planning processes are transparent and inclusive, with particular attention to IPLCs. Consider alternative development pathways that are less dependent on natural resource exploitation in ecosystems and forests, and excessive consumption. Adoption of proven tools, approaches and methods of mitigation pathways. Align infrastructure planning and extraction with forest goals, SDGs, and climate goals in NDCs and broader Paris Agreement goals. Implement policies, institutions and ensure resources to monitor and prevent the encroachment of mining and infrastructure activities in protected areas. 	<p><u>Extractive industries</u></p> <ul style="list-style-type: none"> Ensure that existing extractive activities have minimal impact on land and natural ecosystems. Ensure institutions and governance structures for the monitoring and overseeing of land use are strong and well-resourced. Impose strict regulation against illegal encroachment, and strengthen resources towards enforcement. Maintain cross-sectoral coordination and jurisdictional approach to infrastructure development. Ensure that infrastructure development that has minimal social and environmental impact is given equal or more weight than traditional infrastructure projects with higher bottom lines. Promote the research and development of infrastructure development that is nature-based and climate friendly, and incentivize financing and investment in such endeavours. 	<p><u>Extractive industries</u></p> <ul style="list-style-type: none"> Implement alternative development pathways that are less dependent on resource exploitation in natural ecosystems, ensuring they lead to thriving communities and environment. Ensure that infrastructure development projects have minimal impact, and are, where possible, implemented not to the detriment of, but rather the enhancement and restoration of ecosystems and the environment. Implement a cross-sectoral, inclusive, nature-based and jurisdictional approach to land use planning. This ensures that mitigatory approaches are no longer necessary, as infrastructure development projects are inherently sustainable.



3 Produce	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<ul style="list-style-type: none"> • Conduct data-driven review of existing tools, approaches and methods to minimize the environmental and social impact of extraction and infrastructure development. • Evaluate and strengthen land use planning and zoning in coordination with relevant ministries, when designating areas permissible for mining and for infrastructure development. Explore options for minimizing trade-offs and maximizing synergies between all SDGs (including Goal 15 on forests). • Provide open and transparent information on policies, in particular permitting processes, for different infrastructure and extractive industries. • Assess policy options to strengthen the enforcement and protection for designated protected areas and surrounding buffer zones, with a view to preventing mining and infrastructure development in areas adjacent to protected areas. • Ensure the requirement of free, prior and informed consent (FPIC) of communities in all policies. Develop programs to strengthen these policies through increasing communities' access to legal help and capacity. • Assess subsidies driving fossil fuel mining and identify policy options for out-phasing. 	<ul style="list-style-type: none"> • Actively involve civil society as key actor in policy, land-use planning, and in monitoring activities in protected areas. • Ensure tight regulation and enforcement to minimize and eventually stop illegal extraction and sale of minerals and metals. • Commence phasing out of subsidies for fossil fuel and other natural resource extraction that is detrimental to the environment. City governments and regional governments take an integrated approach to ensure existing local food production is connected to the urban food consumption. Cities use their demand power to motivate shifts to regenerative food production practices in their surrounding regions, while providing farming inputs made from urban organic waste streams to local farmers, creating a reciprocal relationship between urban-rural communities 		

3 Produce	By 2021	By 2025	By 2030	By 2040
<p>2. Financial Institutions</p>	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> • Increase public and private sector investments in green spaces, urban canopy, green infrastructure and other NbS. • Increase investments and actions to implement inter-dependent systems of local food supply and regenerative agricultural practices that build soil health, increase soils' carbon and supports biodiversity and ecosystem services provision for urban communities. • Strengthen ability of cities to issue green bonds and other innovative financial mechanisms to increase financial investments in green areas. <p><u>Extractive industries</u></p> <ul style="list-style-type: none"> • Ensure that investments are planned and implemented following a social and environmental impact assessment and management plans, and effectively apply the mitigation hierarchy. Prioritize avoidance and reduction of negative impacts over rehabilitation and offsets. Consider both direct and indirect negative impacts. • Improve investor disclosure on environmental and social impacts, and on progress made toward forest-related commitments made by the investor community 	<p><u>Extractive industries</u></p> <ul style="list-style-type: none"> • Divest from companies that employ destructive mining practices (e.g. open-pit mining in forests) • Stop investments in fossil fuel mining, including indirect investments. • Invest in companies, business models and initiatives with cradle-to-cradle business models and high environmental and social standards (e.g. IFC). In the mining sectors, this includes producer companies but also manufacturers and retailers that procure mined goods. • Highlight initiatives that have identified sustainable livelihoods models in local communities through continued and increased investments. 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> • Create and fund a city-oriented project preparatory facility to increase the deployment of NbS in urban areas. • Generate multiple revenue streams from benefits such as improved storm water migration and increased carbon sequestration on individual urban green infrastructure projects. • Secure climate finance for urban “greening” of cities in order to implement land-use targets within enhanced NDCs. • Increase investments and funding for business models with sustainable supply chains. <p><u>Extractive industries</u></p> <ul style="list-style-type: none"> • Support industries that are verified to be climate and forest-friendly, making extractive and infrastructure development activities with high forest risk no longer financially viable. • Enhance financial compliance and disclosure procedures, ensuring they correspond to the methodological developments in the land use and forestry sector. • Ensure investments flow towards businesses and practices that promote positive environmental and social impacts. 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> • Ensure that public and private financial investments in city planning, infrastructure and operations incorporate green spaces, green infrastructure and other NbS. <p><u>Extractive industries</u></p> <ul style="list-style-type: none"> • Make and promote financial and investment decisions that are primarily driven by the positive social and environmental impact, rather than bottom line of infrastructure projects and remaining extractive industries.

3 Produce	By 2021	By 2025	By 2030	By 2040
2. Financial Institutions	<ul style="list-style-type: none"> Encourage investee disclosure on environmental and social impacts, and, where applicable, on progress made toward forest-related commitments made (e.g. company pledges) Encourage investment in alternatives to mining to support local livelihoods as a means to address indirect deforestation driven by developments, such as credit lines for small-businesses, agroforestry, etc. Signal investment towards forest-friendly extraction, renewable energy with zero-deforestation supply chain commitments. 		<ul style="list-style-type: none"> Provide financing for the research and development of new industries that are based on sustainable and restorative use of natural resources. 	
3. Technology Providers and Innovators	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> Increase the use of tools such as iTree to better quantify the benefits of urban tree canopy and urban green infrastructure. Promote the use of technology for data collection on resident engagement, such as through citizen science. Increase the use of satellite imagery to support cities in creating land-use inventories, managing urban green spaces, and measuring progress toward municipal green infrastructure goals. <p><u>Extractive industries</u></p> <ul style="list-style-type: none"> Develop and test innovations that enable the recycling of technology products to reduce demand on minerals 	<p><u>Extractive industries</u></p> <ul style="list-style-type: none"> Implement tools and technology that enable the transparent monitoring of extraction and infrastructure development activities. Develop and implement small footprint extraction and green infrastructure standards and technologies across forest regions. Promote the development of technologies at local-scale that meet local forest and land use demands and pain points. 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> Increase the use of satellite imagery and related quantification tools to help cities include urban green areas in their greenhouse gas baselines, NDC targets and other climate ambitions. Improve monitoring capability to allow city planners to trace the ecological and social benefits from green spaces and green infrastructure. Develop and promote platforms that encourage participatory planning, illuminate local needs, and engage stakeholders when planning urban natural areas and green spaces. 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> Ensure that monitoring tools and new technologies are used by city planning officials, policy makers and investors to inform urban land-use decisions and adaptively manage a changing climate. Promote technologies such as crowdsourcing and participatory planning to make community engagement the norm in green space planning. Employ models that support planning, predicting and managing multiple benefits, such as carbon sequestration, climate change adaptation, and other co-benefits, such as increased habitat for biodiversity and improved water quality.

3 Produce	By 2021	By 2025	By 2030	By 2040
3. Technology Providers and Innovators	<ul style="list-style-type: none"> [...] and mining pressures. Encourage and enable finance and technology transfer of mining and infrastructure development approaches that reduce forest impacts Develop data collection and satellite technology to identify locations for infrastructure development that minimizes the damage on the environment. 		<u>Extractive industries</u> <ul style="list-style-type: none"> Ensure that when extraction does take place, small footprint extraction technology is the primary form available and implemented. Spread and make accessible technologies for the recycling of technological objects and other items with metals and minerals, including in low-income countries. Identifying and piloting nature-based technologies and approaches to infrastructure development and extractive industries. 	<u>Extractive industries</u> <ul style="list-style-type: none"> Implementing nature-based technologies and approaches to infrastructure development. Ensure countries regardless of income level have access and can use technologies, tools and approaches developed to ensure forest impacts have been and continue to be minimized globally.
4. Business & Service Providers	<u>Urban areas</u> <ul style="list-style-type: none"> Accelerate cross-agency collaboration to ensure that city agencies are working toward joint implementation. Accelerate public-private partnerships operations and impact. <u>Extractive industries</u> <ul style="list-style-type: none"> Increase ambition of forest-related commitments including “no net loss” targets. Adopt ambitious standards for forest smart mining and infrastructure development that follow the mitigation hierarchy, prioritize avoidance and minimization of impacts and consider both direct and indirect impacts on forests (e.g. in the context of biodiversity). 	<u>Extractive industries</u> <ul style="list-style-type: none"> Develop new supply chains for recycled or reused minerals and metals. Conduct FPIC consultations, in the presence of civil society actors, with impacted communities and only proceed work when the full, prior and informed consent of communities has been given. Ensure that most companies in the sector are certified. Promote and encourage consumption with lower forest impacts. 	<u>Urban areas</u> <ul style="list-style-type: none"> Create public-private partnerships across sectors to allow for increased integration of green spaces, green infrastructure and NbS. Engage private landowners, who often manage urban trees and green spaces, as land stewards and actors in city-wide implementation. <u>Extractive industries</u> <ul style="list-style-type: none"> Ensure that all companies in the sector are certified. Ensure that more companies are investing in and rolling out nature-based technologies and approaches to infrastructure development and related industries. 	<u>Urban areas</u> <ul style="list-style-type: none"> Ensure a broad set of partners is coordinated as they implement city urban planning with increased green spaces. <u>Extractive industries</u> <ul style="list-style-type: none"> Promote companies in infrastructure development that provide an array of nature-based sustainable approaches to development that enhances ecosystem and forest integrity.

3 Produce	By 2021	By 2025	By 2030	By 2040
4. Business & Service Providers	<ul style="list-style-type: none"> • Improve compliance with laws and regulations, especially for permitting processes, even where enforcement by the government is lacking. • Pursue collaboration with the public sector to manage indirect impacts on forests, which include migration and the expansion of settlements in forest areas. • Improve disclosure on environmental and social impacts, and, where applicable, on progress made toward forest-related commitments. • Increase awareness and responsibility over indirect impacts of mining and infrastructure developments. • Encourage public-private partnerships that spur innovation to reduce forest loss. 			
5. Civil Society	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> • Raise awareness of the importance of green infrastructure for climate mitigation and adaptation, SDGs and NDCs, as well as local goals to improve recreation access, lower the heat island effect and better manage storm water. • Raise awareness of the importance of nature and green spaces within the city for the mental and physical health of people of all ages. <p><u>Extractive industries</u></p> <ul style="list-style-type: none"> • Facilitate the flow of information, build 	<p><u>Extractive industries</u></p> <ul style="list-style-type: none"> • Actively monitor and raise awareness about private sector sustainability commitments and efforts. • Advocate actors to phase out of fossil-fuel and extractive industries. • Build on regional and international alliances to continue building pressure on public and private actors to meet pledges, commitments and urgency of climate goals. 	<p><u>Extractive industries</u></p> <ul style="list-style-type: none"> • Assist in the establishment and implementation of inclusive frameworks for public-private-civil society action that maintains the integrity and advances the goals of the Paris Agreement, and support traditionally underserved communities. • Connect city planners with local organizations such as neighbourhood coalitions, urban river councils and local civil society groups to increase inclusivity and drive equitable long-term planning. 	<p><u>Urban areas</u></p> <ul style="list-style-type: none"> • Engage residents as stewards of green spaces and natural areas through participatory planning that speaks to local needs, empowerment and local governance. • Raise awareness of the importance of ecological health for delivering benefits. • Ensure that previous pledges, commitments and policy-decisions made by governments, companies and other actors are followed, and when not, actors are held accountable.

3 Produce	By 2021	By 2025	By 2030	By 2040
5. Civil Society	<ul style="list-style-type: none"> • [...] capacity and create partnerships to accelerate the implementation of urban green spaces, green infrastructure and NbS. • Monitor ongoing activities of extractive industries and raise awareness where activities do not meet environmental and social impact standards. • Build regional level alliances to gain data and information on impacts of mining to put pressure on actors at international level. • Collaborate with public sector in aiding monitoring efforts. • Raise awareness about the impacts and compounding effects of extraction and infrastructure activities at the local, regional and global level. • Promote and lead multi-stakeholder efforts with public and private actors to act on pledges surrounding extraction and infrastructure activities. • Support and highlight civil society efforts to recycle technology and reduce the use of consumer items that are based on mineral and metal extraction • Raise awareness of the connection between food and nature, highlighting the potential to support farmers, soils, and biodiversity while tackling climate change by eating food grown in regenerative ways; as well as the benefits of giving new life to organic waste streams 		<ul style="list-style-type: none"> • Participate as an active and core stakeholder decision-making around land use and development policies in both public and private sector efforts. • Continue to raise awareness about actions and pledges by companies and governments. Whistle-blow against actors that practice harmful extractive activities. 	<ul style="list-style-type: none"> • Continue to serve as a strong counterbalance to public and private sector interests, ensuring that commitments continue to be maintained and actions achieve them are in motion.

EXISTING INITIATIVES

Cities 4 Forests	Provides guidance and support for 60 cities worldwide to invest in their inner forests (such as city trees, urban natural areas and green infrastructure), as well as nearby and faraway forests.
Great Green Wall for Cities	Provides support to three cities in each of 30 countries across Africa and Asia with the goal of creating 500,000 hectares of new urban forests and restoring or maintaining 300,000 hectares of existing natural forests in the Sahel and Central Asia by 2030.
C40	A mayoral coalition of 94 of the world’s greatest cities who are taking bold climate action and leading the way towards a healthier and more sustainable future.
ICLEI (Local Governments for Sustainability)	A global network of more than 1,750 local and regional governments committed to sustainable urban development.
Vibrant City Labs	A joint project of the U.S. Forest Service, American Forests and the National Association of Regional Councils, which merges the latest research with best practices for implementing green infrastructure projects.
Making Cities Resilient Campaign by Integrating Nature-Based Solutions into Urban Planning	Phase 2 of the MCRC for 2020-2030 has a focus on assisting Local Governments in designing and implementing policies and plans that build the resilience of their cities. Cities participating in the campaign (currently 4,270 and growing) will be encouraged to adopt NbS as a sustainable tool to build their resilience.
Climate-Smart Mining Initiative	The World Bank initiative supports the sustainable extraction and processing of minerals and metals to secure supply for clean energy technologies by minimizing the social, environmental, and climate footprint throughout the value chain of those materials, promoting scaling up technical assistance and investments in resource-rich developing countries.
Initiative for Responsible Mining Assurance’s (IRMA)	In May 2020, IRMA released its list of ‘Critical Requirements’ that mining sites must meet to achieve so-called “IRMA 50” and “IRMA 75” certified levels, providing a stepwise onboarding process for companies. Under the critical requirements companies need to conduct social and environmental impact assessments covering biodiversity, ecosystem services, and protected areas, accompanied by a mitigation and minimization plan, and ensure FPIC of Indigenous peoples and/or evidence of positive relationships with IPLCs and remedies for past impacts.
Fairmined	Alliance for Responsible Mining’s initiative that certifies gold from empowered, responsible and small-scale mining organizations that meet standards for responsible practices.

<p>CDP's Global Environment Disclosure System</p>	<p>CDP runs the global environment disclosure system, by supporting companies, cities and states to manage their risks and opportunities in climate change, deforestation and water security. For mining, CDP has produced reports disclosing the impacts of companies involved in extractives.</p>
<p>Milan Urban Food Policy Pact</p>	<p>The MUFPP is the first international protocol through which city leaders committed to developing sustainable food systems to grant healthy and accessible food to all, protect biodiversity, and fight against food waste. Today, it has been signed by over 200 cities and is open to any city globally.</p>
<p>Tree Cities of the World</p>	<p>At the 2018 World Forum on Urban Forests in Mantova, Italy, world leaders issued the Mantova Green Cities Challenge and a call-for-action that included joining the Tree Cities of the World programme, connects cities around the world in a new network dedicated to sharing and adopting the most successful approaches to managing community trees and forests.</p>
<p>Green Cities Initiative</p>	<p>Green Cities Initiative aims to improve the livelihoods and well-being of urban and peri-urban populations in at least 100 cities (15 metropolitan, 40 intermediary and 45 small cities) around the world in the next three years, looking to have 1000 cities join by 2030. In particular, the initiative is focused on improving the urban environment, strengthening urban-rural linkages and the resilience of urban systems, services and populations to external shocks. Ensuring access to a healthy environment and healthy diets from sustainable food systems, it will also contribute to climate change mitigation and adaptation and sustainable resource management</p>

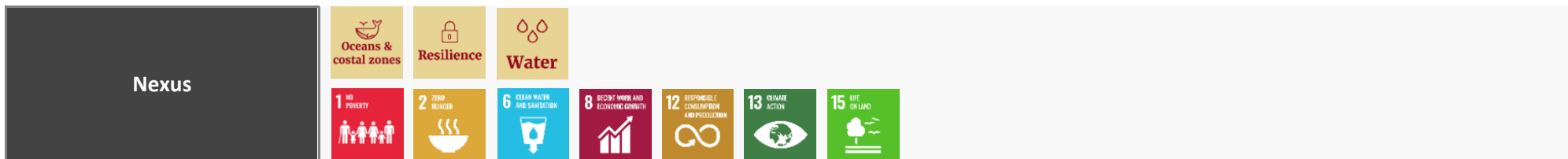
FURTHER REFERENCES

Cities 4 Forests	<p>Provides guidance and support for 60 cities worldwide to invest in their inner forests (such as city trees, urban natural areas and green infrastructure), as well as nearby and faraway forests.</p>
Urban Forestry Toolkit (Vibrant Cities Lab)	<p>The U.S. Forest Service Step-by-Step Guide to Implementing Urban Forestry in Your Community</p>
iTree Tools	<p>iTree is a state-of-the-art, peer-reviewed software suite from the USDA Forest Service that provides urban & rural forestry analysis & benefits assessment tools.</p>
Integrating Green and Grey (World Resources Institute & World Bank)	<p>This report offers service providers, such as water utilities, flood management agencies, irrigation agencies, and hydropower companies, policymakers and development partners a framework to evaluate green infrastructure from a technical, environmental, social, and economic perspective, and to assess key enabling conditions, with illustrative examples.</p>
Inclusive Community Engagement (C40 & Arup)	<p>The Playbook for Inclusive Community Engagement is a working resource designed to provide cities with a practical guide to engage their communities in climate action, particularly those hard-to-reach and often excluded groups.</p>
IRMA'S Standard for Responsible Mining	<p>IRMA's Standard for Responsible Mining provides detailed guidance and certification and explicitly calls for the identification of direct, indirect and cumulative effects on biodiversity and ecosystem services</p>
International Financial Corporation's (IFC) Sustainability Framework	<p>IFC's standard presents 8 different Performance Standards, covering different social, environmental, health aspects, and other aspects, that a company has to meet throughout the life cycle of the investment. Requires actors to consider the indirect impacts on biodiversity and ecosystems.</p>
Responsible Jewellery Council's Code of Practice	<p>RJC's code provides a standard for responsible business practices along the whole supply chain, from mine to retail, building on/ using international standards (e.g. IFC's performance standards), which include the mitigation hierarchy. The code applies to gold, silver, PGM, diamond, and colored gemstones, and requires mandatory third-party auditing.</p>
Global Reporting Initiative (GRI) Guidelines	<p>The GRI Guidelines have served as a starting point for numerous companies' corporate social responsibility, and environmental, social, and governance reporting. They offer a disclosure-specific document for mining and metals.</p>

Impact
4

SMALL-SCALE AGRICULTURE/ FARMING SYSTEMS

PRODUCE | MITIGATION & ADAPTATION/RESILIENCE



4 Produce	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<p><u>Policy alignment and governance</u></p> <ul style="list-style-type: none"> Align national and regional agriculture policies to ensure that small-scale agriculture and food production moves towards resilient, regenerative and climate-smart practices building on agroecological principles. Align national agriculture policies and on the ground action to ensure that small scale agriculture and food production moves towards resilient, agroecological, regenerative and climate smart practices. Establish legislation for secure and equal tenure rights to land and natural resources for small-scale farmers, fishfolks and foresters. 	<p><u>Policy alignment and governance</u></p> <ul style="list-style-type: none"> Ensure at least 25 countries have developed policy frameworks for transformative climate outcomes in agriculture (Resilience). Ensure governments prioritize and support regenerative, agroecological agriculture policies and practices, and protect soil health, including soil erosion control and water use efficiency (Resilience). Ensure secure and equal tenure rights to land and natural resources for 75% of small-scale farmers, fishfolks and foresters. 	<p><u>Policy alignment and governance</u></p> <ul style="list-style-type: none"> Develop supportive cross-sectoral institutional, legal and regulatory frameworks for coherent policies in land use sectors, assuring food security and sustainable natural resource management as well as the human rights and fair livelihoods of small-scale farmers. Implement policies that transform food systems to be sustainable, regenerative, with the creation of a circular economy and adoption of climate smart, agroecological, and conservation practices. 	<p><u>Policy alignment and governance</u></p> <ul style="list-style-type: none"> Enable policies for circular agriculture economy based in agroecological principles by minimizing the number of external inputs for agricultural production, closing nutrient circles and reducing negative impacts on the environment by eliminating discharges (i.e., wastewater, nitrogen) and surface runoff. Ensure that rural communities have access to the right technology infrastructure along with adequate information/extension services and planning framework to thrive and benefit from new business opportunities and realize their potential for advances in productivity.



4 Produce	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
1. Policymakers (national, subnational, local levels)	<u>Policy alignment and governance</u> <ul style="list-style-type: none"> Upscale implementation of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGTs) and encourage companies to pursue business that secures land titles for small-scale producers, fishers, and farmers. 		<u>Policy alignment and governance</u> <ul style="list-style-type: none"> Ensure secure and equal tenure rights to land and natural resources for 100% of small-scale farmers, fishfolks and foresters. Reduce land-based pollutions or harmful activities that cause negative impacts on coastal and marine ecosystems (SDG14.1) 	
	<u>Access to finance</u> <ul style="list-style-type: none"> Enhance policies for reducing financial risks, lower transaction costs, facilitate financial transactions, enable access to financial services, and facilitate long-term investments as well as low-priced loans for small-scale farmers and fishers. Enhance policies for climate risk insurance for small-scale farmers and fishers (Resilience Pathway). 	<u>Access to finance</u> <ul style="list-style-type: none"> Ensure that 75% of the small-scale farmers and fishers are covered by climate risk insurance mechanisms (Resilience Pathway). Realign USD 300 billions of agricultural subsidies to help build climate resilience and regenerative and agroecological agriculture in 16 countries (Resilience Pathway). Enhance the payments to the small-scale farmers for ecosystem services, e.g., carbon sequestration and fresh water provision. 	<u>Access to finance</u> <ul style="list-style-type: none"> Ensure that 100% of the small-scale farmers and fishers are covered by climate risk insurance mechanisms (Resilience Pathway). 	
	<u>Strengthening adaptation and resilience</u> <ul style="list-style-type: none"> Develop a demand-led research and development agenda to support the climate resilience of smallholder farmers (Resilience Pathway). Improve existing early systems and install EW systems where missing and enable them to provide warnings against multiple, context-specific priority climate risks (Resilience Pathway). 	<u>Strengthening adaptation and resilience</u> <ul style="list-style-type: none"> Develop national mechanisms that coordinate risk management strategies with institutions for risk monitoring, prevention, control and response at the local and global levels. Ensure NbS (including ecosystem-based adaptation and DRR) are incorporated into all updated 2025 NDCs (Resilience Pathway). 	<u>Strengthening adaptation and resilience</u> <ul style="list-style-type: none"> Through public-private partnerships develop stronger climate and weather information, services and early warning systems for the use of the agricultural sector and disseminate these to small scale farmers. 100% of the most vulnerable small-scale food system stakeholders are protected by early warning systems 	<u>Strengthening adaptation and resilience</u> <ul style="list-style-type: none"> 100% of the most vulnerable small-scale food system stakeholders have access to climate risk-informed and shock-responsive social protection schemes (Resilience Pathway).



4 Produce	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
<p>1. Policymakers (national, subnational, local levels)</p>	<p><u>Strengthening adaptation and resilience</u></p> <ul style="list-style-type: none"> • Incentivize diversification in cropping patterns and an efficient use of water to produce “more nutrition per drop and encourage farmers to stop growing water intensive crops in water stressed areas (Resilience and Water Pathways). • Support and scale up climate risk-informed and shock-responsive social protection schemes for the most vulnerable people with agriculture- and food-based livelihoods (Resilience). • Incorporate NbS (including ecosystem-based adaptation and disaster risk reduction (DRR)) in 50 % of the updated 2021 NDCs (Resilience Pathway). 	<p><u>Strengthening adaptation and resilience</u></p> <ul style="list-style-type: none"> • 75% of the most vulnerable small-scale food system stakeholders are protected by early warning systems (Resilience Pathway). • 50% of the most vulnerable small-scale food system stakeholders have access to climate risk-informed and shock-responsive social protection schemes (Resilience Pathway). 	<p><u>Strengthening adaptation and resilience</u></p> <ul style="list-style-type: none"> • 75% of the most vulnerable small-scale food system stakeholders have access to climate risk-informed and shock-responsive social protection schemes (Resilience). • Build resilience of 300 million smallholder agricultural producers (Resilience Pathway). 	
	<p><u>Access to markets</u></p> <ul style="list-style-type: none"> • Develop public procurement commitments and schemes to include sourcing from small farmers using regenerative practices. 	<p><u>Access to markets</u></p> <ul style="list-style-type: none"> • Provide access to market information enabling small-scale farmers to orientate themselves effectively in the market place, add value to their product, and to create new market spaces leveraging digital capabilities to make it easy for citizens/ businesses/ public procurement to purchase products from small regenerative farmers in the region. 	<p><u>Access to markets</u></p> <p>Enable markets and public sector actions to incentivize climate-resilient and low-emission practices; bring 200 million farmers into appropriate markets through increased profitability and market development (Resilience Pathway).</p>	



4 Produce	By 2021	By 2025	By 2030	By 2040
2. Financial Institutions	<u>Access to finance</u> <ul style="list-style-type: none"> • Provide access to financial services for small and medium sized agriculture enterprises that are adopting resilient, regenerative, climate smart and agroecological practices. • Improve access to financial services for small and medium sized agriculture enterprises so that they can adopt resilient, regenerative, climate-smart and agro-ecological practices. • Scale up public-private partnerships and investment to increase productivity, resilience and sustainability aligned with forest protection and restoration (Resilience Pathway). 	<u>Access to finance</u> <ul style="list-style-type: none"> • Ensure that international climate finance for agricultural sectors directly reaches the small and medium sized farmers. • Eliminate subsidies for climate damaging forms of agriculture, and support more sustainable crop and animal production. • Develop and implement innovative approaches such as value chain lending, mobile-based finance and other approaches that move beyond private collateral as the basis for lending, so credit access can be expanded. 	<u>Access to finance</u> <ul style="list-style-type: none"> • De-risk agriculture financial investment through tailored mechanisms that consider climate risk analysis to ensure funds allocation within financial and private institutions. • Ensure donors double agricultural research spending through the CGIAR system to help 200 million small-scale producers adapt to become more climate-resilient (Resilience Pathway). 	
	<u>Access to insurance</u> <ul style="list-style-type: none"> • Ensure increased uptake of agricultural risk insurance (Resilience Pathway). 		<u>Access to insurance</u> <ul style="list-style-type: none"> • Scale up access for over 100 million small-scale producers to insurance, markets, finance and productive safety nets (Resilience Pathway). 	
3. Technology Providers and Innovators	<u>Evidence</u> <ul style="list-style-type: none"> • Improving the evidence base on agroecology and ecosystem-based approaches at regional and global levels. 	<u>Evidence</u> <ul style="list-style-type: none"> • Deepen the understanding of the impacts of climate change on agricultural yields, cropping and livestock practices, crop and livestock disease spread, disease resistance and irrigation development. 		

4 Produce	By 2021	By 2025	By 2030	By 2040
3. Technology Providers and Innovators	<p><u>Knowledge and capacity</u></p> <ul style="list-style-type: none"> • Increase knowledge base/capacity on agroecology, including through promotion of South-South/ triangular cooperation that connects demands of support with existing expertise. • Promote resilient climate-smart agriculture and agroecological practices and technologies that increase yields and food security, adaptation and reduce GHG. • Integrate local and traditional knowledge with formal knowledge. • Promote use of indigenous and traditional agricultural knowledge, such as heritage seeds and breeds, as contemporary resilient food systems technology. 	<p><u>Knowledge and capacity</u></p> <ul style="list-style-type: none"> • Develop more systematic knowledge of the relationship and dynamics between biological communities and the services they provide, how this affects the stability and resilience of the services and agricultural productivity for smallholder farmers. • Integrating ecosystem services in the small-scale farming practices. • Improve planting material and other technologies to increase yields and ensure food security, climate adaptation capacity and resilience. 	<p><u>Knowledge and capacity</u></p> <ul style="list-style-type: none"> • Develop the capacity to test and deploy improved and locally adapted crops and locally adapted animal breeds to help smallholder farmers become more resilient and adapt to climate change. 	<p><u>Knowledge and capacity</u></p> <p>Develop and upscale Global Testing, Inspection and Certification (TIC) and other tools that are fed by climate, crops and other biophysical information in real-time.</p>
	<p><u>Access</u></p> <ul style="list-style-type: none"> • Provide access to agricultural inputs and services (climate-resilient seed, organic fertilizers, training, credit, veterinary services, machinery) for the next season, through extension programme, digital advisories, or public-private partnerships. • Improve the quality of and access to agro-meteorological information and early warning systems at farm, national, regional and global levels (Resilience Pathway). 	<p><u>Access</u></p> <ul style="list-style-type: none"> • Ensure that 50% of the most vulnerable small-scale farmers have access to agricultural inputs and services (climate-resilient seed, organic fertilizers, training, credit, veterinary services, machinery) for the next season, through extension programme, digital advisories, or public-private partnerships. 	<p><u>Access</u></p> <ul style="list-style-type: none"> • Ensure that 100% of the most vulnerable small-scale farmers have access to agricultural inputs and services (climate-resilient seed, organic fertilizers, training, credit, veterinary services, machinery) for the next season, through extension programme, digital advisories, or public-private partnerships. • Provide open-source climate-informed services for farmers. 	

4 Produce	By 2021	By 2025	By 2030	By 2040
3. Technology Providers and Innovators		<u>Access</u> <ul style="list-style-type: none"> Provide access to tools for land-use monitoring systems and mobile technologies for smallholder farmers to carry out rapid, reliable and transparent assessments of the most appropriate land use practices, climate change risks, variability and impacts. 	<u>Access</u> <ul style="list-style-type: none"> Improve access to and use of adaptation technologies and agro-ecological practices for 100 million small-scale producers (Resilience Pathway). Expand access to climate-informed digital agricultural advisory services for at least 100 million small-scale producers (Resilience Pathway). Public and private organizations provide 100 million smallholder farmers with access to climate-informed advisory services (Resilience Pathway). Secure resilient livelihoods and value chains through early warning systems and adaptive safety nets; realign USD 5 billion per year in humanitarian assistance for 40 million rural dwellers (Resilience Pathway). 	
4. Business and Service Providers	<u>Establish Science Based Targets</u> <ul style="list-style-type: none"> Reduce food loss by 20%. Promote diversification of farm related business activities to reduce poverty and food insecurity risks. Develop greater transparency to track food flows from place of origin and measure impacts. <u>Access to markets</u> <ul style="list-style-type: none"> Facilitate the access for smallholder farmers/forest dwellers to land use-related and sustainable value chains. 	<u>Establish Science Based Targets</u> <ul style="list-style-type: none"> Establish more tripartite frameworks for joint action by farmers and farmer organizations, private and public sector action to increase climate change adaptation and mitigations. Increase the use of sustainable bio-energy (residues, manure) in the on-farm production (Energy). Match agricultural job opportunities fostered through increased use of agroecological practices to unemployment workers. 	<u>Establish Science Based Targets</u> <ul style="list-style-type: none"> Reduce food losses in upper- and middle-income countries by 30%. Eliminate use of energy generated from fossil fuels in the on-farm production (Energy). 	<u>Establish Science Based Targets</u> <ul style="list-style-type: none"> Reduce food losses in upper- and middle-income countries by 50%. Ensure sustainable natural resource bases for regenerative agricultural production, particularly for smallholder farmers.



4 Produce	By 2021	By 2025	By 2030	By 2040
4. Business and Service Providers		<u>Establish Science Based Targets</u> <ul style="list-style-type: none"> Ensure agricultural commodity supply chains worth USD 50 billion annually have enhanced sustainability through climate resilient and agroecological approaches to investment (Resilience Pathway). 		
	<u>Access to technology and innovation</u> <ul style="list-style-type: none"> Develop blueprint to scale up investment in climate-informed farmer advisory services and information and communication technology (ICT) platforms (Resilience Pathway). 	<u>Access to technology and innovation</u> <ul style="list-style-type: none"> Support extension services and consolidate close working relations with research institutes to accelerate technology field testing. 	<u>Access to technology and innovation</u> <ul style="list-style-type: none"> Climate services accessed by 200 million farmers and agribusinesses through ICT advisory services (Resilience Pathway). 	
5. Civil Society	<u>Strengthen local value chains</u> <ul style="list-style-type: none"> Empower national, regional small-scale networking, community supported agriculture and producers' organizations. Strengthen local products value chains. 	<u>Strengthen local value chains</u> <ul style="list-style-type: none"> Improve and strengthen the governance of food systems and redirecting agricultural financing. 	<u>Strengthen local value chains</u> <ul style="list-style-type: none"> Establish local and national training systems dedicated to agroecological small-scale agriculture, small scale agribusiness. 	
	<u>Raising awareness</u> <ul style="list-style-type: none"> Educate the public about food, food systems, consumption and its impacts on and vulnerability to climate change and what actions can be taken in order to minimize these impacts. Educate civil society about the damage caused by animal-based agriculture and the health and climate (and many other) benefits of shifting to a diet rich in plant-based foods. Promote local farmer's markets and consuming seasonal and local foods. 	<u>Raising awareness</u> <ul style="list-style-type: none"> Organize dissemination of knowledge and practices, strengthen research-practices links. Promote sustainable small scale business related to agriculture and food (services supply, transformation, distribution). 		

EXISTING INITIATIVES

Action Network on Alternative Agriculture	Provide evidence of the importance of traditional and indigenous knowledge to effectively adapt agriculture, forests and foodsystems to the effects of a changing climate.
Climakers	Farmers Driven Climate Agenda intends to promote a completely reverted paradigm applying an authentic bottom-up approach, where farmers gain a leading role in the global political processes on climate change and agriculture. This renewed agenda is based on the best practices that farmers are already implementing as practical solutions to climate change mitigation and adaptation and is intended to be farmers-driven, science-based and result oriented.
Think Eat Save	Think.Eat.Save is a partnership between UNEP and FAO contributing to the Sustainable Food Systems Programme. The Think.Eat.Save provides a one-stop-shop for news, resources, and tools to reduce food loss and waste.
Global Alliance for Climate-Smart Agriculture	Inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture.
SAVE FOOD	Fight against global food waste and loss.
One Planet Network: Sustainable Food Systems Programme	The Sustainable Food Systems (SFS) Programme is a multi-stakeholder partnership focused on catalyzing more sustainable food consumption and production patterns. Our shared vision enables our partners to collaborate on joint initiatives, which range from normative, advocacy and policy support activities, to research and development projects as well as on-the-ground implementation activities that address our food systems challenges. The Programme promotes a holistic approach, taking into account the interconnections and trade-offs between all elements and actors in food systems.
Transforming Food Systems under Climate Change	Aims to work collectively with the world's 700 million small-scale farmers by 2030 to transform the way food is produced, processed and consumed. Never before have we faced such ambitious goals.
Agroecology Knowledge hub	The database provides a starting point to organize the existing knowledge on agroecology, collecting articles, videos, case studies, books and other important material in one place. The objective is to support policy-makers, farmers, researchers and other relevant stakeholders through knowledge exchange and knowledge transfer.

<p><u>Global Soil Partnership</u></p>	<p>Its mission is to position soils in the Global Agenda through collective action. Our key objectives care to promote Sustainable Soil Management (SSM) and improve soil governance to guarantee healthy and productive soils, and support the provision of essential ecosystem services towards food security and improved nutrition, climate change adaptation and mitigation, and sustainable development</p>
<p><u>4 per 1000</u></p>	<p>The aim of the initiative is to demonstrate that agriculture, and in particular agricultural soils can play a crucial role where food security and climate change are concerned. The ambition of the initiative is to encourage stakeholders to transition towards a productive, highly resilient agriculture, based on the appropriate management of lands and soils, creating jobs and incomes, hence ensuring sustainable development. The Executive Secretariat of the "4 per 1000" initiative is hosted by the CGIAR System Organization, an international organization based in Montpellier.</p>
<p><u>Sustainable Agriculture Initiative Platform</u></p>	<p>Platform is an organisation created by the food industry to communicate and to actively support the development of sustainable agriculture in a pre-competitive environment. The members include everyone from small companies starting out on the journey towards sustainability to some of the world's largest multinational food producers. Sustainable Agriculture Initiative Platform</p>
<p><u>The Economics of Ecosystems and Biodiversity (TEEB)</u></p>	<p>The Economics of Ecosystems and Biodiversity (TEEB) is a global initiative focused on "making nature's values visible". Its principal objective is to mainstream the values of biodiversity and ecosystem services into decision-making at all levels. It aims to achieve this goal by following a structured approach to valuation that helps decision-makers recognize the wide range of benefits provided by ecosystems and biodiversity, demonstrates their values in economic terms and, where appropriate, captures those values in decision-making.</p>
<p><u>Global Farmer Field School Platform</u></p>	<p>A hub to support quality of Farmer Field Schools globally. It provides the latest information of initiatives around the globe. Document library: Over 300 documents (case studies, training manuals, impact assessments, journal articles, videos, pictures, etc.) are available in various languages. Access to the global roster of the Farmer Field School experts</p>
<p><u>The Transformative Partnership Platform on Agroecology</u></p>	<p>The Transformative Partnership Platform (TPP) on agroecological approaches to building resilience of livelihoods and landscapes works to address key knowledge and implementation gaps to support agroecological transitions. It aims to provide evidence to underpin advocacy and inform policy makers and donors about the environmental and social benefits of agroecological approaches. The TPP Community of Practice on GLFx aims to build a fully inclusive diverse community that reflects these aims. https://glfx.globallandscapesforum.org/topics/21467/page/TPP-home</p>
<p><u>Scaling up Agroecology Initiative</u></p>	<p>In the transformative spirit of the 2030 Agenda, the initiative works with food producers, governments and other stakeholders to strengthen agroecology – as a promising approach –, harnessing a range of sustainable practices and policies, knowledge and alliances to achieve equitable and sustainable food systems in support of the SDGs.</p>

Millennium Institute

Works in over 40 countries and all regions across the globe where we help governments and institutions identify strategies that offer all people access to food, water, health care, education, and equal opportunities for women and men.

FURTHER REFERENCES

[Addressing agriculture, forestry and fisheries in National Adaptation Plans – Supplementary guidelines](#)

Five practical actions towards low-carbon livestock

[Agroecology Info Pool](#)

Convincing showcases, a criteria tool to assess projects and in-depth analyses of Agroecology.

Impact
5

LARGE SCALE COMMODITY PRODUCTION

PRODUCE | MITIGATION & ADAPTATION/RESILIENCE



5 Produce	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p> <p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Develop regulations that support deforestation-free food value chains in forest rich countries (Resilience Pathway). Enable conditions within multilateral dialogues that lead to development of commitments (both public and private) for enhancing and mainstreaming good practices across commodity production supply chains. Ensure that the expansion of large-scale commodity production does not increase deforestation and land degradation through eliminating pervasive fiscal incentives and subsidies, penalties for transgressors, and use of independent judicial bodies and watchdog organizations. 	<p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Develop regulations that support deforestation-free food value chains in forest rich countries (Resilience Pathway). Enable conditions within multilateral dialogues that lead to development of commitments (both public and private) for enhancing and mainstreaming good practices across commodity production supply chains. Ensure that the expansion of large-scale commodity production does not increase deforestation and land degradation through eliminating pervasive fiscal incentives and subsidies, penalties for transgressors, and use of independent judicial bodies and watchdog organizations. 	<p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Implement policies that transform agricultural sectors, large-scale commodity production and move towards resilient, agroecological, regenerative & climate smart practices. Enabling policies for carbon neutral certification for agricultural production. Relocate commodity agriculture, to decouple agricultural production from land area requirements and encourage locations far from land conversion fronts, to secure and enforce protection of high-carbon landscapes. Access market-based finance for national REDD+ activities in order to fund sustainable, deforestation-free commodity production. 	<p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Enable policies for a circular agriculture economy based on agroecology principles by minimizing the number of external inputs for agricultural production, closing nutrient loops and reducing negative impacts on the environment by eliminating discharges (i.e., wastewater) and surface runoff (Oceans Pathway). Reduce land-based pollutions or harmful activities that cause negative impacts on coastal and marine ecosystems (SDG14.1) 	
5 Produce	By 2021	By 2025	By 2030	By 2040



1. Policymakers (national, subnational, local levels)		<u>Set goals and implement reforms</u> <ul style="list-style-type: none"> Assure that stricter standards in progressive markets do not divert unsustainably produced products away to other markets by developing common standards across consumer countries, reducing complexity in supply chains 		
	<u>Policy alignment and governance</u> <ul style="list-style-type: none"> Enable policies for transitioning large-scale commodity production towards resilient, low carbon, agroecological, regenerative and climate-smart practices. Promote partnerships between consumer and producer countries that lead to setting up enabling conditions necessary to protect forests while improving agricultural production standards for forest-risk commodities. Embed climate action at the heart of coronavirus recovery plans and accelerate the transition to a zero-carbon economy in a just and inclusive manner. Build fairer and more sustainable food system that incentivizes sustainable agricultural and land-management strategies that centre food security and land rights (forest protection, soil health, agroforestry, pastureland management) and strengthens the resilience of small-scale farmers. 	<u>Policy alignment and governance</u> <ul style="list-style-type: none"> Align agriculture sector policies with the overall national climate policies. Align regulatory frameworks in demand countries of commodity products (e.g., soy, rice, palm oil etc.) through introducing diligence and trade parameters. Develop policy frameworks that raise the bar on corporate due diligence action related to forest-risk commodity supply chains together with demand-side measures that support, incentivize and reward sustainably produced commodities in markets. Require companies to measure and report their greenhouse gas emissions and make climate-related financial disclosure mandatory across the economy. Hold companies legally accountable for their climate and environmental impacts 		<u>Policy alignment and governance</u> <ul style="list-style-type: none"> Enable regulatory regime for fit for purpose, effectively supporting regenerative, agroecological resilient and productive agriculture, production for the domestic market, and trade in agri-food products with international markets, while protecting the environment and the public.

5 Produce	By 2021	By 2025	By 2030	By 2040
1. Policymakers (national, subnational, local levels)	<u>Policy alignment and governance</u> <ul style="list-style-type: none"> Promote joint initiatives to develop and implement sustainability standards and policy measures and to share data and examples of best practice among stakeholders. These should build where possible on existing networks and initiatives, and include industry associations and groupings, reaching both producers and consumers of forest risk commodities to build a sense of shared responsibility & shared interest 			
2. Financial Institutions	<u>Transparency of financial flows</u> <ul style="list-style-type: none"> Undertake scenario analyses to understand financial institutions' exposure to forest risk commodities from a physical, regulatory, legal and reputational perspective, and ensure this information guides strategies and portfolio in the medium to long term. Improve transparency and accountability of finance and major commodity supply chains driving conversion of high-carbon landscapes. Increase private sector investment in sustainable, low carbon, agroecological, regenerative and climate smart agriculture commodity production. 	<u>Transparency of financial flows</u> <ul style="list-style-type: none"> Develop more ambitious industry and finance standards through green banks, company policies for zero agricultural land expansion, disclosure requirements, subsidy reform, and robust verification methods. Focus: palm oil, beef, soy, pulp, rubber, cocoa and coffee. Define and disclose clear procedures for managing non-compliance and the consequences of non-compliance for clients. Explore partnering with clients to improve their standards and practices. Eliminate subsidies for climate damaging forms of agriculture, and support more sustainable crop and animal production. 		



5 Produce	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
2. Financial Institutions	<ul style="list-style-type: none"> Enhance financial and technical support from consumer/ demand countries, financial institutions, and commodity supply chain actors towards measurable reductions in land-use emissions and deforestation by preventing forest loss and intensifying land use in high forest risk commodity-producing countries. 	<ul style="list-style-type: none"> Include requirements on financial organisations to report specifically on their deforestation risk exposure throughout supply chains, and the application of a due diligence obligation to loans and investments. 		
	<p><u>Increase investment</u></p> <ul style="list-style-type: none"> Shift to investments in deforestation-free food value chains. Shift to investments that conserve, maintain and build soil health and diversity. 	<p><u>Increase investment</u></p> <ul style="list-style-type: none"> Generate policy frameworks that steer flows of finance and investment away from unsustainable practices towards sustainable activities and deforestation-free commodity supply chains. Invest in research and development and incentivise the adoption of technical advances that strengthen resilience, adaptation and mitigation within the farming sector. Generate financial incentives for forest-protecting producers in the agricultural frontiers to foster sustainable producer behaviour. Redirect finance to support more sustainable, climate-smart, agroecological and regenerative land-use practices. Financial regulators holding financial institutions to account on financing of forests related risk. 	<p><u>Increase investment</u></p> <ul style="list-style-type: none"> Increase levels of investment in deforestation-free activities linked to land use processes. 	



5 Produce	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
3. Technology Providers and Innovators	<p><u>Knowledge and capacity</u></p> <ul style="list-style-type: none"> • Further develop tools and methods for on farm carbon calculations coupling with most suitable land use or farming practices. 	<p><u>Knowledge and capacity</u></p> <ul style="list-style-type: none"> • Foster robust, consistent and practical systems and approaches that enable companies to assess, verify and report on risk and risk mitigation within their supply chains. • Build capacity in producer countries as to improve governance and law enforcement and put in place enabling conditions necessary to protect forests while improving the standards of production of agricultural commodities, including basic services and infrastructure and support for SMEs and farmers linked to commodity production. • Generate conditions for industry and governments to access and rely on clear, consistent and credible tools for assessing, verifying and mitigating deforestation risk and tracking the movement of products through supply chains. • Capacitate risk-informed systems to strengthen resilience for large scale commodity production. • Develop and upscale tools for measuring, maintaining and building up soil health, carbon sequestration, and other positive outcomes of regenerative and agroecological production. 		<p><u>Knowledge and capacity</u></p> <ul style="list-style-type: none"> • Further development of technology for agricultural production to meet the increasing food demand while not increasing the risks of climate change.



5 Produce	By 2021	By 2025	By 2030	By 2040
4. Business and Service Providers	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Companies mainstream the application of high carbon stock and high-conservation value approaches by producers and the use of NbS to achieve science-based emission reduction targets Companies invest in restoration and deforestation projects and earn benefits for this. Sustainable companies developing proactive role in helping shape public policy through advancing collective voice through the Forest Positive coalition. Ensure largest corporate consumers of agricultural commodities commit to regenerative agricultural practices across supply chains. Reduce food losses in upper- and middle-income countries by 20%. 	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Companies pledge on carbon neutral value chain of their commodity production. Companies remove 50 GtCO₂e through agriculture based NbS. Companies reinforce positive action and collaborate on mutually beneficial policy measures by articulating “downstream” and “upstream” stakeholders within producer and consumer countries. Increase the use of sustainable bio-energy (residues, manure) large commodity production value chain (Energy Pathway). Ensure agricultural commodity supply chains worth USD 50 billion annually have enhanced sustainability through climate resilient approaches to investment (Resilience Pathway) 	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Eliminate the use of energy generated from fossil fuels in large commodity production value chain (Energy Pathway). Companies reach the target of doubling agroecological, resilient, and regenerative practices in food and agriculture systems compared to 2030. Improve synthetic fertilizer production and application and reduce emissions by ~180 million tons of carbon dioxide (Mt CO₂) per year and to avoid groundwater, freshwater and ocean pollution (Water Pathway). Reduce food losses in upper- and middle-income countries by 30%. 	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Companies reach the target of carbon negative food and agriculture systems. Replace synthetic fertilizer with renewable and natural production to avoid groundwater, freshwater and ocean pollution (Water Pathway). Reduce food losses in upper- and middle-income countries by 50%.
	<p><u>Deforestation free commodities</u></p> <ul style="list-style-type: none"> Increase private sector pledges on zero deforestation commitments in their supply chain. Companies to take action to eliminate deforestation in their supply chains by incorporating supplier data in procurement decisions. Shift to deforestation-free food value chains in forest areas. 	<p><u>Deforestation free commodities</u></p> <ul style="list-style-type: none"> Private sector engagement on reducing deforestation increases through implementation of jurisdictional approaches in relevant upstream supply chain productive regions. Includes functionality of the Jurisdictional Exchange Network (JEN). Measure and report transparently on deforestation in production supply chain. 		



5 Produce	By 2021	By 2025	By 2030	By 2040
4. Business and Service Providers	<u>Transparency</u> <ul style="list-style-type: none"> Establish a global monitoring system to track large scale commodity production value chains on deforestation. 	<u>Transparency</u> <ul style="list-style-type: none"> Develop producer – consumer countries partnerships including governments, industry, farmers and civil society to accelerate sector transformations towards nature-positive models. 	<u>Transparency</u> <ul style="list-style-type: none"> Establish supply chain transparency, equity, procurement policies and commodity certification 	
5. Civil Society	<u>Raise awareness</u> <ul style="list-style-type: none"> Promote use of locally produced and seasonal foods and commodities. Organizing consumer advocacy, using media to build awareness of the impacts of purchasing decisions. NGOs concerned with deforestation, agroecology climate and food systems support consumer education and advocacy, media campaigns and boycotts. Play an active role through information and sensitization to reduce food losses of public in upper- and middle-income countries by 20%. 	<u>Raise awareness</u> <ul style="list-style-type: none"> Increase level of consumer awareness concerning commodity related impacts, in emerging markets. Reduce consumption footprint on land and encourage the consumption of products from deforestation-free and agroecological supply chains. 		

EXISTING INITIATIVES

<u>Forest, Agriculture, Commodities and Trade Dialogue (FACT)</u>	Initiative launched by COP26 Presidency and Tropical Forest Alliance to accelerate the transition towards more sustainable land use practices.
<u>The Livestock Environmental Assessment and Performance (LEAP) Partnership</u>	The Livestock Environmental Assessment and Performance (LEAP) Partnership is a multi-stakeholder initiative that seeks to improve the environmental sustainability of the livestock sector through harmonized methods, metrics, and data. LEAP leads a coordinated global initiative to accelerate the sustainable development of livestock supply chain and to support coherent climate actions while contributing to the achievement of the 2030 Agenda for Sustainable Development and the Paris Agreement.
<u>Global Forest Watch PRO</u>	Securely manage deforestation risk in commodity supply chains. Global Forest Watch Pro (GFW Pro) is an online management application to support reducing deforestation in commodity supply chains. GFW Pro delivers critical decision-making analysis at the property, supply shed and portfolio levels. The platform also empowers users, from commodity field officers to financial Chief Risk Officers, to manage and monitor changes in deforestation risk.
<u>Transparency for Sustainable Economies (TRASE)</u>	Transparent supply chains for sustainable economies.
<u>Jurisdictional Exchange Network (JEN)</u>	Jurisdictional approaches in relevant upstream supply chain productive regions
<u>weADAPT</u>	weADAPT is a collaborative platform for climate adaptation. It draws together a wide range of partners to share experience, tools and case studies to create a dynamic community and knowledge base for adaptation.
<u>Initiative on Governing Bioeconomy Pathways</u>	The SEI Initiative on Governing Bioeconomy Pathways aims to better articulate the alternative pathways available for bioeconomy development, and to identify the policies, institutions and governance mechanisms that can facilitate each of them.
<u>Action Network on Alternative Agriculture</u>	Provide evidence of the importance of traditional and indigenous knowledge to effectively adapt agriculture, forests and food systems to the effects of a changing climate.

Innovative Finance for the Amazon, Cerrado and Chaco (IFACC)	<p>Effort to catalyse innovative finance mechanisms for the expansion of soy and cattle production with deforestation and conversion-free principles in the Brazilian Amazon, Cerrado and the Chaco regions of Paraguay and Argentina.</p>
The Investors Policy Dialogue on Deforestation (IPDD)	<p>Collaborative investor initiative set up in July 2020 to engage with public agencies and industry associations in selected countries on the issue of deforestation.</p>
Climakers	<p>Farmers Driven Climate Agenda intends to promote a completely reverted paradigm applying an authentic bottom-up approach, where farmers gain a leading role in the global political processes on climate change and agriculture. This renewed agenda is based on the best practices that farmers are already implementing as practical solutions to climate change mitigation and adaptation and is intended to be farmers-driven, science-based and result oriented.</p>
Think Eat Save	<p>Think.Eat.Save is a partnership between UNEP and FAO contributing to the Sustainable Food Systems Programme. The Think.Eat.Save provides a one-stop-shop for news, resources, and tools to reduce food loss and waste.</p>
Forest Positive Coalition of Action	<p>Collective effort by the Consumers Good Forum to drive transformative change in order to remove deforestation, forest conversion and degradation from key commodity supply chains and support forest positive businesses.</p>
Global Alliance for Climate-Smart Agriculture	<p>Inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture.</p>
Africa Palm Oil Initiative (APOI)	<p>Public-private partnership that supports the transition of the palm oil sector from a driver of deforestation to a driver of long-term, low-carbon development in the West/Central Africa region in ten countries.</p>
Cocoa Forest Initiative	<p>Initiative to end cocoa-related deforestation and restore forest areas.</p>
SAVE FOOD	<p>Fight against global food waste and loss.</p>



<p>One Planet Network: Sustainable Food Systems Programme</p>	<p>The Sustainable Food Systems (SFS) Programme is a multi-stakeholder partnership focused on catalyzing more sustainable food consumption and production patterns. Our shared vision enables our partners to collaborate on joint initiatives, which range from normative, advocacy and policy support activities, to research and development projects as well as on-the-ground implementation activities that address our food systems challenges. The Programme promotes a holistic approach, taking into account the interconnections, trade-offs between all elements and actors in food systems.</p>
<p>Agroecology Knowledge hub</p>	<p>The database provides a starting point to organize the existing knowledge on agroecology, collecting articles, videos, case studies, books and other important material in one place. The objective is to support policy-makers, farmers, researchers and other relevant stakeholders through knowledge exchange and knowledge transfer.</p>
<p>Sustainable Agriculture Initiative Platform</p>	<p>Platform is an organisation created by the food industry to communicate and to actively support the development of sustainable agriculture in a pre-competitive environment. The members include everyone from small companies starting out on the journey towards sustainability to some of the world’s largest multinational food producers. Sustainable Agriculture Initiative Platform</p>

FURTHER REFERENCES

<p>International Code of Conduct for the Sustainable Use and Management of fertilizers</p>	
<p>Transboundary climate risks</p>	<p>Actions to Transform Food Systems Under Climate Change</p>

Impact
6

OFF-FARM AGRICULTURAL COMMODITY VALUE CHAIN

SUPPLY CHAIN, CONSUMPTION, DIETS & WASTE MITIGATION & ADAPTATION/RESILIENCE



6 Supply Chain, Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Adopt NbS to drive policies and regulations for the food system at all levels (Resilience Pathway) Develop regulations that support deforestation-free food value chains in forest rich countries (Resilience Pathway) Apply measures and policies (investment in infrastructure, targeting the upgrade of skills for farmers & workers, effective regulation) that improve the capacity to compete in modern global value chains. Design policies that aim to tackle the structural causes of food value chain underperformance, generate behaviour change, esp. by focalizing technical, organizational and economic support to address gaps amongst food system actors for more balanced relationships. 	<p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Support active policy coordination and coherence across multiple sectors and public actors (e.g., ministries of agriculture, trade, health, environment, education, transport and infrastructure, etc). Improve standards of governance and law enforcement and put in place enabling conditions necessary to protect forests and improve the standards of production of agricultural commodities, including basic services and infrastructure and support for farmers, through partnerships on the ground in producer countries. Provision of capacity-building assistance and the negotiation of clear bilateral trade agreements that incentivize good practices. 	<p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Create a clear market demand for sustainable products, through ensuring that all companies placing forest risk commodities on the market face a level playing field in terms of legislation, and to provide favourable market conditions for sustainable products and/or less favourable market conditions for unsustainable products. Align supportive cross-sectoral institutional, legal and regulatory frameworks for coherent policies in land use sectors, assuring food security and sustainable natural resource management at national level Harmonize sustainability standards and certification across countries to facilitate their application to agri-food global value chains. 	<p><u>Set goals and implement reforms</u></p> <ul style="list-style-type: none"> Promote equal, both, regional and multilateral trade for more vulnerable countries to access global food markets.



6 Supply Chain, Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p> <ul style="list-style-type: none"> Through multi-stakeholder initiatives, gather stakeholders across sectoral and disciplinary boundaries to build an understanding of and collaboration on governance issues in the food system. Reduce the use of plastic in food packaging and improve the disposal/recycling procedures. <p><u>Transparency</u></p> <ul style="list-style-type: none"> Require companies to measure and report their greenhouse gas emissions and make climate-related financial disclosure mandatory across the economy Hold companies legally accountable for their climate and environmental impacts, and the accompanying social and human rights violations. 	<ul style="list-style-type: none"> Through multi-stakeholder initiatives, gather stakeholders across sectoral and disciplinary boundaries to build an understanding of and collaboration on governance issues in the food system. Reduce the use of plastic in food packaging and improve the disposal/recycling procedures. <p><u>Transparency</u></p> <ul style="list-style-type: none"> Require companies to measure and report their greenhouse gas emissions and make climate-related financial disclosure mandatory across the economy Hold companies legally accountable for their climate and environmental impacts, and the accompanying social and human rights violations. 	<ul style="list-style-type: none"> Build fairer and more sustainable food system that incentivizes sustainable agricultural and land-management strategies that centre food security and land rights (forest protection, soil health, agroforestry, pastureland management) and strengthens the resilience of small-scale farmers. Align environmental, social and governance policies with mainstream investment processes and risk management frameworks (Resilience Pathway). 	<ul style="list-style-type: none"> Lower trade barriers to promote global value chains and contribute to growth in agriculture and the food industry and to create important spill-over effects through the transmission of technology and the transfer of knowhow. Abolishing the use of plastic along the food value chain. 	
<p>2. Financial Institutions</p>	<p><u>Financing models</u></p> <ul style="list-style-type: none"> Develop commitments and roadmaps for financing the enhancement of trade, capacity-building and other measures to provide incentives and support sustainable production. Building capacity to accurately assess risk and deploy appropriate risk-mitigating mechanisms, by equipping investors with the data and risk tools needed for better risk assessment and utilizing mechanisms such as blended finance to de-risk and catalyse private capital (Resilience Pathway). 	<p><u>Financing models</u></p> <ul style="list-style-type: none"> Blend finance to develop a deeper pipeline of bankable projects and catalyse private investments in new markets and business models for food value chains. Align public incentives through economic policies (e.g., fiscal and credit) that favour forest conservation and land use intensification. Develop digital solutions to support pipeline development and new standalone investment opportunities for food value chains. 	<p><u>Financing models</u></p> <ul style="list-style-type: none"> Shift the investor mentality to take advantage of the growing momentum in blended finance to participate in less traditional asset classes and markets. Foster deal matchmaking platforms to facilitate transactions between a pipeline of investable projects and pools of investment capital. Become environmental, social and governance stewards, actively engaging companies on environmental, social and governance risk management and impact. 	



6 Supply Chain, Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
2. Financial Institutions			<ul style="list-style-type: none"> • Ensure that environmental and social impacts (direct and indirect) are a priority for board-level oversight, and factor into assessment of management performance. 	
	<p><u>Increase investment</u></p> <ul style="list-style-type: none"> • Invest in infrastructure, skills development for labour involved in the food value chain to that improve the capacity to compete in sustainable global value chains. • Incorporate climate considerations into public investment appraisals. • Scaling up green financing linked to climate outcomes. 	<p><u>Increase investment</u></p> <ul style="list-style-type: none"> • Provide access and assure effective use of international financing options for the long-term transition to sustainable, climate-smart and resilient food and agriculture systems. 		
	<p><u>Sustainable and transparent financing</u></p> <ul style="list-style-type: none"> • Integrate sustainability and mainstreaming environmental, social and governance standards in investment decision-making processes. • Signal the importance of commitment to gender equity and human rights across all companies in investment portfolios. 	<p><u>Sustainable and transparent financing</u></p> <ul style="list-style-type: none"> • Steer flows of finance and investment away from unsustainable activities and supply chains and/or towards sustainable activities and supply chains – ideally at the global level. • Elevate assessment of social risks and impacts to levels similar to those afforded to environmental and governance risks (Resilience). • Use economic power to encourage the adoption of robust, national-level regulations that advance better corporate conduct on environmental and social issues across value chains. 		



6 Supply Chain, Consumption, diets & waste	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
3. Technology Providers and Innovators	<u>Evidence</u> <ul style="list-style-type: none"> Better compilation & comparison of data originating from different sectors to assess the performance of the food value chain, & inform decision making. Increase systematic collection and analysis of data that covers various areas of the entire food value chain. 	<u>Evidence</u> <ul style="list-style-type: none"> Measures to improve transparency and information, and track the movement of products through supply chains, including traceability and verification systems. 		
	<u>Access</u> <ul style="list-style-type: none"> Increase availability of tools and digital solutions and methods in food value chains (including production, processing, distribution, consumption). 	<u>Access</u> <ul style="list-style-type: none"> Ensuring access to knowledge, innovation, technology, broadband connectivity across the world through public, private partnerships & policy coherence to improve digital infrastr. 		<u>Access</u> <ul style="list-style-type: none"> Continuous assurance of equal access to innovation and technology for all involved in the food value chain.
	<u>Knowledge and capacity</u> <ul style="list-style-type: none"> Ensure inclusive and gender-responsive approaches to digital skills development and access to digital innovation. Building an international network of system thinkers and leaders from a wide range of sectors and backgrounds to facilitate an exchange of knowledge and offer technical expertise to countries. Develop free & open-source digital platforms providing e-commerce services & distributed ledger tech., such as block chain, as they mutually enable more efficient, inclusive local & global agricultural markets by tackling their contribution to reducing information asymmetries, transaction costs, & providing financial inclusion of actors. 	<u>Knowledge and capacity</u> <ul style="list-style-type: none"> Generate robust, consistent and practical systems and approaches for companies to assess, verify and report on risk and risk mitigation within their supply chains. This includes the need to promote greater use of data and technological innovation and to build on existing best practice, including but not limited to certification. Build clear and sustainable pathways to bring knowledge to the field by linking core actors with local and regional “knowledge providers” (e.g., extension services, research institutes, laboratories, knowledge networks). 	<u>Knowledge and capacity</u> <ul style="list-style-type: none"> Continuous research and analysis on the potential impacts of digital technologies on agricultural and food markets, their structure and their functioning to anticipate disruptive effects better and to promote sustainable outcomes 	



6 Supply Chain, Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
4. Business and Service Providers	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Identify main GHG emissions sources along the commodity value chain and define actions to reduce emissions. Facilitate an adaptive process of system changes driven by market-led approaches, aligned with national strategies and combined with policy innovations. Implement commercial and trading practices that promote new business models, such as worker cooperatives, benefit companies and social enterprises, that protect and restore the environment, strengthen communities' and women's rights, and share value with employees or workers in the supply chain. 	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Improve energy efficiency along food value chain (Energy Pathway). Limiting emissions from transport and logistics (Transport Pathway). Preventing and reducing food wastage along the value chain. Applying circular economy approaches, for example in improved waste management, packaging, recycling). Optimizing water use in the procession and production (Water Pathway). Codification in trade agreements of terms and safeguards related to transparency, farm-to-fork traceability, forest, land use and land tenure regulations, economic policies, and producer incentives. 	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Reduce food losses and wastage in upper- and middle-income countries by 30%. 	<p><u>Increase climate commitments</u></p> <ul style="list-style-type: none"> Reduce food losses and wastage in upper- and middle-income countries by 50%.
	<p><u>Transparency</u></p> <ul style="list-style-type: none"> Ensure full transparency and traceability across supply chain tiers and extend supplier disclosure to the farm level. 	<p><u>Transparency</u></p> <ul style="list-style-type: none"> Set appropriate pricing based on sustainable production costs, and providing long-term, predictable and transparent contracts and payment terms for suppliers. 		
	<p><u>Environmental and social responsibility</u></p> <ul style="list-style-type: none"> Establish mechanisms for supporting smallholder farmers in particular to improve standards of production and reduce pressure on forests. 	<p><u>Environmental and social responsibility</u></p> <ul style="list-style-type: none"> Redefine corporate purpose (at the board level) to include a company's stakeholders, including workers, consumers and affected communities, in addition to its shareholders. 	<p><u>Environmental and social responsibility</u></p> <ul style="list-style-type: none"> Require non-financial objectives for companies' strategy based on environment, social and governance criteria (i.e., the wellbeing of people, communities and the environment) 	<p><u>Environmental and social responsibility</u></p> <ul style="list-style-type: none"> Continuous fostering of effective public-private partnerships, good regulations to crowding the private sector and policy coherence to improve digital infrastructure and skills in rural areas

6 Supply Chain, Consumption, diets & waste	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
4. Business and Service Providers	<ul style="list-style-type: none"> • Incorporate sustainability conditions in trade and investment agreements. • Facilitate the movement of agricultural products from farm gate to markets. 	<ul style="list-style-type: none"> • Make a commitment to eliminate commercial and trading practices that place undue levels of risk and pressure on suppliers to cut costs. • Exercise preferential sourcing from suppliers that safeguard the environment, guarantee a living wage/income and that give greater voice, power and value to workers, women and farmers through the ownership and governance structure of their business. • Match food value chain job opportunities to unemp. workers. • Work in partnership with other organizations to learn, adapt, synergize different approaches to work towards common food system objectives. 	<ul style="list-style-type: none"> • [...] and embed this in supplier management; monitor and publicly report on progress in suppliers' performance; integrate policies into the KPIs of buyers, recognizing trade-offs and prioritizing positive environmental and social performance. • Reshape supply chains, food retail, marketing and procurement. • Foster inclusive business models, such as contract farming, to address the constraints farmers face in entering markets and value chains. • Promote and widely apply voluntary sustainability certification schemes can address trade-offs between economic, environmental and social objectives. 	<ul style="list-style-type: none"> • [...]and to facilitate the uptake of digital technologies, especially in agricultural and food markets of developing countries.
5. Civil Society	<p><u>Raise awareness</u></p> <ul style="list-style-type: none"> • Setting up local systems for knowledge generation and dissemination of sustainable food value chains. • Education society on sustainable and regenerative food value chains; • Promoting locally produce food and products. 	<p><u>Raise awareness</u></p> <ul style="list-style-type: none"> • Increase level of consumer awareness concerning commodity related impacts, in emerging markets. • Reduce consumption footprint on land, encourage the consumption of products from deforestation-free supply chains. • Develop programs and face existing mechanisms (e.g., purchasing contract terms for ingredients, new buying models) to motivate & enable a shift to regenerative practices that will support smallholder farmers' livelihoods long-term 		



6 Supply Chain, Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
<p>5. Civil Society</p>	<p><u>Climate Action</u></p> <ul style="list-style-type: none"> • Recognition for national platforms, frameworks and processes such as national commodity standards (e.g., the Indonesian and Malaysian Sustainable Palm Oil schemes) and, more broadly recognition of national development and environment priorities. • For food manufacturers and food service/eateries: design food products, dishes, and menus to incorporate ingredients that can be sourced from smallholder regenerative farmers (e.g., this may require reimagining recipes for products to include more diverse ingredients that smallholder farmers are multi-cropping). 			

EXISTING INITIATIVES

TFA finance sector actors regional platform	<p>TFA to develop finance sector platform to provide input and commit additional capital to a bold public and private agenda around deforestation-free soft commodities.</p>
SAVE FOOD	<p>Fight against global food waste and loss.</p>
Think Eat Save	<p>Think.Eat.Save is a partnership between UNEP and FAO contributing to the Sustainable Food Systems Programme. The Think.Eat.Save provides a one-stop-shop for news, resources, and tools to reduce food loss and waste.</p>
One Planet Network: Sustainable Food Systems Programme	<p>The Sustainable Food Systems (SFS) Programme is a multi-stakeholder partnership focused on catalysing more sustainable food consumption and production patterns. Our shared vision enables our partners to collaborate on joint initiatives, which range from normative, advocacy and policy support activities, to research and development projects as well as on-the-ground implementation activities that address our food systems challenges. The Programme promotes a holistic approach, taking into account the interconnections and trade-offs between all elements and actors in food systems.</p>
Transforming Food Systems under Climate Change	<p>Aims to work collectively with the world's 700 million small-scale farmers by 2030 to transform the way food is produced, processed and consumed. Never before have we faced such ambitious goals.</p>
Sustainable Agriculture Initiative Platform	<p>Platform is an organisation created by the food industry to communicate and to actively support the development of sustainable agriculture in a pre-competitive environment. The members include everyone from small companies starting out on the journey towards sustainability to some of the world's largest multinational food producers. Sustainable Agriculture Initiative Platform</p>



FURTHER REFERENCES

[Sustainable food systems: Concept and framework](#)

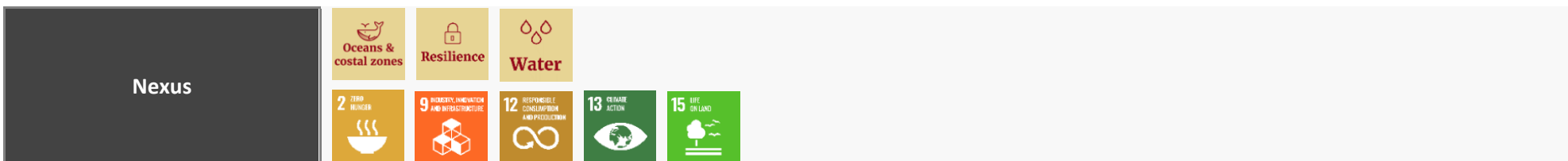
The State of Agricultural and Commodity Markets 2020

[The State of Food and Agriculture:
Moving forward on food loss and waste reduction](#)

Impact
7

CONSUMPTION, DIETS & WASTE

SUPPLY CHAIN, CONSUMPTION, DIETS AND WASTE | MITIGATION & ADAPTATION/RESILIENCE



7 Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
<p>1. Policymakers (national, subnational, local levels)</p>	<p><u>Set goals and enabling reforms</u></p> <ul style="list-style-type: none"> Set vision and goals for transforming food systems in consultations with the private sector, cities, towns and rural areas, civil society organisations, farmers' organizations, trade unions and community leaders. Set clear, ambitious 2030 and 2040 system targets and decide delivery strategies. These should be in line with the SDGs and Paris Agreement goals. Promote policies addressing demand-side measures to incentivize deforestation-free commodities in producing and consuming countries 	<p><u>Set goals and enabling reforms</u></p> <ul style="list-style-type: none"> Strengthen institutional capacity and cross-government collaboration to transform food systems, including challenges related to food consumption, diets and waste. Increase transparency and data availability between cross-government institutions. 	<p><u>Set goals and enabling reforms</u></p> <ul style="list-style-type: none"> Ensure there is minimal waste (less than 5 %) of food and agriculture products in all food and agriculture value chains (Resilience Pathway). 	<p><u>Set goals and enabling reforms</u></p> <ul style="list-style-type: none"> Ensure all policies, regulation and public support provides incentives for inclusive, sustainable and resilient food systems, consumption, diets and waste (Resilience Pathway).



7 Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
1. Policymakers (national, subnational, local levels)	<p><u>Transition to local food systems and healthy diets</u></p> <ul style="list-style-type: none"> Develop a strategy and guidance on sustainable consumption and healthy diets. Use public procurement to scale the market for healthy, seasonal and local foods. 	<p><u>Transition to local food systems and healthy diets</u></p> <ul style="list-style-type: none"> Integrate strategy on sustainable consumption and healthy diets into the education and health systems. Deploy fiscal instruments (taxes, subsidies, market support) to reward producers of healthy food (making it more affordable for lower-income households) and penalise producers of unhealthy foods. Align regulations with the nutrition guidelines. Require clear food health labelling. Restrict marketing of unhealthy food. Encourage urban and peri-urban farming. Reduce food loss and food waste. 		
2. Financial Institutions	<ul style="list-style-type: none"> Develop a set of core financing principles, built on the SDGs and the Paris Agreement, and framed along the lines of the Principles for Responsible Agriculture Investment. 	<ul style="list-style-type: none"> Mobilize public and private investors to drive USD 300 billion a year into asset classes and instruments needed to transform food and land use systems. Guide capital allocation into better food and land-use systems and withdraw it from high-risk companies. Work with governments to improve capital markets oversight, adjust financial regulations. 		<ul style="list-style-type: none"> Ensure all investments are allocated to inclusive, low carbon, climate-resilient and sustainable food and agriculture systems (Resilience Pathway).

7 Consumption, diets & waste	By 2021 ▼	By 2025 ▼	By 2030 ▼	By 2040 ▼
3. Technology Providers and Innovators	<ul style="list-style-type: none"> Strengthen integrated food economics know-how and modelling capacity. Develop tools combining insights across economics, spatial modelling, climate risk analytics, nutrition, health and political science leading to better public and private sector decision-making. 			
4. Business and Service Providers	<p><u>Establish Science Based Targets</u></p> <ul style="list-style-type: none"> Develop strategies compatible with the SDGs, the Paris Agreement goals, and global targets on ecosystems and biodiversity. Reshape and monitor supply chains to reduce carbon emissions. Shift research and development, and marketing resources into healthier food options for consumers. Set more ambitious climate and transparency targets in corporate social (and environmental) responsibility strategies. Commit to reduction of food loss and waste along the value chain. 	<p><u>Establish Science Based Targets</u></p> <ul style="list-style-type: none"> Promote products and marketing strategies in line with “healthier diets”, NbS, “wider choice and supply” and “opportunity for all”. 	<p><u>Establish Science Based Targets</u></p> <ul style="list-style-type: none"> Halve per capita global food waste at the retail and consumer levels and reduce food losses in production, post-harvest and supply chains, including postharvest losses (SDG 12.3) (Resilience). Ensure 50% reductions in food loss and waste in five major supply chains where loss or waste are high (Resilience) 	<p><u>Establish Science Based Targets</u></p> <ul style="list-style-type: none"> Ensure largest corporate consumers source 100% of agricultural commodities from suppliers implementing regenerative agricultural practices (Resilience).



7 Consumption, diets & waste	By 2021	By 2025	By 2030	By 2040
4. Business and Service Providers	<p><u>Transparent, sustainable, fair and local value chains</u></p> <ul style="list-style-type: none"> Investing in long-term sustainable supply from fair partnerships. Address inequalities in their value chains, whether individually or through agreed collective bargaining processes. Commit to fair, transparent and long-term contracts with farmers and other workers in the value chain. Encourage environmental performance, source from countries and sub-national jurisdictions that protect ecosystems and promote regenerative agriculture principles. 	<p><u>Transparent, sustainable, fair and local value chains</u></p> <ul style="list-style-type: none"> Ban products that are causing deforestation and other ecosystem conversions land grabs and exploitation throughout supply chains. Adapt procurement strategies to invest in helping farmers with the costs of meeting standards and training. Incentivize farmers to invest in sustainable practices themselves by lengthening procurement contracts that include guaranteed offtake – that is, guaranteeing farmers that they will have buyers for the results of their investments. 		
5. Civil Society	<ul style="list-style-type: none"> Raise awareness of healthy, nutritious and climate-smart diets. Reduce food waste by 20%. Increase the use of locally produced products in diets. 	<ul style="list-style-type: none"> Reduce food and waste loss by 20%. 	<ul style="list-style-type: none"> Shift to more healthy and balanced diets while reducing animal protein consumption to reduce CO2 emissions by ~300 Mt. Reduce food waste in upper and middle-income countries by 30%. 	<ul style="list-style-type: none"> Shift to more healthy and balanced diets while reducing animal protein consumption to reduce CO2 emission by ~500 Mt. Reduce food waste in upper and middle-income countries by 50%.

EXISTING INITIATIVES

SAVE FOOD	Fight against global food waste and loss.
Think Eat Save	Harmonization of measurements and tools to assess food loss and waste (SDG 12.3).
Food and Land Use Coalition (FOLU)	A community of organizations and individuals committed to the urgent need to transform the way we produce food and use our land for people, nature and the climate.
One Planet Network: Sustainable Food Systems Programme	The Sustainable Food Systems (SFS) Programme is a multi-stakeholder partnership focused on catalyzing more sustainable food consumption and production patterns. Our shared vision enables our partners to collaborate on joint initiatives, which range from normative, advocacy and policy support activities, to research and development projects as well as on-the-ground implementation activities that address our food systems challenges. The Programme promotes a holistic approach, taking into account the interconnections and trade-offs between all elements and actors in food systems.

FURTHER REFERENCES

‘Cities and circular economy for food’ accessible via here: https://www.ellenmacarthurfoundation.org/our-work/activities/food	EAT-Lancet Commission Summary Report
Groving Better: ten critical transitions to transform food and land use	

BIBLIOGRAPHY

FAO. 2020. Global Forest Resources Assessment 2020: Main report. Rome.

IPCC, 2019: Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.- O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. In press.

IPBES (2018): The IPBES assessment report on land degradation and restoration. Montanarella, L., Scholes, R., and Brainich, A. (eds.). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 744 pages.

NYDF Assessment Partners. (2020). Balancing forests and development: Addressing infrastructure and extractive industries, promoting sustainable livelihoods. Climate Focus (coordinator and editor).

WWF (2020) Living Planet Report 2020 - Bending the curve of biodiversity loss. Almond, R.E.A., Grooten M. and Petersen, T. (Eds). WWF, Gland, Switzerland.