

# CLIMATE ACTION PATHWAY

## LAND USE

### Action Table

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2020



## ACTION TABLE STRUCTURE AND APPROACH

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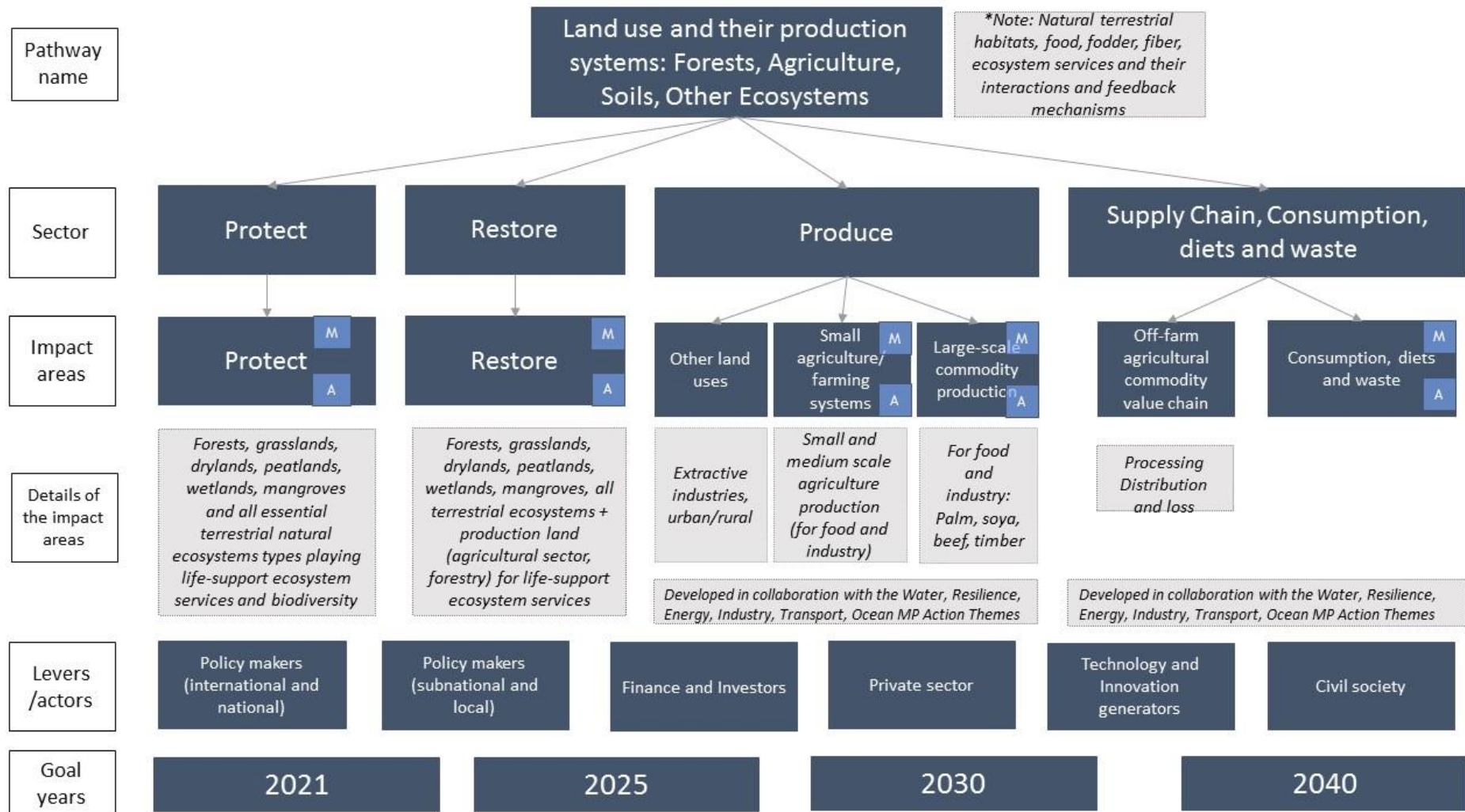
Land use or Agriculture, Forestry and Other Land Use (AFOLU) are major contributors to climate change, contributing with about 24 per cent of the global greenhouse gas (GHG) emissions including through loss and degradation of forests and other ecosystems as well as agriculture activities. At the same 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; it can provide key solutions to achieve the goals of the Paris Agreement and the 2030 Agenda for Sustainable Development. The complex nature of land use 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 sub-sectors. The diagram below provides additional details on the content of each impact area. Impact areas under sub-sectors i) and ii) are straightforward, while sub-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. Each of the actors or key levers of change, namely policy makers (national/subnational level), investors and capital markets, companies/producers, and civil society/influencers, must enact several transformational changes immediately to achieve the milestones through 2050, necessary to implement the Paris Agreement goals. Enacting these changes necessitates strong collaboration and coordination as their effectiveness rely on inter-connected efforts. At the same time, key stakeholders should swiftly accelerate implementation of their pledges, commitments and political will shown so far, maximizing their resources available. As progress becomes apparent additional support will raise to expedite the race to zero. For instance, investors and capital markets can change the world-finance horizon by generating new and expanded streams of finance for nature-based solutions, expunging investments that lead to deforestation, and requiring zero-deforestation in supply chains. Furthermore, the investment also needs to be directed towards global food systems that deliver regenerative and sustainable impact. Governments on another hand can establish across-the-board incentives, policies, and regulations to stop further land-clearing, supports regenerative, sustainable and



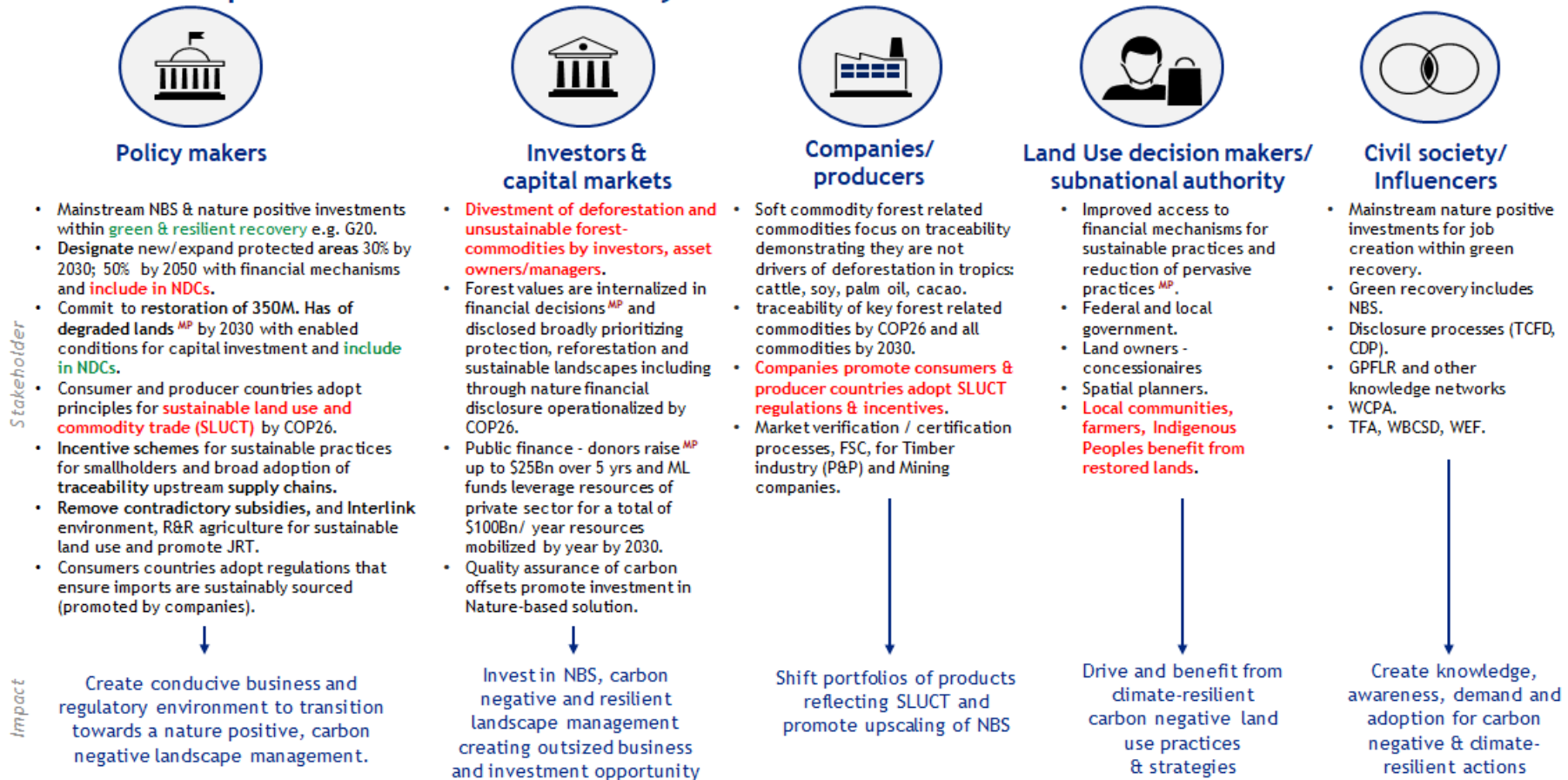
resilient agricultural and land use practices, incentivizing negative emissions actions in the land-use sector. Getting these two key levers to design, in partnership, solutions to achieve these goals will be instrumental. Consumer concerns over climate change, plastic waste, and a host of other perceived ills will push companies and governments toward real action. Yet awareness raising on daily choices and actions that individuals can take to reduce the carbon footprint associated with land-use sectors is needed to transform consumers' behaviour towards more sustainable choices.





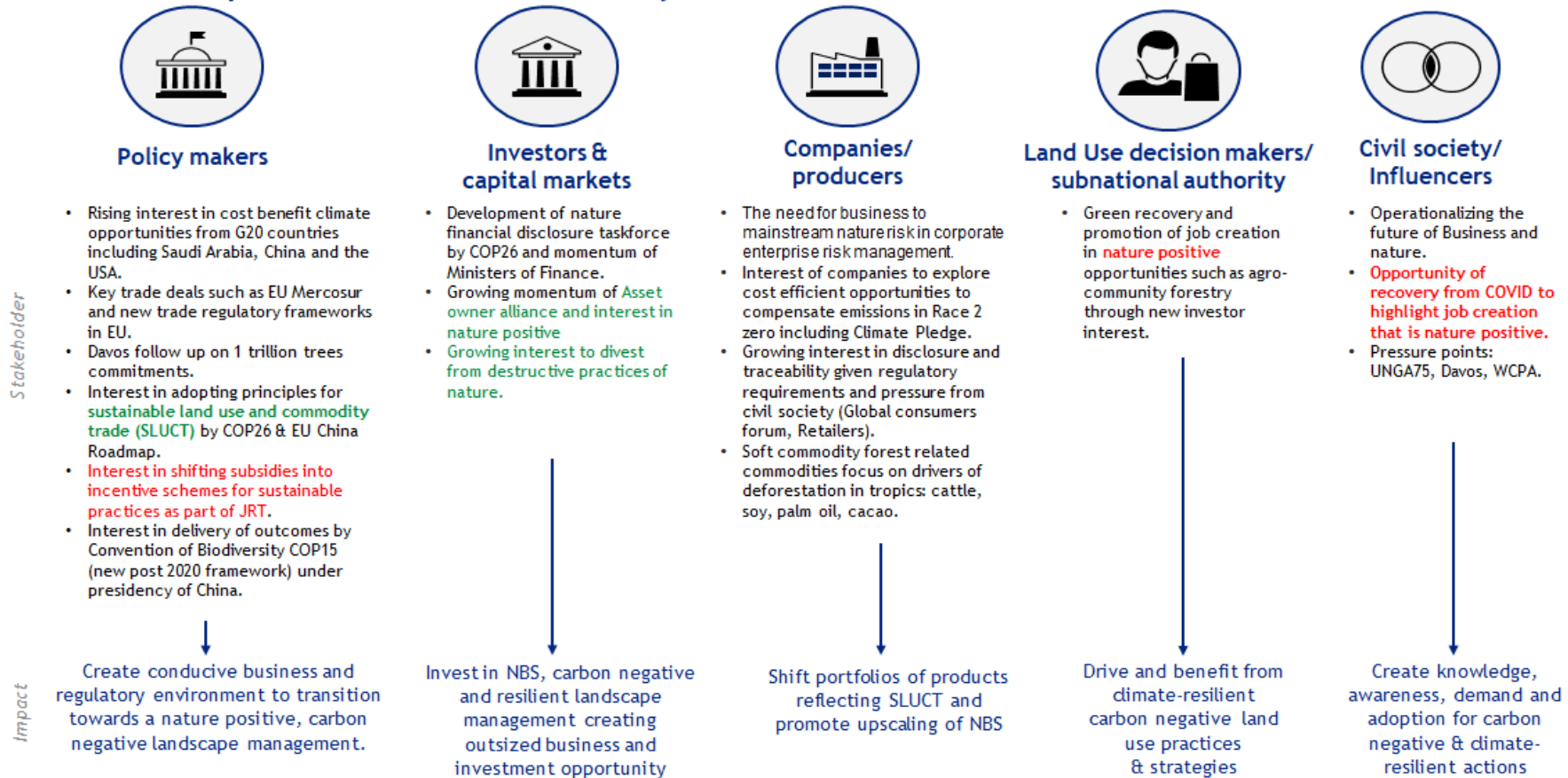
## LAND USE SECTOR CHANGE LEVERS

Key stakeholders enabling and supporting actions across landscapes to protect, restore and produce on land based systems





## Key stakeholders enabling and supporting actions across landscapes to protect, restore and produce on land based systems

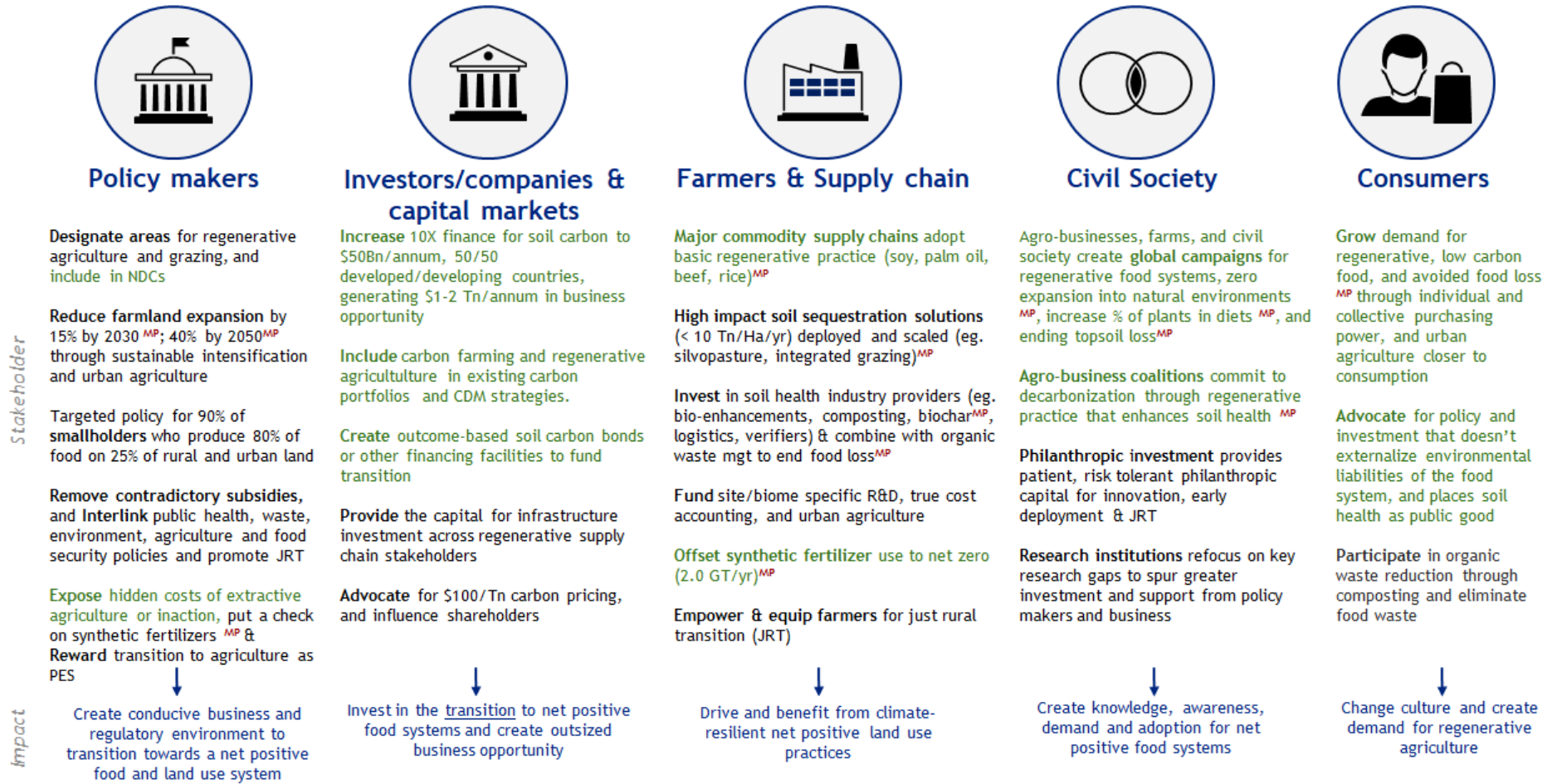






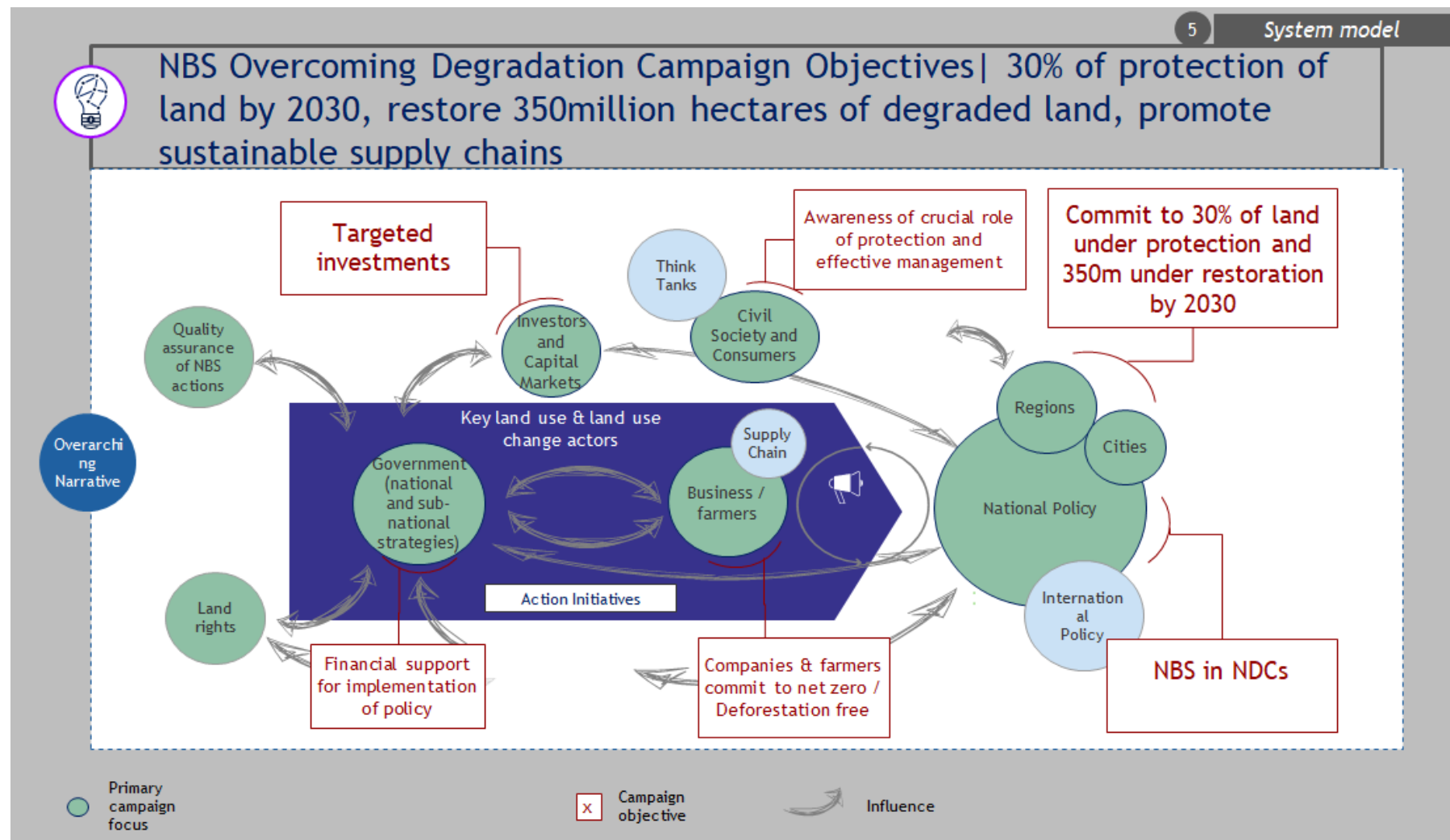
MP = Marrakech Partnership target  
Green text = HLC primary advocacy space

## Key enablers for carbon farming and resilient and regenerative food systems





## LAND USE SECTOR SYSTEM MAP



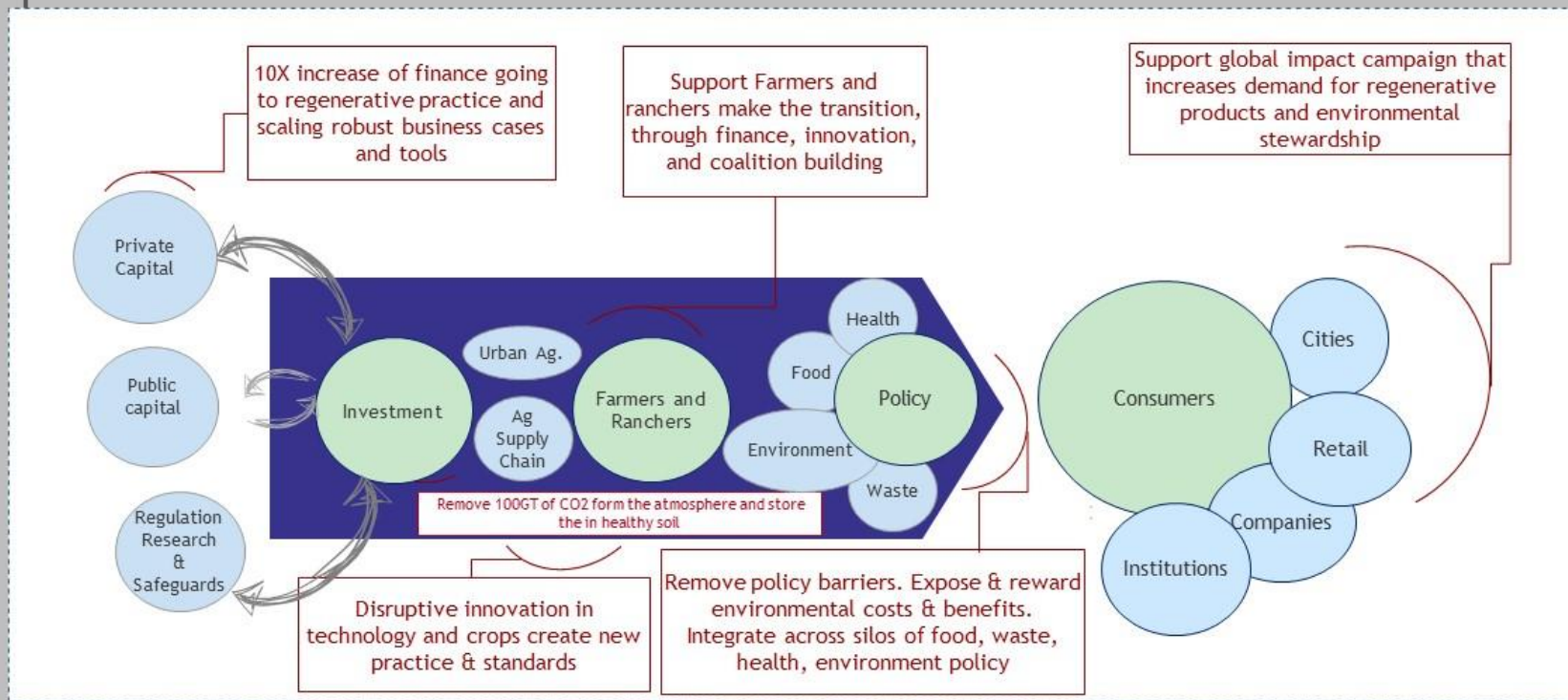




System model



Remove & store 100GT of CO<sub>2</sub>EQ in healthy soil & increase soil carbon by 1%/year by 2030: doubling farmland under regenerative practice, applying food and organic waste to soil.



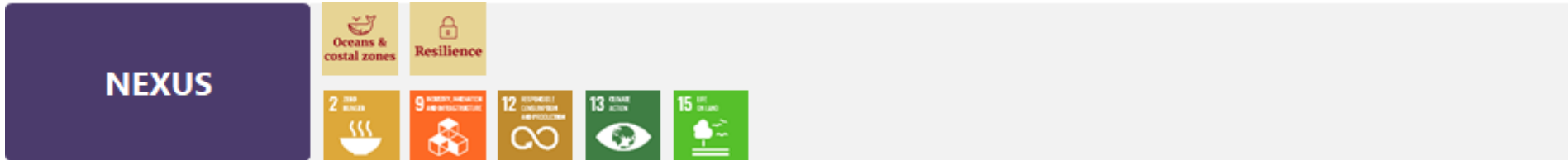
● Primary campaign focus    
 ● Secondary campaign focus    
 X Campaign objective    
 Influence



# PROTECT

Protect

MITIGATION & ADAPTATION/  
RESILIENCE



	By 2021	By 2025	By 2030	By 2040
<b>Policymakers (national, subnational, local levels)</b>	<ul style="list-style-type: none"> <li>Establish enhanced protective measures for standing natural forests 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+.</li> <li>Set out action plans to address implementation gaps in habitat protection policies and implement in the short term.</li> </ul>	<ul style="list-style-type: none"> <li>End of net deforestation</li> <li>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).</li> <li>Mainstream ecosystem based adaptation action to promote conservation and benefit livelihoods.</li> </ul>	<ul style="list-style-type: none"> <li>End of gross primary forest loss and other terrestrial natural ecosystems including mangroves, peatlands, grasslands and savannas.</li> <li>Enhance primary forest area, quality and resilience of natural forests</li> <li>Ensure the conservation of mountain ecosystems to enhance their capacity to provide mitigation and adaptation benefits essential for sustainable development (SDG 15.4)</li> </ul>	<ul style="list-style-type: none"> <li>Expand protected forest areas and areas under sustainable management in the scale needed to achieve the 1.5 C goal.</li> <li>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.</li> <li>Complete harmonization of</li> </ul>

- 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.
- Set out a commonly applied monitoring structure, baseline and indicators of progress.

governance frameworks 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.
- Increase policy measures to ensure mandatory corporate disclosure and due diligence requirements of companies operating on forests 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 for reduced deforestation and increased restoration.
- Update NDCs to maximize the

- Update NDCs to maximize the contributions of forest and land use related, nature-based solutions with progressive and increased ambitious targets, compared with previous NDC iteration.

cross-sectoral institutional, legal and regulatory frameworks to implement forest conservation and sustainable forest management with no conflict with other national developmental priorities.

- Update NDCs to include forest and land use related, nature-based solutions with progressive and increased ambition, compared with previous NDC iteration.

contributions of forest and land use related, nature-based solutions with increased ambitious targets, compared with previous NDC iteration.

## Financial Institutions

- Increase pilot generation of high-quality carbon credit units from NbS in the forest and land use sector, including REDD+
  - 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)
  - 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
- A global carbon market exist which trades high-quality NbS credits, including from REDD+
  - Price for ton of carbon responds to direct/indirect cost
  - Developed countries set aside adequate funding for REDD+ and restoration investment
  - Improved access of developing countries to the climate finance.
  - Improve 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.
  - 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).
  - Financial institutions set and
- Secure climate finance for the implementation of forest and land-use targets within enhanced NDCs.
  - Establish clear compliance mechanisms to ensure that investors and lenders do not support unsustainable forest and land-use practices or loss of biodiversity.
  - Ensure natural capital is quantified and considered as part of national budgets for policy implementation.
  - Increased number of FIs annually disclosing forest /climate metrics.
- Align financial priorities and investments across sectors with the protection of standing natural forests, reforestation and landscape restoration.

	<p>aligned with forest protection and restoration.</p> <ul style="list-style-type: none"> <li>Increased data and insights to financial institutions.</li> </ul>	<p>implement sustainability targets. Deforestation risks identified in increased number of FI portfolios.</p>
<p><b>Technology Providers and Innovators</b></p>	<ul style="list-style-type: none"> <li>Increase the use of new technologies for agriculture forest, land use and land use change monitoring and national forest inventories.</li> <li>Countries transparency, timely and consistently report the state and change of protected areas</li> <li>Build capacity and access to technology to stem illegal logging operations, increase transparency and strengthen governance.</li> <li>Facilitate implementation of open access tools for monitoring forests and land use to carry out rapid, reliable and transparent assessments.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Ensure monitoring tools and new technologies are used by policy makers and investors to inform sustainable forest and land-use decisions</li> </ul>
<p><b>Business and Service Providers</b></p>	<ul style="list-style-type: none"> <li>Establish clear rules on how company can invest in REDD+ and ecosystems' protection with clear rules on benefit sharing and returns.</li> </ul>	<ul style="list-style-type: none"> <li>Private sector actions and contributions are recognized as contributing to NDCs</li> </ul>
<p><b>Civil society</b></p>	<ul style="list-style-type: none"> <li>Keep improving monitoring reporting and technology tools.</li> </ul>	<ul style="list-style-type: none"> <li>Assist in the establishment and implementation of inclusive frameworks for public-private-</li> <li>Develop sufficient capacities through partnerships by sharing best practices and</li> <li>Support and facilitate high-impact action at all levels, building on wealth of</li> </ul>

	<ul style="list-style-type: none"> <li>• Raise awareness of forest conservation, including primary forests, land restoration and sustainable land management, and their importance for climate change mitigation and adaptation.</li> <li>• Facilitate the flow of information, capacity building and partnerships to accelerate forest conservation, land restoration and sustainable land management.</li> </ul>	<p>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)</p>	<p>knowledge, notably through collaborative initiatives under the NAZCA Platform.</p>	<p>knowledge, information and capacity generated to date, targeting gaps and bottlenecks that could limit the achievement of the goals of the Paris Agreement</p>
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## EXISTING INITIATIVES

<p><u><a href="#">New York Declaration on Forests</a></u></p>	<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 [Consult with NYDF Sec for update]</p>
<p><u><a href="#">Balikpapan Statement</a></u></p>	<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>
<p><u><a href="#">Central Africa Forest Initiative</a></u></p>	<p>Fight climate change, protect forests, reduce poverty and contribute to sustainable development in Central Africa.</p>
<p><u><a href="#">Africa Palm Oil Initiative of the Tropical Forest Alliance</a></u></p>	<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>



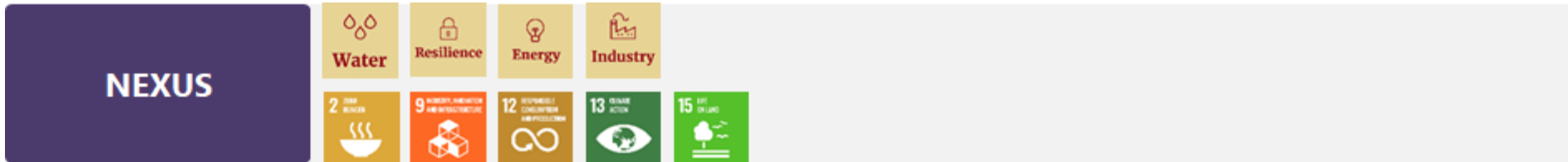
<p><b><u>Protect and sustainably manage 400 million hectares of forests in the Amazon, Central America, the Congo Basin and Indonesia.</u></b></p>	<p>Protection of 400 M hectares of forest by indigenous peoples. NAZCA action submitted by COICA</p>
<p><b><u>Friends of Ecosystem-based Adaptation</u></b></p>	<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>
<p><b><u>Climate Resilience Initiative A2R</u></b></p>	<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>
<p><b><u>Forest for Life Partnership</u></b></p>	<p>The Forests for Life Partnership aims to halt and reverse forest degradation across 1 billion hectares of the most intact forests worldwide</p>
<p><b><u>Natural Climate Solutions Alliance</u></b></p>	<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>
<p><b><u>Global Mangrove Alliance + Save Our Mangroves Now!</u></b></p>	<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>
<p><b><u>Global Peatlands Initiative</u></b></p>	<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>

Impact  
**2**

# RESTORE

Restore

MITIGATION & ADAPTATION/  
RESILIENCE



	By 2021	By 2025	By 2030	By 2040
<b>Policymakers (national, subnational, local levels)</b>	<ul style="list-style-type: none"> <li>Establish enhanced measures to accelerate implementation of carbon removal strategies 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 approach.</li> <li>Countries to set up national</li> </ul>	<ul style="list-style-type: none"> <li>Increase the rate of implementation of restoration targets.</li> <li>Implement activities according to the Strategy of the UN Decade on Ecosystem Restoration 2021-2020</li> <li>Expand policies and measures for sustainable land management including sustainable forest management to accelerate the reversal of land and forest degradation</li> <li>Design and implement long-term forest fire management</li> </ul>	<ul style="list-style-type: none"> <li>End desertification and achieve a land degradation-neutral world (SDG 15.3).</li> <li>Increase the area under landscape restoration to at least an additional 200 million hectares from what was pledged in 2020.</li> <li>Ensure forest and land-use governance frameworks are in place in countries, jurisdictions and indigenous territories to promote integrated and sustainable land management.</li> </ul>	<ul style="list-style-type: none"> <li>Stop land degradation and increase areas under sustainable land management.</li> <li>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.</li> </ul>



restoration targets in degraded ecosystems and identify measures to achieve them with plans to 5, 10 and 15 years.

- 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.
  - Identify implementation and regulatory gaps that hinder progress on restoration and establish action plans to overcome them.
  - 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)
  - Strengthen forest governance frameworks and law enforcement and enhance integrated landscape planning.
  - Clarify and formalize indigenous and local community forest tenure and rights, recognizing their role in protecting forests.
- policies and policies to address other disturbances (flood, drought, pest outbreaks, etc). Have clear policies to restore soil health and increase soil carbon content.
- Expand implementation of the forest landscape restoration approach that helps with integral landscape planning, therefore to reduce the pressure and demand for land.
  - Promote agroforestry systems for agricultural production
  - Mainstream improved governance for the restoration of ecosystems and provide for 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).
  - Map and monitor restoration progress including assessing information on benefits (ecosystem services, climate change mitigation, adaptation, etc.)
  - Establish mechanisms to provide implementation support for developing countries as well as south-to-
- Update NDCs to include forest-related, nature-based solutions and progressively increased ambition.

	<ul style="list-style-type: none"> <li>• Set out a commonly applied monitoring structure for forest landscape restoration, baseline and indicators of progress.</li> <li>• Increase the role of forest landscape restoration as a nature-based solution in nationally determined contributions (NDCs), showing increased ambition.</li> </ul>	<p>south cooperation to scale up restoration.</p> <ul style="list-style-type: none"> <li>• Increase the quantity, quality and resilience of forests and other natural terrestrial ecosystems against climate change threats and ensuring biodiversity outcomes.</li> <li>• Increase the role of forest landscape restoration as a nature-based solution in nationally determined contributions (NDCs), showing increased ambition</li> </ul>		
<p><b>Financial Institutions</b></p>	<ul style="list-style-type: none"> <li>• Action plans laid out to kick-start massive businesses transition to nature-positive models in the AFOLU sector.</li> <li>• Increase number of investment funds for the design and implementation of projects focused on restoration and forest conservation/management at landscape scale.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Stabilize and reduce the footprint of agriculture and forestry on ecosystems while concurrently restoring degraded ecosystems.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish clear compliance mechanisms to ensure that investors and lenders do not support unsustainable forest and land-use practices or loss of biodiversity.</li> <li>• Improved access of developing countries to the climate finance.</li> <li>• Improve access of developing countries to the post-2020 financial mechanisms of the UNFCCC.</li> <li>• Ensure countries have in place national investment frameworks to channel multiple sources of investments and results-based payments.</li> </ul>	<ul style="list-style-type: none"> <li>• Align financial priorities and investments across sectors with the protection of standing natural forests, reforestation and landscape restoration.</li> </ul>

	<ul style="list-style-type: none"> <li>• Significantly increase climate finance allocated to the forest and land use sector in order to accelerate implementation of national REDD+ strategies, restoration and national adaptation plans.</li> <li>• Scaled up ambitious public-private partnerships and finance for increased agricultural productivity aligned with forest protection and restoration.</li> </ul>	<ul style="list-style-type: none"> <li>• Secure climate finance for the implementation of forest and land-use targets within enhanced NDCs.</li> <li>• Ensure natural capital is quantified and considered as part of national budgets for policy implementation.</li> </ul>
<p><b>Technology Providers and Innovators</b></p>	<ul style="list-style-type: none"> <li>• Increase the use of new technologies for restoration monitoring.</li> <li>• Build capacity and access to technology to stem illegal logging operations, increase transparency and strengthen governance.</li> <li>• Facilitate implementation of open access tools for monitoring forests and land use to carry out rapid, reliable and transparent assessments.</li> </ul>	<ul style="list-style-type: none"> <li>• 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).</li> <li>• 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.</li> <li>• Ensure monitoring tools and new technologies are used by policy makers and investors to inform sustainable forest and land-use decisions</li> </ul>
<p><b>Business and Service</b></p>	<ul style="list-style-type: none"> <li>• Clear rules on how company can invest in restoration with clear rules on benefit sharing and returns.</li> <li>• Set up land-based operations</li> </ul>	<ul style="list-style-type: none"> <li>• Expand land-based operations that applies a landscape approach in order to avoid further degradation and restores landscapes.</li> <li>• Business operations include restoration as a requirement and actions to support LDN targets.</li> <li>• Invest in ecosystem</li> </ul>

<h2>Providers</h2>	<p>that include restoration plans and applies a landscape approach</p>	<ul style="list-style-type: none"> <li>• Accelerate implementation of public-private partnerships to allow comprehensive restoration actions.</li> <li>• Invest in ecosystem restoration activities within the companies' operations and elsewhere, in support of the Decade on Ecosystem Restoration.</li> </ul>	<p>restoration activities within the companies' operations and elsewhere, in support of the Decade on Ecosystem Restoration.</p>
<h2>Civil society</h2>	<ul style="list-style-type: none"> <li>• Develop accessible certification/verification of restoration projects</li> <li>• Raise awareness of forest conservation, including primary forests, land restoration and sustainable land management, and their importance for climate change mitigation and adaptation.</li> <li>• Facilitate the flow of information, capacity building and partnerships to accelerate forest conservation, land restoration and sustainable land management.</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen regional networks and initiatives of productive forest landscape restoration</li> </ul>	<ul style="list-style-type: none"> <li>• 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).</li> <li>• Develop sufficient capacities through partnerships by sharing best practices and knowledge, notably through collaborative initiatives under the NAZCA Platform.</li> </ul>



## EXISTING INITIATIVES

<p><a href="#"><u>Bonn Challenge</u></a></p>	<p>Restore 150 million hectares of the world's deforested and degraded lands by 2020 and 350 million hectares by 2030.</p>
<p><a href="#"><u>The Restoration Barometer</u></a></p>	<p>A universally applicable, systematic framework for identifying, assessing and tracking action on global restoration commitments.</p>
<p><a href="#"><u>AFR100</u></a></p>	<p>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</p>
<p><a href="#"><u>Initiative 20x20</u></a></p>	<p>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.</p>
<p><a href="#"><u>ECCA30</u></a></p>	<p>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</p>
<p><a href="#"><u>Great Green Wall for the Sahara and the Sahel Initiative</u></a></p>	<p>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".</p>
<p><a href="#"><u>Natural Climate Solutions Alliance</u></a></p>	<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>



[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.



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

Produce

MITIGATION & ADAPTATION/  
RESILIENCE



	By 2021	By 2025	By 2030	By 2040
<b>Policymakers (national, subnational, local levels)</b>	<ul style="list-style-type: none"> <li>Establish and improve policies, plans and ordinances to increase urban tree canopies, expand urban green spaces and increase the utilization of green infrastructure.</li> <li>Maximize the use of nature-based solutions within city boundaries to improve climate mitigation and adaptation.</li> <li>Streamline policies that support the Sustainable</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Impose requirements to establish green urban ecosystems as urban spaces grow.</li> <li>All cities count with urban</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that urban green infrastructure is given equal weight as traditional built infrastructure with regard to city planning and city investments.</li> <li>Enhance advanced capital planning amongst city agencies to increase scale and impact of urban green infrastructure.</li> <li>Monitor, quantify and incorporate the carbon benefits of urban tree</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Ensure that the quality of urban green space is maintained across different</li> </ul>

Development Goals (SDGs) and NDCs to ensure greater alignment and contribution towards common goals, especially related to the suite of benefits that nature-based solutions 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 incorporating urban farming, community gardening, and systems to aggregate/distribute surplus food into city planning.
- 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

greening plans and there are policy and regulatory tools that enable their implementation.

- 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

canopies and other vegetation into NDC commitments and progress.

- Ensure that total urban green spaces are equally distributed across residential neighborhoods, 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.
- 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

neighborhoods, including biodiversity and ecological function.

- End food insecurity among urban communities through a variety of food centered policies, including urban farming.
- 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.



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.
- 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 tradeoffs and maximizing synergies

monitor and prevent the encroachment of mining and infrastructure activities in protected areas.

- 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

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 endeavors.



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.



## Financial Institutions

- Increase public and private sector investments in green spaces, urban canopy, green infrastructure and other nature-based solutions.
- 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.
- 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
- Divest from companies that employ destructive mining practices (e.g. open-pit mining in forests)
- Stop investments in fossil fuel minings, 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.
- Create and fund a city-oriented project preparatory facility to increase the deployment of nature-based solutions in urban areas.
- Generate multiple revenue streams from benefits such as improved stormwater migration and increased carbon sequestration on individual urban green infrastructure projects.
- Secure climate finance for urban "greening" for cities in order to implement land-use targets within enhanced NDCs.
- Increase investments and funding for business models with sustainable supply chains.
- 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
- Ensure that public and private financial investments in city planning, infrastructure and operations incorporate green spaces, green infrastructure and other nature based solutions.
- 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.

	<p>on environmental and social impacts, and on progress made toward forest-related commitments made by the investor community</p> <ul style="list-style-type: none"> <li>• Encourage investee disclosure on environmental and social impacts, and, where applicable, on progress made toward forest-related commitments made (e.g. company pledges)</li> <li>• 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.</li> <li>• Signal investment towards forest-friendly extraction, renewable energy with zero-deforestation supply chain commitments.</li> </ul>	<p>towards businesses and practices that promote positive environmental and social impacts.</p> <ul style="list-style-type: none"> <li>• Provide financing for the research and development of new industries that are based on sustainable and restorative use of natural resources.</li> </ul>
<p><b>Technology Providers and Innovators</b></p>	<ul style="list-style-type: none"> <li>• Increase the use of tools such as iTree to better quantify the benefits of urban tree canopy and urban green infrastructure.</li> <li>• Promote the use of technology for data collection on resident engagement,</li> <li>• Implement tools and technology that enable the transparent monitoring of extraction and infrastructure development activities.</li> <li>• Develop and implement small footprint extraction and green infrastructure standards and</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Improve monitoring capability</li> <li>• 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.</li> </ul>

	<p>such as through citizen science.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Develop and test innovations that enable the recycling of technology products to reduce demand on minerals and mining pressures.</li> <li>• Encourage and enable finance and technology transfer of mining and infrastructure development approaches that reduce forest impacts</li> <li>• Develop data collection and satellite technology to identify locations for infrastructure development that minimizes the damage on the environment.</li> </ul>	<p>technologies across forest regions.</p> <ul style="list-style-type: none"> <li>• Promote the development of technologies at local-scale that meet local forest and land use demands and pain points.</li> </ul>	<p>to allow city planners to trace the ecological and social benefits from green spaces and green infrastructure.</p> <ul style="list-style-type: none"> <li>• Develop and promote platforms that encourage participatory planning, illuminate local needs, and engage stakeholders when planning urban natural areas and green spaces.</li> <li>• Ensure that when extraction does take place, small footprint extraction technology is the primary form available and implemented.</li> <li>• Spread and make accessible technologies for the recycling of technological objects and other items with metals and minerals, including in low-income countries.</li> <li>• Identifying and piloting nature-based technologies and approaches to infrastructure development and extractive industries.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote technologies such as crowdsourcing and participatory planning to make community engagement the norm in green space planning.</li> <li>• Employ models that support planning, predicting and managing multiple benefits, such as carbon sequestration, climate change adaptation, and other cobenefits, such as increased habitat for biodiversity and improved water quality.</li> <li>• Implementing nature-based technologies and approaches to infrastructure development.</li> <li>• 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.</li> </ul>
<p><b>Business and Service Providers</b></p>	<ul style="list-style-type: none"> <li>• Accelerate cross-agency collaboration to ensure that city agencies are working toward joint implementation.</li> <li>• Accelerate public-private</li> </ul>	<ul style="list-style-type: none"> <li>• Develop new supply chains for recycled or reused minerals and metals.</li> <li>• Conduct FPIC consultations, in the presence of civil society</li> </ul>	<ul style="list-style-type: none"> <li>• Create public-private partnerships across sectors to allow for increased integration of green spaces, green infrastructure and nature-</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure a broad set of partners is coordinated as they implement city urban planning with increased green spaces.</li> </ul>

partnerships operations and impact.

- 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).
- 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.

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.

based solutions.

- Engage private landowners, who often manage urban trees and green spaces, as land stewards and actors in city-wide implementation.
- 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.

- Promote companies in infrastructure development that provide an array of nature-based sustainable approaches to development that enhances ecosystem and forest integrity.

	<ul style="list-style-type: none"> <li>• Increase awareness and responsibility over indirect impacts of mining and infrastructure developments.</li> <li>• Encourage public-private partnerships that spur innovation to reduce forest loss.</li> </ul>			
<h2>Civil society</h2>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Raise awareness of the importance of nature and green spaces within the city for the mental and physical health of people of all ages.</li> <li>• Facilitate the flow of information, build capacity and create partnerships to accelerate the implementation of urban green spaces, green infrastructure and nature-based solutions.</li> <li>• Monitor ongoing activities of extractive industries and raise awareness where activities do</li> </ul>	<ul style="list-style-type: none"> <li>• Actively monitor and raise awareness about private sector sustainability commitments and efforts.</li> <li>• Advocate actors to phase out of fossil-fuel and extractive industries.</li> <li>• Build on regional and international alliances to continue building pressure on public and private actors to meet pledges, commitments and urgency of climate goals.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Participate as an active and core stakeholder decision-making around land use and development policies in both public and private sector efforts.</li> <li>• Continue to raise awareness about actions and pledges by companies and governments.</li> </ul>	<ul style="list-style-type: none"> <li>• Engage residents as stewards of green spaces and natural areas through participatory planning that speaks to local needs, empowerment and local governance.</li> <li>• Raise awareness of the importance of ecological health for delivering benefits.</li> <li>• Ensure that previous pledges, commitments and policy-decisions made by governments, companies and other actors are followed, and when not, actors are held accountable.</li> <li>• Continue to serve as a strong counterbalance to public and private sector interests, ensuring that commitments continue to be maintained and actions</li> </ul>

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

Whistle-blow against actors that practice harmful extractive activities.

achieve them are in motion.



regenerative ways; as well as the benefits of giving new life to organic waste streams

## EXISTING INITIATIVES

<p><a href="#"><u>Cities 4 Forests</u></a></p>	<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>
<p><a href="#"><u>Great Green Wall for Cities</u></a></p>	<p>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.</p>
<p><a href="#"><u>C40</u></a></p>	<p>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.</p>
<p><a href="#"><u>ICLEI (Local Governments for Sustainability)</u></a></p>	<p>A global network of more than 1,750 local and regional governments committed to sustainable urban development.</p>
<p><a href="#"><u>Vibrant City Labs</u></a></p>	<p>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.</p>
<p><a href="#"><u>Making Cities Resilient Campaign by Integrating Nature-Based Solutions into Urban Planning</u></a></p>	<p>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 nature-based solutions as a sustainable tool to build their resilience.</p>
<p><a href="#"><u>Climate-Smart Mining Initiative</u></a></p>	<p>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</p>

	<p>footprint throughout the value chain of those materials, promoting scaling up technical assistance and investments in resource-rich developing countries.</p>
<p><u><a href="#">Initiative for Responsible Mining Assurance's (IRMA)</a></u></p>	<p>. 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.</p>
<p><u><a href="#">Fairmined</a></u></p>	<p>Alliance for Responsible Mining's initiative that certifies gold from empowered, responsible and small-scale mining organizations that meet standards for responsible practices.</p>
<p><u><a href="#">CDP's Global Environment Disclosure System</a></u></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><u><a href="#">Milan Urban Food Policy Pact</a></u></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><u><a href="#">Tree Cities of the World</a></u></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><u><a href="#">Green Cities Initiative</a></u></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.</p> <p>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

<p><a href="#"><u>Urban Forestry Toolkit (Vibrant Cities Lab)</u></a></p>	<p>The U.S. Forest Service Step-by-Step Guide to Implementing Urban Forestry in Your Community</p>
<p><a href="#"><u>iTree Tools</u></a></p>	<p>i-Tree is a state-of-the-art, peer-reviewed software suite from the USDA Forest Service that provides urban and rural forestry analysis and benefits assessment tools.</p>
<p><a href="#"><u>Integrating Green and Grey (World Resources Institute &amp; World Bank)</u></a></p>	<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>
<p><a href="#"><u>Inclusive Community Engagement (C40 &amp; Arup)</u></a></p>	<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>
<p><a href="#"><u>IRMA'S Standard for Responsible Mining</u></a></p>	<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>
<p><a href="#"><u>International Financial Corporation's (IFC) Sustainability Framework</u></a></p>	<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 Jewelry Council's Code of Practices

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.

Global Reporting Initiative (GRI) Guidelines

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.



# SMALL-SCALE AGRICULTURE / FARMING SYSTEMS

Produce

MITIGATION & ADAPTATION/ RESILIENCE



	By 2021	By 2025	By 2030	By 2040
Policymakers (national, subnational, local levels)	<ul style="list-style-type: none"> <li>Enhance policies for reducing financial risks, lower transaction costs, facilitate financial transactions, enable access to financial services, and facilitate long-term investments, low-priced credit and insurance for small-scale farmers.</li> <li>Develop public procurement commitments and schemes to include sourcing from small farmers using regenerative practices.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Develop national mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>Develop supportive cross-sectoral institutional, legal and regulatory frameworks for coherent policies in land use sectors, assuring food security and sustainable natural resource management.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Enable policies for circular agriculture economy by minimizing the amount 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.</li> <li>Ensure that rural communities have access to the right technology</li> </ul>

	<ul style="list-style-type: none"> <li>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.</li> <li>Ensure secure and equal tenure rights to land and natural resources for small-scale farmers.</li> </ul>	<p>that coordinates risk management strategies with institutions for risk monitoring, prevention, control and response at the local and global levels.</p> <ul style="list-style-type: none"> <li>Enhance the payments to the small-scale farmers for ecosystem services, e.g., carbon sequestration.</li> </ul>	<ul style="list-style-type: none"> <li>Through public-private partnerships develop stronger climate information and early warning systems for the use of agricultural sector and disseminate to small scale farmers.</li> </ul>	<p>infrastructure and planning framework to thrive and benefit from new business opportunities and realize their potential for advances in productivity.</p>
<p><b>Financial Institutions</b></p>	<ul style="list-style-type: none"> <li>Provide access to financial services for small and medium sized agriculture enterprises that are adopting resilient, regenerative, climate smart and agroecological practices.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that international climate finance for agricultural sectors directly reaches the small and medium sized farmers.</li> <li>Developing and implementing innovative approaches such as value chain lending, mobile-based finance and other approaches that move beyond private collateral as the basis for lending, credit access can be expanded.</li> </ul>	<ul style="list-style-type: none"> <li>De-risk agriculture financial investment through tailored mechanisms that consider climate risk analysis to ensure funds allocation within financial and private institutions.</li> </ul>	
<p><b>Technology Providers and Innovators</b></p>	<ul style="list-style-type: none"> <li>Increase knowledge base/capacity on agroecology, including through promotion of South-South/ triangular cooperation that connects demands of support with existing expertise.</li> <li>Provide access to agricultural</li> </ul>	<ul style="list-style-type: none"> <li>Improving the evidence base on agroecology and ecosystem-based approaches at regional and global levels</li> <li>Develop more systematic knowledge of the relationship and dynamics between biological communities and the services they provide, how this</li> </ul>	<ul style="list-style-type: none"> <li>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 while meeting the growing food demand.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

	<p>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> <ul style="list-style-type: none"> <li>• Promote climate-smart agriculture and agroecological practices and technologies that increase yields/food security, adaptation and reduce GHG.</li> <li>• Integrate local and traditional knowledge with formal knowledge;</li> </ul>	<p>affects the stability and resilience of the services and agricultural productivity for smallholder farmers.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Integrating ecosystem services in the small-scale farming practices.</li> <li>• Improve planting material and other technologies to increase yields and ensure food security, climate adaptation capacity and resilience.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide open source climate-informed services for farmers.</li> </ul>	
<p><b>Business and Service Providers</b></p>	<ul style="list-style-type: none"> <li>• Reduce food loss by 20 per cent.</li> <li>• Facilitate the access for smallholder farmers/forest dwellers to land use-related</li> </ul>	<ul style="list-style-type: none"> <li>• Establish more tripartite frameworks for joint action by farmers and farmer organizations, private and public sector action to increase</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce food losses in upper- and middle-income countries by 30 per cent.</li> <li>• Increase the use of renewable energy in the on-farm</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce food losses in upper- and middle-income countries by 50 per cent.</li> <li>• Ensure sustainable natural resource bases for</li> </ul>

	<p>and sustainable value chains.</p> <ul style="list-style-type: none"> <li>• Promote diversification of farm related business activities to reduce poverty and food insecurity risks.</li> <li>• Develop greater transparency to track food flows from place of origin and measure impacts.</li> </ul>	<p>climate change adaptation and mitigations.</p> <ul style="list-style-type: none"> <li>• Match agricultural job opportunities to unemployment workers.</li> <li>• Support extension services and consolidate close working relations with research institutes to accelerate technology field testing.</li> </ul>	<p>production.</p>	<p>regenerative agricultural production, particularly for smallholder farmers.</p> <ul style="list-style-type: none"> <li>• Sustainably improve agricultural productivity to feed the growing population and ensure livelihoods for small scale farmers and food producers.</li> </ul>
<p><b>Civil society</b></p>	<ul style="list-style-type: none"> <li>• Educate civil society about food, food systems and its impacts on and vulnerability to climate change and what actions can be taken in order to minimize these impacts.</li> <li>• Empower national, regional small-scale networking and producers organizations.</li> <li>• Promote local farmer's markets and consuming seasonal and local foods.</li> <li>• Strengthen local products value chains.</li> </ul>	<ul style="list-style-type: none"> <li>• Organize dissemination of knowledge and practices, strengthen research-practices links.</li> <li>• Promote small scale business related to agriculture and food (services supply, transformation, distribution)</li> <li>• Improve and strengthen the governance of food systems and redirecting agricultural financing.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish local and national training systems dedicated to small-scale agriculture, small scale agribusiness.</li> </ul>	

## EXISTING INITIATIVES

<a href="#"><u>Action Network on Alternative Agriculture</u></a>	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. 
<a href="#"><u>Climakers</u></a>	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. 
<a href="#"><u>Think Eat Save</u></a>	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. 
<a href="#"><u>Global Alliance for Climate-Smart Agriculture</u></a>	Inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture. 
<a href="#"><u>SAVE FOOD</u></a>	Fight against global food waste and loss. 
<a href="#"><u>One Planet Network: Sustainable Food Systems Programme</u></a>	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. 
<a href="#"><u>Transforming Food Systems under Climate Change</u></a>	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><a href="#"><u>Agroecology Knowledge hub</u></a></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><a href="#"><u>Global Soil Partnership</u></a></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><a href="#"><u>4 per 1000</u></a></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><a href="#"><u>Sustainable Agriculture Initiative Platform</u></a></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><a href="#"><u>The Economics of Ecosystems and Biodiversity (TEEB)</u></a></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><a href="#"><u>Global Farmer Field School Platform</u></a></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</p>





assessments, journal articles, videos, pictures, etc.) are available in various languages. Access to the global roster of the Farmer Field School experts

## FURTHER REFERENCES

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

[Five practical actions towards low-carbon livestock](#)



# LARGE-SCALE COMMODITY PRODUCTION Produce

MITIGATION & ADAPTATION/  
RESILIENCE



	By 2021	By 2025	By 2030	By 2040
<b>Policymakers (national, subnational, local levels)</b>	<ul style="list-style-type: none"> <li>Enable policies for transitioning large-scale commodity production towards resilient, low carbon, agroecological, regenerative and climate-smart practices.</li> <li>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.</li> <li>Ensure that expansion of</li> </ul>	<ul style="list-style-type: none"> <li>Align agriculture sector policies with the overall national climate policies.</li> <li>Implement policies that transform agricultural sectors large-scale commodity production moves towards resilient, agroecological, regenerative and climate smart practices.</li> <li>Align regulatory frameworks in demand countries of commodity products (e.g. soy, rice, palm oil etc.) through introducing diligence and trade</li> </ul>	<ul style="list-style-type: none"> <li>Enable policies for circular agriculture economy by minimizing the amount 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.</li> </ul>	<ul style="list-style-type: none"> <li>Enable regulatory regime for fit for purpose, effectively supporting regenerative, 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.</li> </ul>

	<p>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>	<p>parameters.</p> <ul style="list-style-type: none"> <li>• Enabling policies for carbon neutral certification for agricultural production.</li> <li>• 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.</li> </ul>	
<p><b>Financial Institutions</b></p>	<ul style="list-style-type: none"> <li>• Improve transparency and accountability of finance and major commodity supply chains driving conversion of high-carbon landscapes.</li> <li>• Increase private sector investment in sustainable, low carbon, agroecological, regenerative and climate smart agriculture commodity production.</li> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Invest in research and development for and incentivizing the adoption of technical advances that strengthen resilience, adaptation and mitigation within the farming sector.</li> <li>• Generate financial incentives for forest-protecting producers in the agricultural frontiers to foster sustainable producer behaviour.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase levels of investment in deforestation prone activities linked to land use processes.</li> <li>• Abolish financial subsidies for large scale commodity production.</li> </ul>

	<p>commodity-producing countries.</p>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>		
<p><b>Technology Providers and Innovators</b></p>	<ul style="list-style-type: none"> <li>• Profile cost-effective traceability parameters that allow synchronicity between upstream (producers) and downstream (retailers, manufacturers) private stakeholders.</li> <li>• Improve the overall quality of and access to agrometeorological information and early-warning systems at farm, national, regional and global level.</li> <li>• Further develop tools and methods for on farm carbon calculations coupling with most suitable land use or farming practices.</li> </ul>	<ul style="list-style-type: none"> <li>• Support the availability, quality of, and access to information on forests and commodity supply chains; support research and innovation.</li> <li>• Capacitate risk-informed systems to strengthen resilience for large scale commodity production.</li> <li>• Develop and upscale tools for measuring soil health, carbon sequestration, and other positive outcomes of regenerative production.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase availability of tools and methods for precision agriculture, site specific farming and land management practices.</li> </ul>	<ul style="list-style-type: none"> <li>• Further development of technology for agricultural production to meet the increasing food demand while not jeopardizing risks of climate change.</li> </ul>
<p><b>Business and Service Providers</b></p>	<ul style="list-style-type: none"> <li>• Increase private sector pledges on zero deforestation commitments in their supply chain.</li> <li>• Companies to take action to eliminate deforestation in</li> </ul>	<ul style="list-style-type: none"> <li>• Companies pledge on carbon neutral value chain of their commodity production.</li> <li>• Companies reinforce positive action and collaborate on mutually beneficial policy</li> </ul>	<ul style="list-style-type: none"> <li>• Increase the use of renewable energy in large commodity production value chain.</li> <li>• Establish supply chain transparency, equity, procurement policies and</li> </ul>	<ul style="list-style-type: none"> <li>• Large scale companies reach the target of reducing emissions from livestock (enteric fermentation and manure) by 30 per cent and from</li> </ul>

	<p>their supply chains by incorporating supplier data in procurement decisions.</p> <ul style="list-style-type: none"> <li>• Companies mainstream the application of high carbon stock and high-conservation value approaches by producers and the use of nature-based solutions to achieve science-based emission reduction targets</li> <li>• Companies invest in restoration and deforestation projects and earn benefits for this.</li> <li>• Establish a global monitoring system to track large scale commodity production value chains on deforestation.</li> <li>• Companies developing proactive role in helping shape public policy through advancing collective voice through the Forest Positive coalition.</li> </ul>	<p>measures by articulating “downstream” and “upstream” stakeholders within producer and consumer countries.</p> <ul style="list-style-type: none"> <li>• 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).</li> <li>• Measure and report transparently on deforestation in production supply chain.</li> <li>• Develop producer – consumer countries partnerships including governments, industry, farmers and civil society to accelerate sector transformations towards nature-positive models.</li> </ul>	<p>commodity certification.</p> <ul style="list-style-type: none"> <li>• Large scale companies reach the target of reducing emissions from livestock (enteric fermentation and manure) by 20 per cent and from rice paddies by 20 per cent.</li> <li>• Improve synthetic fertilizer production and efficiency and reduce emissions by ~180 million tons of carbon dioxide (Mt CO2) per year.</li> </ul>	<p>rice paddies by 70 per cent.</p> <ul style="list-style-type: none"> <li>• Improve synthetic fertilizer production and efficiency and reduce emissions by ~200 Mt CO2 per year.</li> </ul>
<p><b>Civil society</b></p>	<ul style="list-style-type: none"> <li>• Reduce food losses in upper- and middle-income countries by 20 per cent.</li> <li>• Promote use of locally produced and seasonal foods and commodities.</li> <li>• Organizing consumer advocacy, using media to</li> </ul>	<ul style="list-style-type: none"> <li>• Increase level of consumer awareness concerning commodity related impacts, in emerging markets.</li> <li>• Reduce consumption footprint on land and encourage the consumption of products from deforestation-free supply</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce food losses in upper- and middle-income countries by 30 per cent.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce food losses in upper- and middle-income countries by 50 per cent.</li> </ul>



build awareness of the impacts of purchasing decisions.

- NGOs concerned with deforestation, climate and food systems support consumer education and advocacy, media campaigns and boycotts.

chains.

## EXISTING INITIATIVES

<p><b><u>The Livestock Environmental Assessment and Performance (LEAP) Partnership</u></b></p>	<p>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.</p>
<p><b><u>Global Forest Watch PRO</u></b></p>	<p>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.</p>
<p><b><u>Transparency for Sustainable Economies (TRASE)</u></b></p>	<p>Transparent supply chains for sustainable economies.</p>
<p><b><u>Jurisdictional Exchange Network (JEN)</u></b></p>	<p>Jurisdictional approaches in relevant upstream supply chain productive regions</p>
<p><b><u>weADAPT</u></b></p>	<p>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.</p>
<p><b><u>Initiative on Governing Bioeconomy Pathways</u></b></p>	<p>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.</p>

<p><a href="#"><u>Action Network on Alternative Agriculture</u></a></p>	<p>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.</p>
<p><a href="#"><u>Climakers</u></a></p>	<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>
<p><a href="#"><u>Think Eat Save</u></a></p>	<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>
<p><a href="#"><u>Global Alliance for Climate-Smart Agriculture</u></a></p>	<p>Inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture.</p>
<p><a href="#"><u>SAVE FOOD</u></a></p>	<p>Fight against global food waste and loss.</p>
<p><a href="#"><u>One Planet Network: Sustainable Food Systems Programme</u></a></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 and trade-offs between all elements and actors in food systems.</p>
<p><a href="#"><u>Agroecology Knowledge hub</u></a></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><b><u>Sustainable Agriculture Initiative Platform</u></b></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><b><u>Sustainable Land Use and Commodity Trade Dialogue for COP26</u></b></p>	<p>Enhance government collaboration to support economic development, trade, and the protection of forests</p>

## FURTHER REFERENCES

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

Impact  
**6**

# OFF-FARM AGRICULTURAL COMMODITY VALUE CHAIN

Supply Chain, Consumption, diets and waste

MITIGATION & ADAPTATION/  
RESILIENCE



	By 2021	By 2025	By 2030	By 2040
<b>Policymakers (national, subnational, local levels)</b>	<ul style="list-style-type: none"> <li>Apply measures and policies (investment in infrastructure, targeting the upgrade of skills for farmers and workers, effective regulation) that improve the capacity to compete in modern global value chains.</li> <li>Design policies that aim to tackle the structural causes of food value chain underperformance and generate behaviour change, particularly by focalizing</li> </ul>	<ul style="list-style-type: none"> <li>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).</li> <li>Improve standards of governance and law enforcement and put in place many of enabling conditions necessary to protect forests and improve the standards of</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Align supportive cross-sectoral institutional, legal and</li> </ul>	<ul style="list-style-type: none"> <li>Promote equal, both, regional and multilateral trade for more vulnerable countries to access global food markets.</li> </ul>

	<p>technical, organizational, and economic support to address gaps amongst food system actors for more balanced relationships.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Reduce the use of plastic in food packaging.</li> </ul>	<p>production of agricultural commodities, including basic services and infrastructure and support for farmers, through partnerships on the ground in producer countries.</p> <ul style="list-style-type: none"> <li>• Provision of capacity-building assistance and the negotiation of clear bilateral trade agreements that incentivize good practices</li> </ul>	<p>regulatory frameworks for coherent policies in land use sectors, assuring food security and sustainable natural resource management at national level</p> <ul style="list-style-type: none"> <li>• Harmonizing sustainability standards and certification across countries to facilitate their application to agri-food global value chains.</li> <li>• Lower trade barriers to promote global value chains and contribute to growth in agriculture and the food industry and to create important spillover effects through the transmission of technology and the transfer of know-how.</li> <li>• Abolishing the use of plastic along the food value chain.</li> </ul>
<p><b>Financial Institutions</b></p>	<ul style="list-style-type: none"> <li>• Develop commitments and roadmaps for financing the enhancement of trade, capacity-building and other measures to provide incentives and support sustainable production.</li> <li>• Invest in infrastructure, skills development for labour involved in the food value chain to that improve the capacity to compete in</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Provide access and assure effective use of international financing options for the long-term transition to sustainable, climate-smart and resilient food</li> </ul>	<ul style="list-style-type: none"> <li>• Shift the investor mentality to take advantage of the growing momentum in blended finance to participate in less traditional asset classes and markets.</li> <li>• Foster deal matchmaking platforms to facilitate transactions between a pipeline of investable projects and pools of investment capital.</li> </ul>

	<p>sustainable global value chains.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Incorporate climate considerations into public investment appraisals.</li> <li>• Scaling up green financing linked to climate outcomes.</li> <li>• Integrate sustainability and mainstreaming environmental, social and governance standards in investment decision-making processes.</li> </ul>	<p>and agriculture systems.</p> <ul style="list-style-type: none"> <li>• Blend finance to develop a deeper pipeline of bankable projects and catalyse private investments in new markets and business models for food value chains</li> <li>• Align public incentives through economic policies (e.g., fiscal and credit) that favour forest conservation and land use intensification.</li> <li>• Develop digital solutions to support pipeline development and new standalone investment opportunities for food value chains.</li> </ul>		
<p><b>Technology Providers and Innovators</b></p>	<ul style="list-style-type: none"> <li>• Better compilation and comparison of data originating from different sectors to assess the performance of the food value chain, and to inform decision-making.</li> <li>• Increase systematic collection and analysis of data that covers various areas of the</li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous assurance of equal access to innovation and technology for all involved in the food value chain.</li> </ul>

	<p>entire food value chain.</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>	<p>but not limited to certification.</p> <ul style="list-style-type: none"> <li>• 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).</li> <li>• Measures to improve transparency and information, and track the movement of products through supply chains, including traceability and verification systems.</li> </ul>		
<p><b>Business and Service Providers</b></p>	<ul style="list-style-type: none"> <li>• Connect small-scale farmers to markets to reduce food losses.</li> <li>• Facilitate the movement of agricultural products from farm gate to markets.</li> <li>• Establish mechanisms for supporting smallholder farmers in particular to improve standards of production and reduce pressure on forests.</li> <li>• Incorporate sustainability conditions in trade and investment agreements.</li> <li>• Facilitate an adaptive process of system changes driven by market- led approaches,</li> </ul>	<ul style="list-style-type: none"> <li>• Match food value chain job opportunities to unemployment workers.</li> <li>• 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.</li> <li>• Work in partnership with other organizations to learn, adapt, and synergize different approaches to work towards common food system objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Reshape supply chains, food retail, marketing and procurement.</li> <li>• Foster inclusive business models, such as contract farming, to address the constraints farmers face in entering markets and value chains.</li> <li>• Promote and widely apply voluntary sustainability certification schemes can address trade-offs between economic, environmental and social objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous fostering of effective public-private partnerships, good regulations to crowd-in the private sector and policy coherence to improve digital infrastructure and skills in rural areas and to facilitate the uptake of digital technologies, especially in agricultural and food markets of developing countries.</li> </ul>

	aligned with national strategies and combined with policy innovations.			
<b>Civil society</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Develop programs and fage existing mechanisms (e.g. purchasing contract terms for ingredients, new buying models) to motivate and enable a shift to regenerative practices that will support smallholder farmers' livelihoods long-term.</li> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• Setting up local systems for knowledge generation and dissemination of sustainable food value chains.</li> <li>• Education society on sustainable and regenerative food value chains;</li> <li>• Promoting locally produce food and products;</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce food losses in upper- and middle-income countries by 30 per cent.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce food losses in upper- and middle-income countries by 50 per cent.</li> </ul>



ingredients that smallholder farmers are multi-cropping).

## EXISTING INITIATIVES

<p><a href="#"><u>TFA finance sector actors regional platform</u></a></p>	<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>
<p><a href="#"><u>SAVE FOOD</u></a></p>	<p>Fight against global food waste and loss.</p>
<p><a href="#"><u>Think Eat Save</u></a></p>	<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>
<p><a href="#"><u>One Planet Network: Sustainable Food Systems Programme</u></a></p>	<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>
<p><a href="#"><u>Transforming Food Systems under Climate Change</u></a></p>	<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>
<p><a href="#"><u>Sustainable Agriculture Initiative Platform</u></a></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

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<a href="#"><u>Sustainable food systems: Concept and framework</u></a>	<a href="#"><u>The State of Agricultural and Commodity Markets 2020</u></a>
<a href="#"><u>The State of Food and Agriculture: Moving forward on food loss and waste reduction</u></a>	





# CONSUMPTION, DIETS AND WASTE

*To be completed in 2021*

Supply Chain,  
Consumption,  
diets and waste

MITIGATION &  
ADAPTATION/  
RESILIENCE

## NEXUS

	By 2021	By 2025	By 2030	By 2040
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**Policymakers  
(national,  
subnational,  
local levels)**

- Promote policies addressing demand-side measures to incentivize deforestation-free commodities in producing and consuming countries.

**Financial  
Institutions**

<p><b>Technology Providers and Innovators</b></p>			
<p><b>Business and Service Providers</b></p>			
<p><b>Civil society</b></p>	<ul style="list-style-type: none"> <li>• Raise awareness of healthy, nutritious and climate-smart diets.</li> <li>• Reduce food waste by 20 per cent.</li> <li>• Increase the use of locally produced products in diets.</li> </ul>	<ul style="list-style-type: none"> <li>• Shift to more healthy and balanced diets while reducing animal protein consumption to reduce CO2 emissions by ~300 Mt.</li> <li>• Reduce food waste in upper and middle-income countries by 30 per cent.</li> </ul>	<ul style="list-style-type: none"> <li>• Shift to more healthy and balanced diets while reducing animal protein consumption to reduce CO2 emission by ~500 Mt.</li> <li>• Reduce food waste in upper and middle-income countries by 50 per cent.</li> </ul>

## EXISTING INITIATIVES

<u>SAVE FOOD</u>	Fight against global food waste and loss.
<u>Think Eat Save</u>	Harmonization of measurements and tools to assess food loss and waste (SDG 12.3).

## FURTHER REFERENCES

**'Cities and circular economy for food' accessible via here:**  
<https://www.ellenmacarthurfoundation.org/our-work/activities/food>

## 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 Forest and Agriculture Organization (FAO) in collaboration with more than 90 representatives from NGOs, think tanks, universities, collaboration platforms, UN agencies among others. For the full list of the Land Use theme [see here](#).*