

MODULE 3:

Developing a land-use finance definition

The definition of land-use finance specifies the sectors and activities included in the analysis in a detailed typology of misaligned/aligned/conditionally-aligned land-use activities.

OBJECTIVE

Understand options and key aspects for consideration when building a land-use finance definition and typology.

Module 1 provided guidance for high-level discussions on scope. In this module, you will develop a detailed definition to guide data analysis. This will entail specifying relevant sectors and activities that are in scope, and presenting detailed typologies and approaches for assessing the alignment of projects and programmes with jurisdictional or national policy objectives.

Choices on the sectors and activities that should be considered in scope of the land-use finance definition, as well as decisions on how to determine policy alignment, should be based on a thorough understanding of land use and land-use change, as well as relevant national policy frameworks. The typology can also build on existing national and international frameworks and discussions that have been developed.

Continuous stakeholder engagement is key to developing a useful, accurate and accepted definition of land-use finance.

KEY QUESTIONS

- 3.1** What steps should be followed to develop a detailed national/jurisdictional-level definition of climate-relevant land use?
- 3.2** Which sectors and activities might be considered misaligned/aligned/conditionally-aligned?

3.1 Steps to develop a detailed typology of land-use activities

As outlined in Module 1, initial consideration should be given to the type of land-use activities that are within the scope of the analysis. In general, three types of land-use activities can be considered. These can be defined as:

- **Climate-aligned** activities, which contribute to climate change mitigation by increasing GHG emission removals or decreasing GHG emissions from agriculture and forestry. Examples of climate-aligned activities include afforestation/reforestation, sustainable forest management, zero deforestation agriculture, and clean cooking alternatives such as Liquid Petroleum Gas, improved efficiency cookstoves² and induction cookers. Under a broader scope of climate-relevant finance, this could also include activities that increase resilience and adaptation to climate change impacts, as well as activities that contribute to climate change mitigation in the agricultural sector.
- **Conditionally-aligned or ‘grey’** activities are often indirectly related to land-use emissions and may contribute to reducing deforestation but only under certain conditions. Examples include agricultural intensification, bioenergy and timber harvesting. Agricultural intensification, for example, can contribute to climate change mitigation by increasing production on existing land, thereby reducing pressure on surrounding forests. If not coupled with strong land-use policies, however, agricultural intensification can have unintended spillover effects that can lead to an increase in land value and an incentive for more forests conversion to agricultural lands.
- **Climate-misaligned or ‘brown’** activities, which drive deforestation or forest degradation. These activities vary by country. They are commonly referred to as the drivers of deforestation and forest degradation. Examples of climate-misaligned land-use activities include agricultural extensification, unsustainable forest management or infrastructure development, and the use of biomass for heating and cooking. Under a broader definition of land-use finance, this could also include activities that are not adapted to climate change impacts, or reduce the resilience of ecosystems, which could lead to expansion on new lands in the future.

These three categories all fall under the scope of **climate-relevant land-use**. For example, activities within these groups can impact land-use mitigation and adaptation outcomes either positively or negatively. Their relative contribution to climate change mitigation and adaptation can be represented in concentric circles, with areas in the centre contributing heavily to mitigation and adaptation outcomes, and areas towards the outside being misaligned with climate objectives (see Figure 7).

The land-use finance mapping can include any (or all) of these categories based on national level policy discussions and the desired objective of the analysis. Tracking climate-aligned land-use activities can improve overall understanding of the scale of finance delivered to support forest conservation efforts, and reduce emissions from deforestation and forest degradation. Analysing conditionally-aligned and misaligned activities creates additional opportunities to redirect existing flows of finance towards climate change outcomes.

Identifying which activities fit in each category, and under which conditions, helps assess whether they are addressing the current (and future) drivers of deforestation.

² Potential rebound effects might need to be considered for both of these activities.

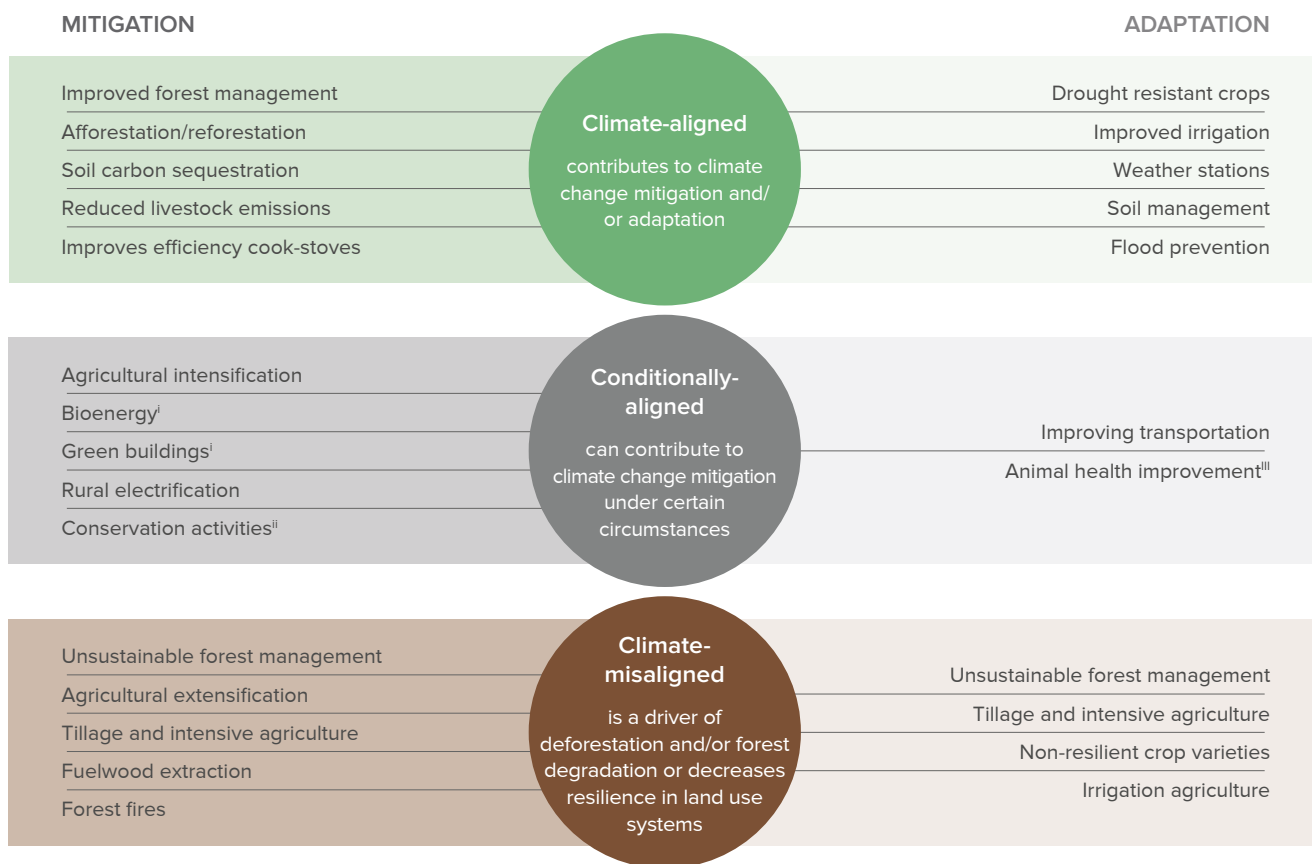


Figure 7: Definition of climate-relevant land use, including aligned, conditionally-aligned and misaligned activities

Note: The activities listed are examples only and depend on the jurisdictional policy context, which could result in the same activities classified as either aligned or misaligned.

ⁱ Can reduce emissions in other sectors but depends on the sustainability of supply
ⁱⁱ If not managed at a large scale these may result in leakage
ⁱⁱⁱ Does not always have adaptation benefits

3.1.1 Literature review and consultation

Developing a detailed national/jurisdictional-level definition of climate-relevant land use for the intended region requires a review of national and international literature and in-depth consultations with relevant stakeholders to develop a detailed list of activities that fall within the scope of analysis.

Climate-misaligned activities (often referred to as the drivers of deforestation and forest degradation) are often identified in a country’s national REDD+ strategy. They help to set the overall context for the analysis. Climate-aligned activities can be identified during an assessment of strategies and approaches to address the drivers of deforestation, or through an analysis of opportunities to increase forest carbon stocks, for example through afforestation and reforestation programmes. In the context of a national or jurisdictional REDD+ strategy these activities might be defined as REDD+ policies and measures in various sectors. Conditionally-aligned activities are the most challenging to identify, and could be either aligned or misaligned depending on other policy and economic conditions in the jurisdiction.

If there are differences between international and national definitions, policies or targets, it is important to engage in dialogue with relevant stakeholders to reconcile these differences. For example, agricultural export growth targets may be central to government development plans, but may also conflict with reduced deforestation goals. In all cases, it is useful to ensure that potential areas of conflict are clearly distinguished in different categories of tracking activities, through specific sub-sector categories, to allow for flexibility in the analysis.

All climate-relevant land-use policies, strategies, and programme documentation should be identified and reviewed. A list of documents and key questions is provided in Module 1, section 1.1.

The outcome will be a detailed overview of climate-relevant land-use national and/or jurisdictional-level policies in the jurisdiction, including their objectives, challenges and status of implementation. This overview could be distributed for stakeholder consultation.

3.2 Which sectors and activities might be considered misaligned/aligned/conditionally-aligned?

3.2.1 Identifying aligned land-use activities

In this step, the project team will define a detailed typology of climate-aligned activities that can be used to assess and categorise available financial data.

The level of detail of the typology should match the level of detail of the available information on spending and investments. For example, in the agriculture sector the key sectoral division will most likely be crop and animal production. It will be targeted by different actions/programmes, for example agricultural intensification, which cover manifold activities/measures, such as training for improved farming techniques. And even these activities/measures might be disaggregated into various types of expenditures and investments, for example operational costs.

National or jurisdictional definitions might already exist and typology of aligned land-use activities might be derived from existing frameworks, such as REDD+ or green growth strategies and plans. Sometimes these plans might not go into a sufficient level of detail and further work might be needed to develop activity-level typologies.

International norms on defining mitigation and adaptation activities in land use are important guiding posts in developing a nationally-specific definition. Table 5 provides information on three international approaches that might provide a useful starting point for countries/jurisdictions as they develop their own tailored and jurisdiction-specific typology of sustainable land-use finance.

The three approaches are:

- Definitions adopted jointly by the group of Multilateral Development Banks (MDBs) and the International Development Finance Club (IDFC) on tracking mitigation and adaptation finance in the relevant areas of agriculture, forestry and land use (MDBs/IDFC, 2015).
- The Climate Bonds Initiative taxonomy used as guidance for green bond issuers and investors in relation to agriculture and forestry activities (CBI, 2018).
- A list of mitigation and adaptation activities identified as part of a three-tier framework in defining land-use mitigation and adaptation by CPI (see Falconer et al. 2015b).

Guidance on mitigation action and activities in land use

<p>MDBs/ IDFC, 2015</p>	<p>Agriculture:</p> <ul style="list-style-type: none"> • Reduction in energy use in traction (such as efficient tillage), irrigation and other agricultural processes • Agricultural projects that improve existing carbon pools (such as rangeland management; collection and use of bagasse, rice husks or other agricultural waste; reduced tillage techniques that increase carbon contents of soil; rehabilitation of degraded lands; or peatland restoration) • Reduction of non-CO₂ GHG emissions from agricultural practices and technologies (for example, paddy rice production, reduction in fertiliser use) <p>Afforestation, reforestation and biosphere conservation</p> <ul style="list-style-type: none"> • Afforestation (plantations) and agroforestry on non-forested land • Reforestation on previously forested land • Sustainable forest management activities that increase carbon stocks or reduce the impact of forestry activities • Biosphere conservation and restoration projects (including payments for ecosystem services) seeking to reduce emissions from the deforestation or degradation of ecosystems <p>Livestock</p> <ul style="list-style-type: none"> • Livestock projects that reduce methane or other GHG emissions, for example manure management with biogas digesters, and improved feeding practices to reduce methane emissions <p>Biofuels</p> <ul style="list-style-type: none"> • Production of biofuels, including biodiesel and bioethanol, only if net emission reductions can be demonstrated
<p>CBI, 2018</p>	<p>Agriculture that reduces carbon and GHG gas emissions; increases soil-based carbon sequestration; improves climate resilience</p> <ul style="list-style-type: none"> • Reduced water use • Verifiable reduced fertiliser use • Verifiable zero-till agriculture • Verifiable rangeland management, for example cell grazing • Intensive agricultural efficiencies for example manure management on dairies, or milk powder processes to reduce transport weight of agricultural products • Intelligent management systems, for example infrastructure and practices aimed at efficient fertiliser dispatch, or increased CO₂ sequestration <p>Exclusions: all agriculture on peatland</p> <p>Forestry activities that avoid or substantially reduce carbon loss; deliver substantial carbon sequestration</p> <ul style="list-style-type: none"> • Plantation forestry and sustainable forestry management with current certificates from internationally-recognised certifying bodies for example Verified Carbon Standard and Forest Stewardship Council • Afforestation plantation on degraded lands • Re-vegetation or reforestation on previously forested land • REDD+ <p>All subject to governance criteria and adherence to internationally-recognised standards that ensure sustainability of investments</p> <p>Exclusions: timber harvesting</p>
<p>CPI (Falconer et al. 2015b)</p>	<p>Production efficiency: mitigation achieved by changing production practices</p> <ul style="list-style-type: none"> • Improved fertiliser use • Manure management • Soil conservation practices • Nutrient and water management • Improved feeding practices • Green forest management • Improved charcoal production techniques <p>Land efficiency: mitigation achieved by using land more efficiently, placing less pressure on forests and other ecosystems</p> <ul style="list-style-type: none"> • Any of the above practices that increase yield per hectare • Increased cattle stocking densities • Improved palm oil yields per hectare • Shifting to degraded (non-forested) land • Afforestation/reforestation <p>Changes in demand: mitigation achieved through decreasing demand for high emission commodities and increasing demand for high sequestration commodities</p> <ul style="list-style-type: none"> • Reduced demand for unsustainable commodities • Increased demand for certified commodities • Switching from wood fuel to alternative energy sources • Increased demand for green buildings • Changing dietary habits by eating less beef

Guidance on adaptation activities in land use

<p>MDBs/ IDFC, 2015</p>	<p>Three key steps are applied by MDBs in adaptation finance tracking:</p> <ul style="list-style-type: none"> • Setting out the climate change vulnerability context of the project • Making an explicit statement of intent to address climate vulnerability, as part of the project • Articulating a clear and direct link between the climate vulnerability context and specific project activities <p>(When applying the methodology, reporting adaptation finance is limited to solely those project activities that are linked to the climate vulnerability context.)</p> <p>Examples of potential adaptation activities in crop production and food production, and other agricultural and ecological resources:</p> <ul style="list-style-type: none"> • Primary agriculture and food production: investments in research and development of crops that are more resilient to climate extremes and change • Agricultural irrigation: supplemental irrigation, multi-cropping systems, drip irrigation, levelling and other approaches and technologies that reduce the risk of large crop failures • Forestry: improved management of forest fires and pest or disease outbreaks • Livestock production: increased production of adequate fodder crops to supplement rangeland foraging
<p>CBI, 2018</p>	<p>Infrastructure to provide greater resilience in the face of more severe storms</p>
<p>CPI (Falconer et al. 2015b)</p>	<p>Natural resource management:</p> <ul style="list-style-type: none"> • Afforestation, reforestation and other vegetative cover to increase water retention, reduce flooding risk and reduce soil loss • Protection and expansion of biodiversity-rich areas to increase resilience • Increase drainage capacity of land to reduce flooding risk • Improve coastal defences, for example strengthening of sea walls, planting of mangroves • Restoration/creation of wetlands • Flood protection dikes • River bank erosion control • Construction of multipurpose reservoirs • Construction of green dams <p>Information and technology:</p> <ul style="list-style-type: none"> • Research and development on more heat, drought, pest and pathogen tolerant varieties • Better seasonal forecasting and decision support tools • Improved access to early warning systems for weather hazards • Research on pests and pathogens (pathology and epidemiology) • Pest and pathogen control technologies available • Breeding and development of locally-adapted crops • Agricultural extension services/farmer training <p>On farm practices:</p> <ul style="list-style-type: none"> • Switch to more heat, drought, pest and pathogen tolerant varieties • Improving on farm water storage, irrigation and efficiency of use • Weather protection systems for crops and livestock to reduce heat exposure • Improved crop storage facilities to reduce post-harvest waste from weather and climate events • Adaptation of fish/aquaculture techniques to increased flood risk • Farm level soil conservation practices (no till, mulch, alternative cropping) • Soil conservation structures, for example terraces, grassed waterways • Farmland set-asides for soil conservation • Use of windbreaks • Pest management through targeted herbicide and pesticide application • Switch to livestock with greater heat and drought tolerance • Optimizing herd size and grazing patterns

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Table 5: Three approaches to land use mitigation and adaptation activities

3.2.2 Identifying misaligned land-use activities

During this step, the team will review all relevant studies on the drivers of deforestation and forest degradation, and conduct consultations to determine if there is a consensus across all relevant stakeholders. Such consultations should not duplicate any existing working groups focused on the drivers of deforestation, but rather try to consult those groups.

Policy	Underlying deforestation driver (mitigation)	Potential climate risk (adaptation)
Agriculture	Main drivers: extensive farming techniques in cocoa, palm oil, rubber, rice, cashew and yam	Reductions in crop yields; losses caused by catastrophic events
Wood energy	Firewood and charcoal production	
Forestry	Illegal logging and over-exploitation of plantations	Reductions in production levels; losses caused by catastrophic events, erosion
Mining	Artisanal gold mining	Erosion
Infrastructure	Roads, settlements and other infrastructure	
Tenure and land-use planning	Insecure land tenure and lack of land-use planning	
Demographics	Migration of gold miners and population growth	

Table 6: Starting points for identifying nationally-specific activities that drive deforestation or ‘misaligned’ activities ►

Many countries have already assessed the drivers of deforestation as part of their REDD+ readiness process. Documents likely to provide up-to-date information on drivers include:

- R-PPs³
- UNFCCC forest reference level/forest reference emission level submissions
- Emission Reduction Programme Documents⁴
- National or regional-level academic studies documenting deforestation and/or forest degradation
- National or sub-national REDD+ strategy

The result of this step will be an agreed typology of drivers of deforestation and forest degradation. Table 6 provides an example output.

³ R-PPs are part of the FCPF and UN REDD readiness process.

⁴ Emission Reduction Programme Documents are also part of the FCPF process under the Carbon Fund.

3.2.3 Identifying conditionally-aligned land-use activities

If an activity cannot be clearly categorised as either misaligned or aligned, then it should be classified as conditionally-aligned. Conditionally-aligned activities could include commodity market support programmes or agricultural intensification programmes that incentivise the production of the particular types of agriculture driving deforestation in the jurisdiction in some, but not all, cases. In some instances, safeguards may exist to protect against negative impacts on forests.

In some cases, it might be difficult to clearly distinguish between conditionally-aligned and climate-misaligned activities because of limited data on the potential impact of given measures or activities on climate and forest objectives, or lack of consensus. The project team might choose to only pick two categories of land-use activities as climate aligned and activities with unknown impact.

Figure 8: Example showing how climate-relevant land-use activities have been classified in Papua New Guinea

In Papua New Guinea, three classifications were adopted, based on national discussions and a desire to highlight aligned, conditionally-aligned and misaligned land-use activities.

In Côte d'Ivoire, however, only two categories were used: conditional and climate-aligned. In addition, a different terminology was adopted in Côte d'Ivoire, with the terms grey and green used to refer to these different types of activity respectively. The choice of terminology is open to national interpretation as outlined in Section 1.1.

