Food and Agriculture Organization of the United Nations

BRIEFING NOTE – MAY 2022

# Transformative climate action

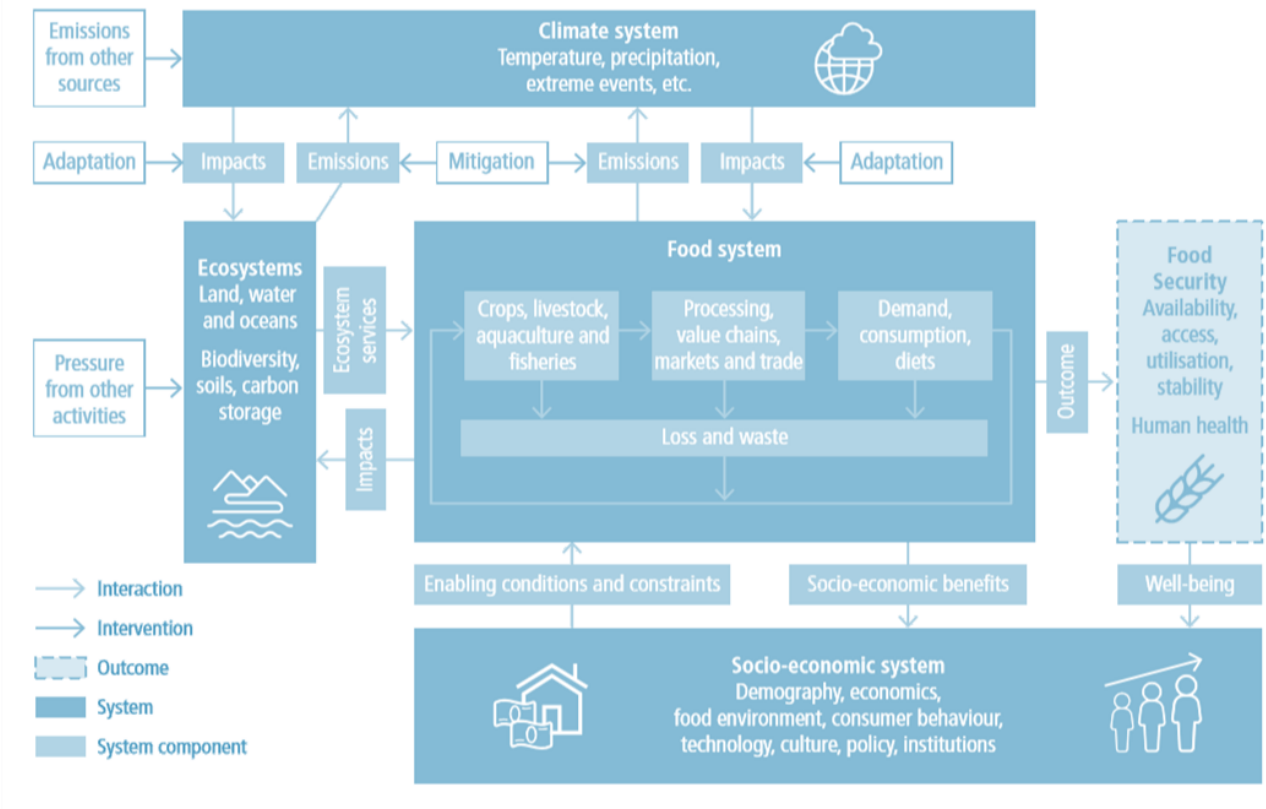
## CONTEXT

The evidence makes clear that addressing climate change and achieving the Sustainable Development Goals, especially eradicating poverty, and hunger by 2030, requires nothing less than the transformation of our food and agriculture systems (CCAFS, 2020; FAO, 2016, 2017; HLPE, 2020; IPCC, 2019). COVID-19 has unveiled the inefficiencies, inequalities and vulnerabilities in our global food system and intensified the call for system-wide transformation (UN, 2020).

The impacts of climate change on the productivity of crops, livestock, fisheries, and forestry are expected to become increasingly severe in all regions, as will the risks posed to vulnerable populations (FAO, 2017). Smallholders, women, indigenous people, children, and the elderly are considered amongst the most vulnerable (IPCC, 2018). The IPCC Special Report on Climate Change and Land adopts a food systems lens to outline the interconnected relationship between the climate, socio-economic and food systems (Figure 1). While the current food system is a considerable driver of climate change and contributor to multiple, interconnected risks, climate change in turn has direct and indirect impacts on agricultural productivity and natural resource-dependent livelihoods. Agriculture and food systems are therefore key to the global response to climate change (IPCC, 2019).

Where scattered incremental adjustments in land use and agricultural sectors will not be sufficient to protect ecosystems and dependent livelihoods from climate impacts, transformative approaches will be needed (IIED, 2019). Much of how adaptation in agriculture systems takes place today involves making incremental adjustments of existing systems to better manage climate variability and cope with near-term risks (WRI, 2018). Mitigation practices are often implemented without consideration of potential trade-offs with other components of the food system (IPCC, 2018). Increasingly severe impacts, combined with other systemic shocks and stresses, are beginning to test the limits of what and how we can adapt (WRI, 2018). Adapting to these impacts and mitigating the contribution of agriculture and land use to global emissions, will progressively require more dramatic shifts at greater scale and speed across natural and human systems.

**FIGURE 1 Interlinkages between the climate system, food system, ecosystems and socio-economic system**




**Source:** ***IPCC, 2019***

Equitable transformation will require giving particular attention to smallholders and socially marginalized groups, not only due to their vulnerability but also for the knowledge, needs, and insights they can contribute to climate solutions. Combined measures that take into account not only farm management but also value chains, ecosystems, and the enabling conditions for transformation – created through policies, markets, institutions, and governance – will be necessary to ensure climate solutions benefit smallholders and rural populations (IPCC, 2019).

## DEFINING TRANSFORMATIVE CLIMATE ACTION

Transformation is a relatively new concept in the climate change literature. Transformational change is qualitatively figured as different from incremental change or business as usual (BAU) (Feola, 2015), a distinction that is considered necessary for effective climate change adaptation or mitigation (Park et al., 2012; Rickards and Howden, 2012). The IPCC defines transformation as a change in the fundamental attributes of natural and human systems (IPCC, 2019). While the terms “transformational adaptation” and “transformative adaptation” are increasingly the subject of discussion in academic circles and in policy arenas, there is no similar level of discussion of “transformational” or “transformative” mitigation.

**Transformational adaptation** refers to a change in the fundamental attributes of a socioecological system in anticipation of climate change and its impacts, in contrast to **incremental adaptation**, which is adaptation that maintains the essence and integrity of a system or process at a given scale (IPCC, 2014b). Adaptation interventions can be qualified as transformational when they include system-wide change or changes across more than one system, focus on the current and medium (future) change, and involve direct questioning of the effectiveness of existing systems, social injustices, and power imbalances (Lonsdale, Pringle, and Turner, 2015). In some situations, incremental changes may be sufficient in the near term, yet transformational changes are necessary in the long run. Incremental actions can also be sequenced and phased for long-term transformative change (see definition below) (WRI, 2018). Policies and planning also have a role to play in strengthening the institutional capacities to encourage and facilitate transformational change.

While transformational change implies a major step-change or shifts from one state to another, the term transformative implies a process of enabling the shift from one state to another (Spillane et al., 2021). Transformative change can therefore be understood as an activity that can change *other* things (Few, Morchain, and Spear, 2017). The IPCC defines **transformative change** as "system-wide change that requires more than technological change through consideration of social and economic factors that, with technology, can bring about rapid change at scale" (IPCC, 2018). Transformative change processes can include innovation, expansion, reorganization, and/or reorientation (Few et al., 2017). Transformative initiatives clearly articulate the "object" of change and target outcomes in relation to climate risk (Few et al., 2017). As an example, a fundamental change in environmental management such as managed realignment in coastal zones could be seen as a transformational adaptation activity, but a livelihood diversification project that reduces women's vulnerability to climate change could be termed a transformative adaptation activity if it also triggers a sustained shift in gender relations and empowerment of women (CARE International, 2010 cited in (WRI, 2018).

Within the context of climate change, transformative change can be understood as a systemic change toward climate-resilient societies (IPCC, 2018). The IPCC outlines **climate-resilient pathways** as development trajectories that combine adaptation and mitigation to realize the goal of sustainable development (IPCC, 2014b). They can be seen as iterative processes for managing change within complex systems in order to reduce disruptions and enhance opportunities associated with climate change. **Climate-resilient development pathways** (CRDPs) are further elaborated as trajectories that strengthen sustainable development and efforts to eradicate poverty and reduce inequalities while promoting fair and cross-scalar adaptation to and resilience in a changing climate. They raise the ethics, equity and feasibility aspects of the deep societal transformations needed to drastically reduce emissions to limit global warming and achieve desirable and livable futures and well-being for all. Multiple alternative pathways are likely to exist in a given country, with different trade-offs to consider for achieving national priorities (IPCC, 2019).

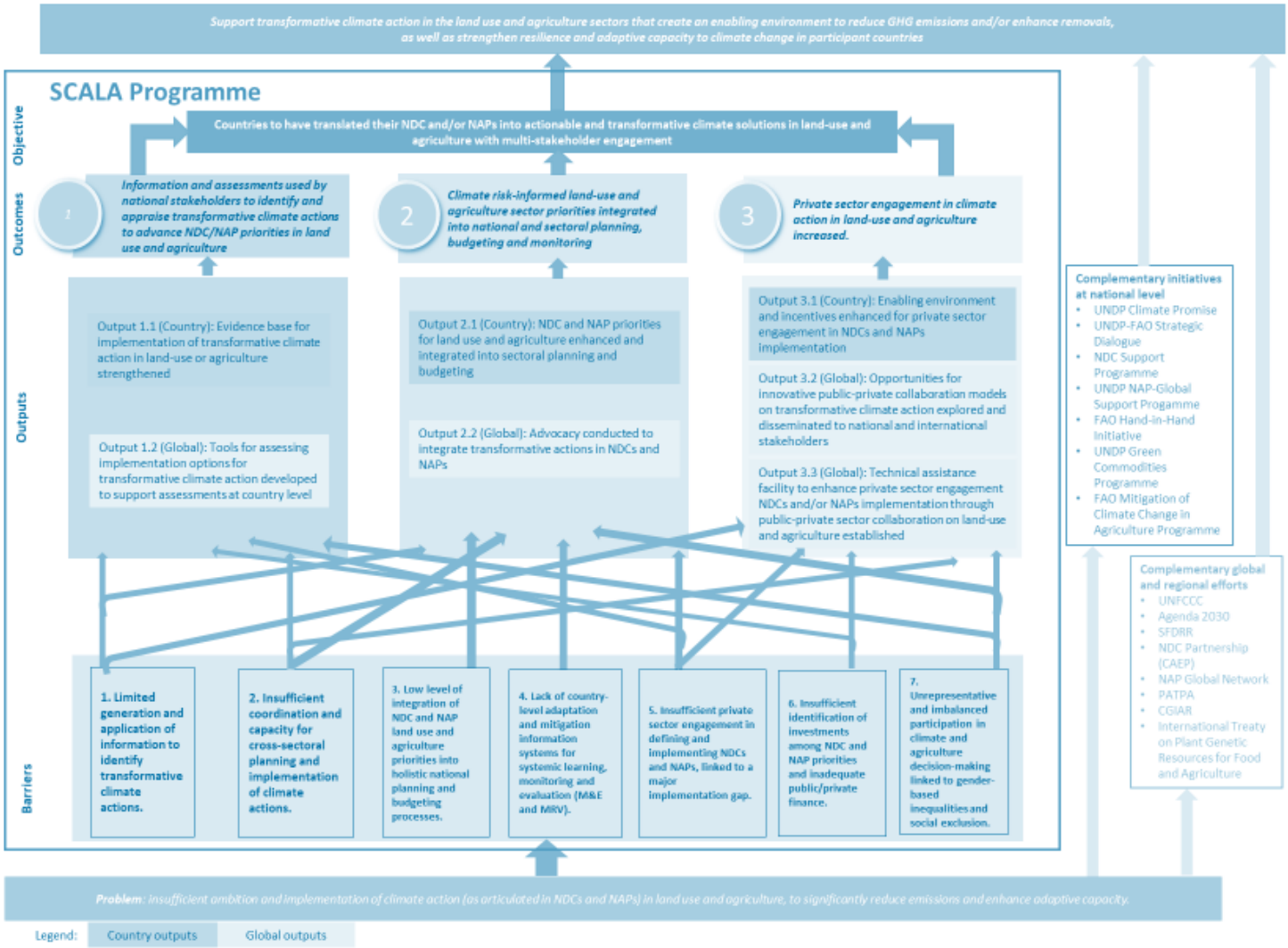
## SCALA'S APPROACH

The SCALA Programme aspires to contribute to the medium- to long term goal of supporting transformative climate actions in the land use and agriculture sectors that reduce GHG emissions and/or enhance removals, as well as strengthen climate risk reduction, resilience and adaptive capacity in participant countries. In terms of the programme-specific objective, SCALA aims for countries to have translated their NDC and/or NAPs into actionable and transformative climate actions in land use and agriculture with multi-stakeholder engagement. As shown in the Theory of Change (Figure 3), SCALA will achieve this objective through 3 inter-related outcomes, which create

an enabling environment for translating countries' land use and agriculture goals, identified in their NDCs and NAPs, into actionable and transformative climate action:

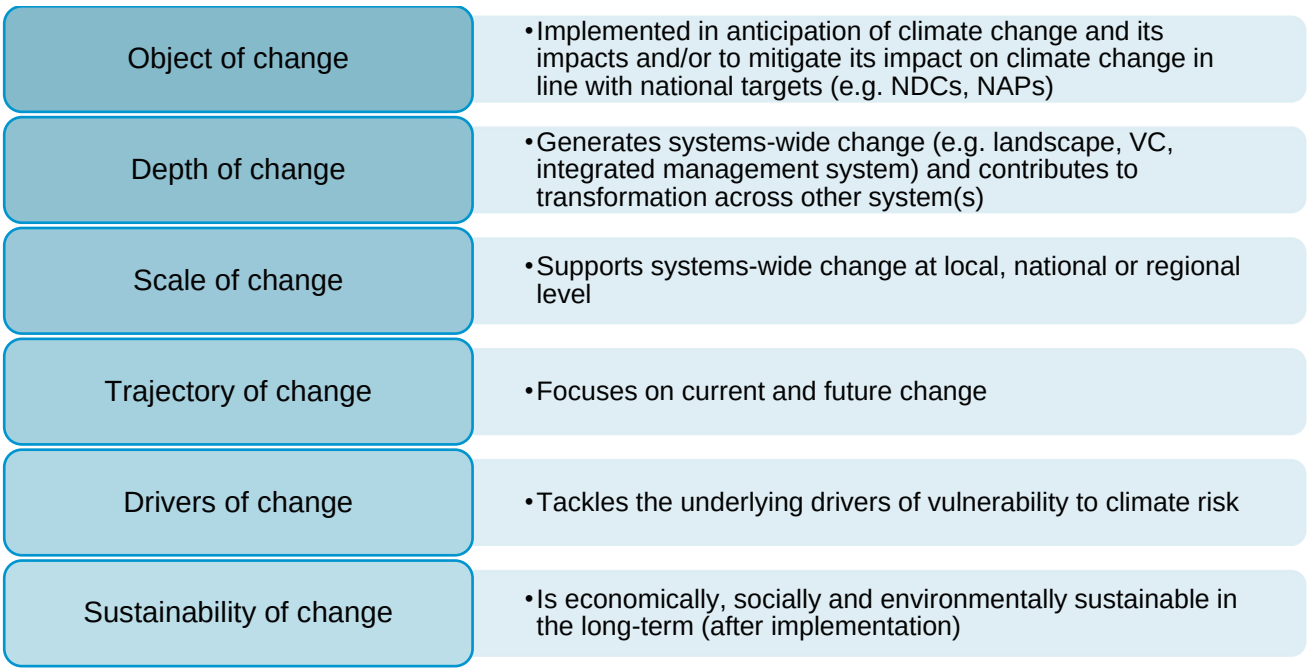
- Outcome 1: Information and assessments used by national stakeholders to identify and appraise transformative climate actions to advance NDC/NAP priorities.
- Outcome 2: Climate risk-informed land use and agriculture sector priorities integrated into national and sectoral planning, budgeting, and monitoring
- Outcome 3: Private sector engagement in climate action in land use and agriculture increased.

**FIGURE 2 SCALA Programme Theory of Change**



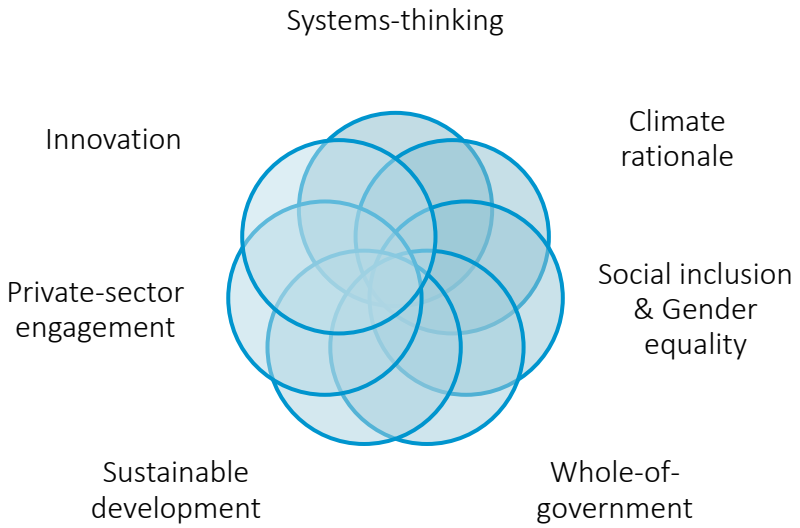
In the context of SCALA, **transformative climate action** refers to agricultural or land use activity (or portfolio of activities) that: i) is implemented in anticipation of climate change and its impacts (or opportunities) and/or to mitigate its impact on climate change in line with national climate change targets (e.g. NDCs, NAPs); ii) generates systems-wide change (e.g. in a landscape, value chain or integrated management system) and contributes to transformation across other system(s) (e.g. socio-political economy, investment landscape); iii) supports systems-wide change at local, national or regional level; iv) focuses on current and future change; v) tackles the underlying drivers of vulnerability to climate risk (e.g. social injustices and power imbalances); and vi) is economically, socially and environmentally sustainable in the long term (after implementation). Figure 4 illustrates a **set of criteria** that can be used for differentiating transformative climate action from incremental climate action under SCALA.

**FIGURE 3 Criteria for the qualification of transformative climate action under SCALA**




It is understood that system transformations will require a portfolio of mutually-reinforcing and concerted actions that contribute to the overall change process. Aligned with the Programme's Theory of Change (Figure 3 above), SCALA identifies **seven dimensions of transformation** that are critical for generating systems change *within* and *beyond* the food system, namely: climate rationale, systems-thinking, social inclusion, and gender equality, sustainable development, whole-of-government, private sector engagement and innovation (Figure 5). Each of these dimensions is not a stand-alone predictor of change but rather a necessary component of the transformation process to be implemented in concert with each other.

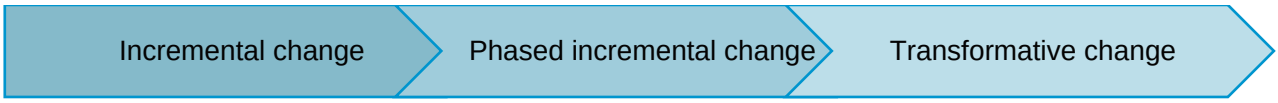
**FIGURE 4 Seven dimensions of transformation under SCALA**




The programme acknowledges that each country's **transformative pathway** will be different. The decision to move from incremental change to a systems-change approach to climate action is typically triggered when key **thresholds** are reached or near (WRI, 2018). Such limits to incremental change may exist when the magnitude of local climatic and environmental changes is likely to be so great that existing systems, processes, and practices cannot be sustained because they are physically and/or economically unviable (Kates, Travis, and Wilbanks, 2012). For instance, Ethiopia's growing areas for coffee – the country's most important agricultural commodity – are expected to be unsuitable for production in the near future as temperatures increase (Moat *et al.*, 2017). In such cases, planners may utilize **decision windows** to evaluate when transformative solutions are needed (WRI, 2018). In the Ethiopian case, this may entail the relocation of coffee production together with afforestation for shading, as well as credit and inputs for farmers to sustain the transition and avoid negative coping strategies (Moat *et al.*, 2017).

While transformative change can yield climate change and development benefits, the planning and implementation of change is complex. Systems-level change requires fundamental shifts in governance, infrastructure, economic systems and models, power relations and behavior (WRI, 2018). Experience suggests that **phased approaches** could be adopted, in which incremental actions gradually give way to transformative and transformational actions, supported by appropriate policies, pilots and the creation of enabling environments (IIED, 2019). Under SCALA, the overall process of change – or transformative pathway – is understood to be a coordinated sequence of near-term incremental actions or portfolio of actions that can be sequenced and gradually phased in order to pave the way for longer-term transformative outcomes in the future (adapted from WRI, 2018; IIED, 2019). For instance, a government may sequence near- to medium-term incremental changes, such as experimenting with crops that have better long-term prospects, combined with consideration of what systemic changes of a value chain or landscape are needed for farmers to improve their livelihoods, such as public-private sector investment or institutional reform (WRI, 2018). This phased approach is understood to represent a potential transformative pathway. Figure 6 illustrates the transformation process along the change continuum, moving from incremental change, to a phased and sequenced approach to change and finally to transformative change.

**FIGURE 5 Transformative change continuum**

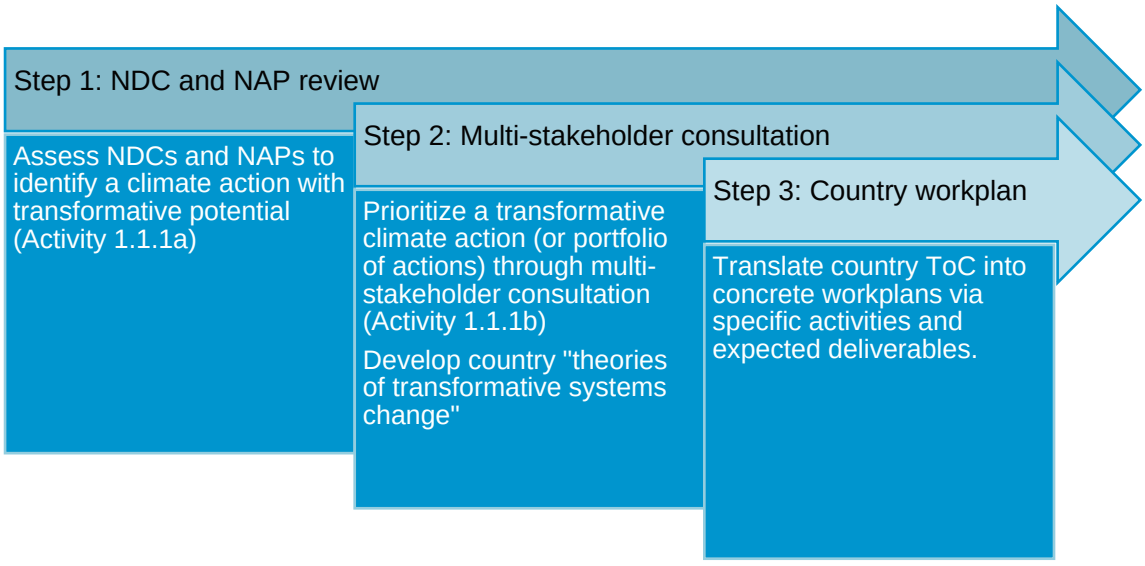



The programme also acknowledges that there may be winners and losers with transformation, and thus there is a need to inclusively engage stakeholders along the change process (Rickards and Howden, 2012). Given the disruptive nature of transformation and potential for conflict, it is critical that transformative climate action is locally owned (IIED, 2019) and the potential **tradeoffs and distributional impacts of change** on various stakeholder groups are carefully considered. Evidence shows that the likelihood of change occurring is higher when national structures and systems are used, and relevant stakeholders from the local, subnational, and national levels are brought on board (WRI, 2018). While governments are generally tasked with determining whether, when, and where transformative approaches are needed, multi-stakeholder participation and integrated coordination is essential for equitable transformations.

## INTERVENTIONS

**SCALA outlines a three-step country-driven process by which transformative climate actions are identified, assessed and integrated into country workplans**. The first step entails a desk review of the NDC and/or NAP to identify a climate action in the land use and agriculture sector with transformative potential, using the seven dimensions of transformation as assessment criteria (see Figure 5). A second step involves a participatory, multi-stakeholder consultation to zero in on the 'transformative climate action' (at the landscape, value-chain or integrated management system level) and articulates how transformation will take place under SCALA. A key output of the consultation will be a "theory of transformative systems change." The third step entails the translation of country theories of change into concrete workplans via specific activities and expected deliverables to support transformative systems change.

**FIGURE 6 Operationalization of transformative climate action under SCALA**



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The Support Programme on **Scaling up Climate Ambition on Land Use and Agriculture through Nationally Determined Contributions and National Adaptation Plans (SCALA)** is a five-year initiative led by FAO and UNDP, with funding from the German Federal Ministry for Economic Affairs and Climate Action (BMWK) through the International Climate Initiative (IKI). SCALA responds to the urgent need for increased action to cope with climate change impacts in the agriculture and land use sectors. The twenty million euro programme supports at least twelve countries in Africa, Asia and Latin America to build adaptive capacity and to implement low emission priorities.

Country support includes strengthening policies, adopting innovative approaches to climate change adaptation and removing barriers related to information gaps, governance, finance, gender mainstreaming and integrated monitoring and reporting. To achieve this shift, the programme engages the private sector and key national institutions.

SCALA supports countries to develop the capacity to own and lead the process to meet targets set out in their National Adaptation Plans and Nationally Determined Contributions under the Paris Agreement, and to achieve the Sustainable Development Goals. The SCALA initiative builds on another FAO-UNDP led programme, Integrating Agriculture in National Adaptation Plans (2015-2020) which has closed.

**Food and Agriculture Organization of the United Nations**
https://www.fao.org/in-action/scala/en

**United Nations Development Programme**
https://www.adaptation-undp.org/scala

**International Climate Initiative (IKI)**
www.international-climate-initiative.com

**Germany's Federal Ministry for Economic Affairs and Climate Action (BMWK)**
www.bmwk.de

Federal Ministry
for Economic Affairs
and Climate Action