

FORESIGHT TRAINING TOOLKIT

WEST AND CENTRAL AFRICA

Developing skills and capacity in applying
foresight for climate resilient agricultural
development in West and Central Africa



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The Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) project, led by the Alliance Bioversity International and CIAT helps deliver a climate-smart African future driven by science and innovation in agriculture. AICCRA works to make climate information services and climate-smart agriculture technologies more accessible to millions of smallholder farmers across Africa.

About AICCRA | Accelerating Impacts of CGIAR Climate Research in Africa (AICCRA) is a project that helps deliver a climate-smart African future driven by science and innovation in agriculture. It is led by the Alliance of Bioversity International and CIAT and supported by a grant from the International Development Association (IDA) of the World Bank. Explore AICCRA's work at aiccra.cgiar.org

Contact | Alcade C. Segnon, PhD, West Africa Science Officer AICCRA, Alliance of Bioversity International and CIAT, Dakar - Senegal
A.Segnon@cgiar.org

Design and Layout | Debra-Jean Harte
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The West and Central Africa Council for Agriculture Research and Development (CORAF) is a core partner of the AICCRA West Africa cluster. CORAF is an international non-profit association of national agricultural research systems from 23 West and Central African countries. Together with ASARECA (Association for strengthening agricultural research in Eastern and central Africa), CCARDESA (Centre for Coordination of Agricultural Research and Development for Southern Africa) and NASRO (North African Sub-Regional Research Organization), it forms the four sub-regional organizations that make up the Forum for Agricultural Research in Africa, FARA.

As an umbrella organization, CORAF delivers on three activity pillars related to:

- A.** Scaling technologies and innovations for impact;
- B.** Regional integrated capacity strengthening and coordination; and
- C.** Knowledge management, foresighting and anticipation, each of which can address the urgent need to improve the knowledge base and evidence-based dialogue upon which practice and policy responses to climate change are built.

CORAF's 2018-2027 Strategic Plan particularly emphasizes the role of foresight analysis – using historical data and modelling future scenarios to draw conclusions about actions to be taken in the present - to build consensus and inform decision-making on research priorities.

A huge thanks to the regional foresight Community of Practice for all their hard work and support throughout the training (10 – 14 October 2022), their co-facilitation support during the application week (17-21 October 2022), and their eagerness to be foresight ambassadors in the region. Ayodeji Rauf, Dr Hadja Oumou Sanon, Dr Adolphe Mahyao Germain, Edward H. Decker, Dr. Ihegwuagu Nnemeka Edith, Dr Wouedjie, Thegue Alice-Norra, Dr. Nathalie Kpera, Dr. Djondang Koye, Aminata Bâ Dia, Dr Amadou Abdoulaye M. Bahari, and Nestor Ngouambe.



AICCRA

Accelerating the Impact of CGIAR
Climate Research for Africa



The Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) project, led by the Alliance Bioversity International and CIAT helps deliver a climate-smart African future driven by science and innovation in agriculture. AICCRA works to make climate information services and climate-smart agriculture technologies more accessible to millions of smallholder farmers across Africa. With better access to technology and advisory services—linked to information about effective response measures—farmers can better anticipate climate-related shocks to take preventative action that helps their communities safeguard livelihoods and the environment. AICCRA is being implemented across scales (continental, regional and country levels) in Africa.

The West Africa regional level implementation led by AICCRA West Africa Cluster (AICCRA WA) collaborates with the West and Central Africa Council for Agriculture Research and Development (CORAF), an association of national agricultural research systems from 23 West and Central African countries, and AGRHYMET Regional Centre, a specialized institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), to ensure that effective large-scale intra-regional and south-south adoption within various value chains are taking place through innovative delivery models for climate services and CSA from West Africa. AICCRA aims to increase access to climate information services and climate-smart agriculture technologies in Africa.

aiccra.cgiar.org



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ACRONYMS AND ABBREVIATIONS

AICCRA	Accelerating the Impact of CGIAR Climate Research for Africa
AU	African Union
CAADP	Africa Agriculture Development Programme
CEMAC	Economic and Monetary Community of Central Africa
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
CoP	Community of Practice
CORAF	West and Central Africa Council for Agriculture Research and Development
CSA	Climate Smart Agriculture
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EWS	Early Warning Systems
FAO	Food and Agricultural Organisation
FAW	Fall Army Worm
IDRC	International Development Research Centre
IPPC	International Plant Protection Convention
LECRDS	Low Emission Climate-Resilient Development
MSP	Multi-Stakeholder Partnerships
NARIs	National Agricultural Research Institutes
NARS	National Agricultural Research Systems
RVF	Rift Valley Fever
SHARED	Stakeholder Approach to Risk Informed and Evidence-based Decision-making
WCA	West and Central Africa
WOAH	World Organisation for Animal Health
WHO	World Health Organisation



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THE AIM OF THE REGIONAL FORESIGHT TRAINING TOOLKIT

This regional foresight training toolkit aims to support a regional foresight community of practice to practically apply the range of foresight tools and methods for innovative strategic planning and policy formulation in their respective institutions. The training approach is mapped out on the following page.

FORESIGHT COMMUNITY OF PRACTICE TRAINING APPROACH



FORESIGHT KEY FRAMEWORK STAGES



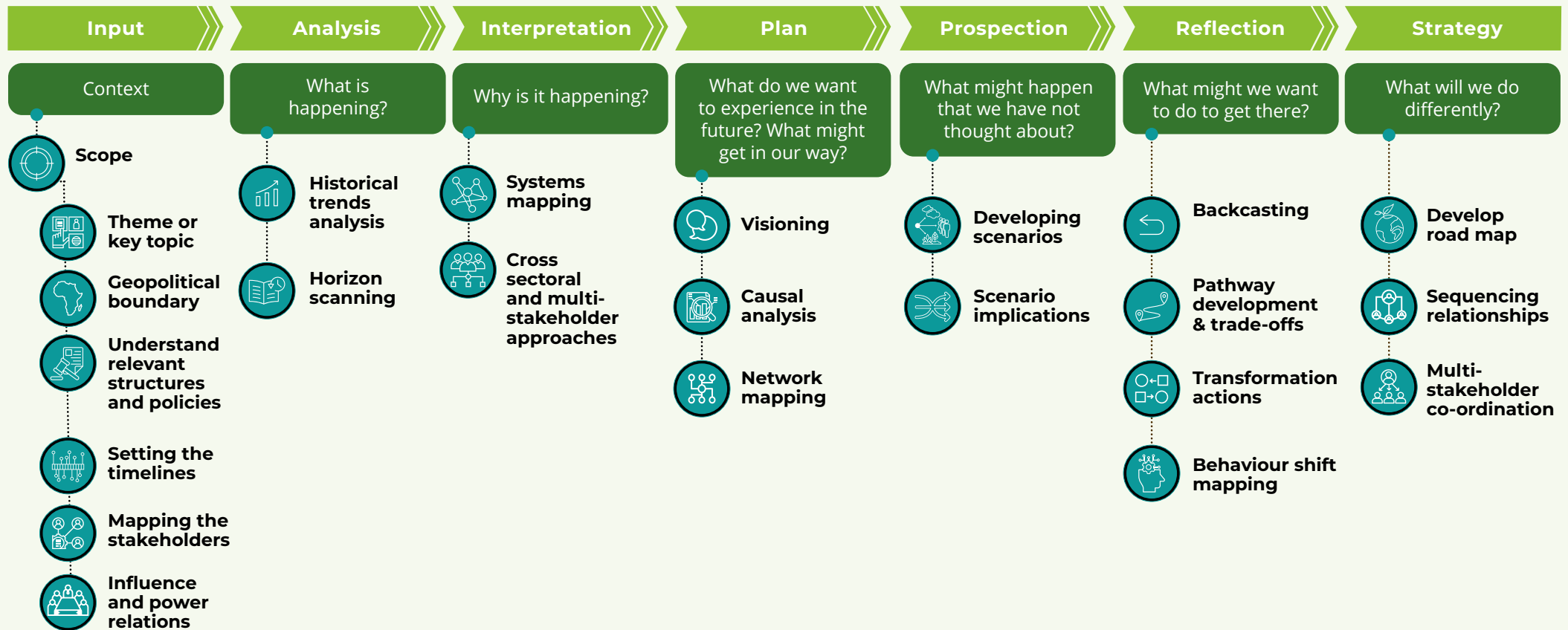
DATA, EVIDENCE, KNOWLEDGE AND CREATIVITY



STAKEHOLDER ENGAGEMENT AND PARTICIPATION

SITUATIONAL ANALYSIS

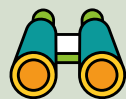
LONG TERM FUTURE PLANNING



STRUCTURE OF THE TOOLKIT

The toolkit comprises six modules structured to both show the methodology but also to be applied, by building a clear case study and examples of climate-resilient development in agricultural systems with relevance to the WCA region. This allows the user to gain insights into

both the foresight tools, methods, and key steps but also to embed case studies and practical examples to better apply those methods into their own national and institutional contexts.



An **introduction to the foresight method or approach** in question;



A breakdown of the **key steps of the method** or tool;



An explanation of how and when to **apply the different steps of the method or tool**;



Background on the content; and



Application of the method in the context of developing a regional preparedness and response strategy plan to pest and disease outbreaks in the region.

MODULE 01

MODULE 01

INTRODUCTION TO FORESIGHT

Introduction to applying foresight approaches for climate-resilient agricultural development.

MODULE 02

MODULE 02

UNDERSTANDING TRENDS AND MULTI-SECTORAL AND SYSTEMS LINKAGES

Understanding regional trends, multi-sectoral and systems linkages and climate risks in the region.

MODULE 03

MODULE 03

VISIONING AND CAUSAL ANALYSIS

Applying foresight tools and methods: visioning, causal analysis and integrating climate resilience into future planning.

MODULE 04

MODULE 04

BUILDING SCENARIOS

Applying foresight tools and methods: introducing scenarios and building multiple scenarios to consider in future planning.

MODULE 05

MODULE 05

SCENARIO IMPLICATIONS AND TRANSFORMATIVE CHANGE

Applying foresight tools and methods: using scenarios to consider uncertainties and create more robust and transformative climate-resilient policies and plans.

MODULE 06







MODULE 06







REFLECTION AND STRATEGY








Review of key foresight methods and tools and tailoring practical action to agriculture and climate change future planning and implementation in the West and Central Africa (WCA) region.







GLOSSARY OF KEY TERMS








FORESIGHT







Term	Description
Backcasting 	The process of working backwards from the definition of a possible future to determine what needs to happen to make the future unfold and connect to the present.
Barrier 	Identified obstacle that could stop the achievement of an activity.
Black Swan 	An event that could absolutely not be predicted.
Brainstorming 	A method of obtaining ideas without judgement or filtering. It involves encouraging wild and unconstrained suggestions and listing ideas as they emerge.
Causality 	A logical link between events, where a cause precedes an effect and altering the cause alters the effect.
Complexity 	Complex systems are non-linear and diverse networks made up of multiple interconnected elements. Cause and effect relationships within the system are not easily discernible or predictable. Historical extrapolation is not possible for predicting emergence (new patterns and behaviours) in complex systems.






Term	Description
Critical Uncertainties 	Are drivers that are both highly impactful and highly uncertain.
Cross-cutting Issues 	Issues or challenges that affect more than a single interest area, institution, or stakeholder, and that need to be addressed from all points of view.
Drivers 	Are factors, issues or trends that cause change thereby affecting or shaping the future.
Driving Force 	A cluster of individual trends on the same general subject moving trends in certain directions, they are broad in scope and long term in nature (for example, climate change or globalisation).
Evidence 	The integration of raw data constituting numbers, words, images, and insights emerging from diverse knowledge sources.
External Driver 	External force of change, for example political or market drivers.







Term	Description
Feasible 	Possible and practical.
Forecast 	An estimate or best guess of what might happen in the future i.e. not a definitive prediction.
Foresight 	Structured tools, methods and thinking styles to enable the capacity to consider multiple futures and plan for them.
Foresight Organising Group 	A small core group that builds the foresight plan.
Foresight Participating Group 	A broad mix of identified key stakeholders that need to be involved.
Futuring 	The act, art, or science of identifying and evaluating possible future events.
Futures thinking 	Describes the practice of thinking about the future in a structured way, and the methods and approaches that are used to do so.

Term	Description
Grey Rhino 	These are the large, obvious dangers that will sooner or later emerge but whose exact timing is unknown.
Impact 	Refers to the potential scale of impact of a driver on a scenario theme.
Internal Driver 	Internal force of change for example, social drivers within a farm or community directing the decision making of a farmer.
Mega-trend 	A trend that is apparent at a large or global scale e.g. growing youth population across the African continent.
Mind Mapping 	Allows a group's ideas to be charted in logical groupings fairly quickly, even when ideas are given in a non-sequential manner. This technique allows efficient brainstorming for ideas and at the same time creates a skeletal framework for later categorisation of the information generated.
Modelling and Simulation 	The process of creating and experimenting with a computerised mathematical model imitating the behaviour of a real-world process or system over time. Simulation is used to describe and analyse the behaviour of a system when asking 'what-if' questions about the real system and aid in the design of real systems.





Term	Description
Not Predictive 	Participatory with multiple viewpoints, bringing in quantitative and qualitative evidence but not predictive.
Pathway 	A trajectory in time, reflecting a sequence of actions and consequences against a background of separate developments, leading to a specific future situation.
Plausible 	It is reasonable to assume the scenario could happen. Plausibility does not mean that a future situation will happen.
Predictability 	The degree of confidence in a forecasting system based either on law derived from observations and experience, or on scientific reasoning and structural modelling.
Projecting 	A quantitative technique that can be used in the analysis phase of the foresight process. Projecting or time series analysis are used when several years of data are available, and trends are both clear and relatively stable.
Projection 	An expected value of one or more indicators at particular points in the future, based on the understanding of selected initial conditions and drivers.
Resilience 	A system's ability to cope with and recover from shocks or disruptions, either by returning to the status quo or by transforming itself to adapt to the new reality.






Term	Description
Scenarios 	Are storylines/narratives, answering 'what if' questions that describe multiple alternative futures spanning a key set of critical uncertainties. Scenarios identify future drivers of change and then plot out plausible directions that they may take.
Scenario Development 	<p>An approach to understanding highly impactful and highly uncertain drivers and to describe possible future states.</p> <p>Although they address uncertainty, scenarios are not predictions or forecasts - they are not 'true' or correct/wrong - only plausible.</p>
Scenario planning 	Is a technique of strategic planning that relies on tools and technologies for managing the uncertainties of the future
Social Network Mapping 	A tool to identify the importance and influence of stakeholders as well as how they exchange information or are connected.
Strategic foresight 	The combination of foresight and strategic management
Time Frame 	The complete period (past-to-future) considered in a foresight exercise.

Term	Description
Transformation 	An agriculture and food systems transformation is a significant redistribution - by at least a third - of land, labour and capital, and/ or outputs, and outcomes (e.g. types and amounts of production and consumption of goods and services) within a time frame of a decade.
Trend 	A general tendency or direction of a movement or change over time e.g. increasing erratic seasonal rainfall patterns.
Trend Impact Analysis 	Collecting information and attempting to spot a pattern, or trend, and assess its influence from the information.
Uncertainty 	Refers to how much or how clear we are on how a driver will emerge or play out in the future. High uncertainty does not mean 'high improbability', high uncertainty can mean having little knowledge of how something may pan out.
Underlying Cause 	Unpacking why an obstacle is in place.






Term	Description
Unknown Unknowns 	Issues and situations in organisations that have yet to surface and which are blind spots for planners who are unaware that they do not know about them.
Viable 	Able to be done or could occur.
Vision 	A compelling image of a (usually preferred) future.
Visioning 	A well-known prospective technique with a highly participatory approach.
Wicked Problem 	A problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognise.
Wild Card 	A low-probability but high-impact event that seems too incredible or unlikely to happen.







CLIMATE RESILIENCE

Term	Description
Adaptive Capacity 	The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.
Climate Change 	Climate change is a change in the state of the climate that can be identified by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer.
Climate Resilience 	The ability of a system to 'bounce back' from the impacts of climate-related stresses or shocks. It is the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.
Exposure 	Refers to the inventory of elements in an area in which hazard events may occur.

Term	Description
Hazard 	A possible, future occurrence of natural or human induced physical events that may have adverse effects on vulnerable and exposed elements.
Risk 	Intersection of hazards, exposure, and vulnerability.
Sensitivity 	The degree to which a system is affected, either adversely or beneficially, by climate variability or change.
Social Vulnerability 	Inability of people, organisations, and societies to withstand adverse impacts from multiple stressors to which they are exposed.
Vulnerability 	The propensity or predisposition of a system to be adversely affected by an event. Vulnerability is a function of a system's sensitivity, and its adaptive capacity.

AGRICULTURAL SYSTEMS

Term	Description
Agriculture 	Is the science, art, or practice of cultivating soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products.
Agricultural Value Chain 	Includes the people and activities that bring a basic agricultural product such as maize to the consumer. The activities include obtaining inputs and production in the field right through to storage, processing, packaging, and distribution.
Biological Diversity 	The variability among living organisms from all sources, including terrestrial, marine, and aquatic ecosystems.
Cross Sectoral Coordination 	The engagement, management, planning and implementation, of activities conducted across different thematic sectors to deliver development outcomes (e.g. food security, nutrition, sustainable landscapes, and agriculture).
Ecosystem Services 	These include provisioning services, such as the production of food (e.g. fruit for humans or grazing for cattle) and water; regulating, such as the control of flooding and disease; supporting, such as nutrient cycles and oxygen production; and cultural, such as spiritual and recreational benefits.

Term	Description
Elements 	The different, discrete elements within a system (e.g. farms, organisations, inputs, and soil).
Interconnections 	The relationships that connect the elements (e.g. rules, ideas, funding, or service relationships, among others).
Land Degradation 	A process in which the value of the biophysical environment is affected by a combination of human land-use activities. It is viewed as any change or disturbance to the land perceived to be undesirable.
Multi-Stakeholder Collaboration 	Consists of a mix of representatives or stakeholders from public, civil, and private domains of society.
Post-Harvest Loss 	Is the loss in quantity and quality of agricultural produce between harvest and consumption. It includes on-farm losses e.g. damage to grain by pests, as well as losses along the value chain during transportation, storage, and processing.
Pre-production 	This stage of the agricultural process is prior to production and may involve land preparation and the sourcing and purchasing of inputs such as seed and fertiliser.






Term	Description
Productive Inputs 	These are used to increase yields and range from improved seeds, genetics, fertilisers and crop protection chemicals to machinery, irrigation technology and knowledge.
System 	An interconnected set of elements that is coherently organised in a way that achieves something (function and purpose). For example, the purpose of an agricultural system could be to produce dairy products and the system could consist of interconnected elements such as the farmer, employees, cattle, machinery, feed, water, and energy.
Systems Thinking 	A mindset, tool, and process that is reserved for complex problems.
Systems View 	Understands life as networks of relationships.
Transboundary Animal Disease 	Epidemic disease which is highly contagious or transmissible and has the potential for very rapid spread, irrespective of national borders, causing serious socio-economic and potentially public health consequences.



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RESILIENCE

is the ability to prevent disasters and crises as well as to anticipate, absorb, accommodate or recover from them in a timely, efficient and sustainable manner.



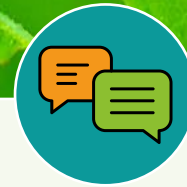
PREPAREDNESS

refers to a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response. Preparedness is associated with disaster risk reduction.



EARLY WARNING

- Early warning systems are designed to enhance detection of pests and diseases to prevent introduction and spread. Early warning systems provide up-to-date, accurate information on emerging crop and livestock pests that may be a threat to agriculture or natural resources if they become established in new countries.



RESPONSE

refers to a series of coordinated activities involving one or more organizations, in order to respond to pests and disease concern/outbreak and bring the situation under control. The development of decision support systems requires an understanding of what information is needed, when it is needed, and at what resolution and accuracy.



MODULE 06

Reflection and Strategy





OVERVIEW OF MODULE SIX



Introduce foresight



Establish learning goals



Scope for a foresight exercise



Trends Analysis



Learning reflections



Practical exercise



Horizon scanning



Practical exercise



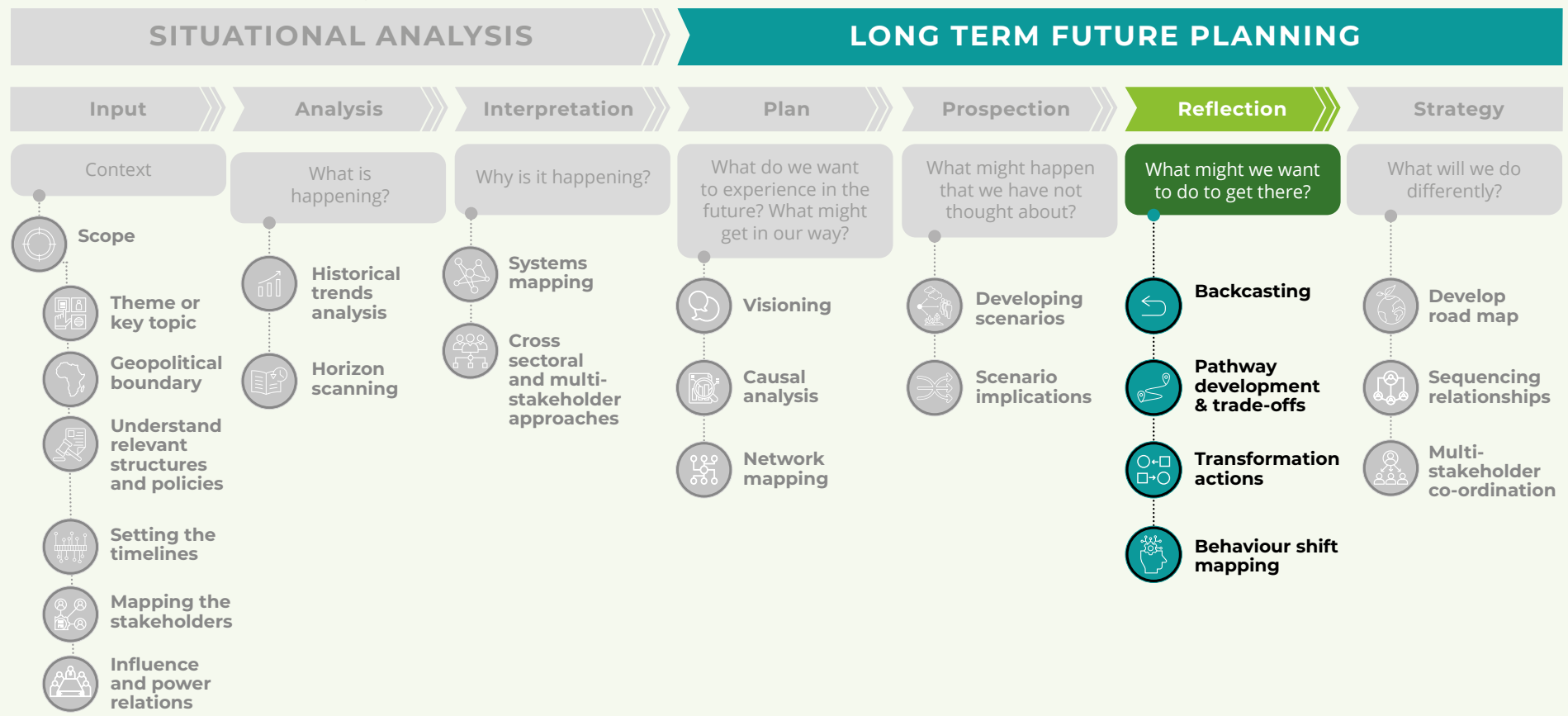
FORESIGHT KEY FRAMEWORK STAGES



DATA, EVIDENCE, KNOWLEDGE AND CREATIVITY



STAKEHOLDER ENGAGEMENT AND PARTICIPATION



REFLECTION



Backcasting



Pathway
development
& trade-offs



Transformation
actions



Behaviour
shift mapping



CORE GUIDING QUESTIONS OF FORESIGHT

What seems to be
happening?

What's really
happening?

What do we want to
happen?

What might happen?

What do we need to do?

BACKCASTING

“ is an approach that starts with defining a vision or desirable future and then works backwards to identify key actions, partnerships, policy changes that will connect that future to the present.



QUESTION?

Backcasting asks the question, “**how did we get here?**” and contributes to shifting mindsets to be creative in our planning process.

BACKCASTING STEPS



Step into 2035 and **position yourself in the successfully achieved vision** such that the future becomes the present.



Look back to 2021 and ask “**what do we remember about how we got to here?**”; “what actions, partnerships, policy changes, etc. did we carry out” to get to the 2035 success?



Remember **which barriers we overcame** and how we addressed them.



As best possible identify **when key activities took place**.



LEARNING EXERCISE

Backcasting

In this exercise we will consider one aspect of our 2035 vision as if we have successfully achieved and look back to see what we did to get to this day.



1 HOW DID WE GET TO WHERE WE ARE NOW?

We are in 2035 and have successfully achieved this aspect of our vision and desired future:



Outcome. Farmers and pastoralists across the 19 CORAF member countries are using climate resilient, climate-smart, and agro-ecological approaches and ably providing diverse sources of food to equitably meet food and nutritional security requirements of rural and urban populations.

Describe what you remember about how we managed to successfully achieve this and when.

2 HOW DID WE OVERCOME THE BARRIERS ON THE WAY?



To achieve our success, we had to overcome barriers. How did we do that?

Describe what you remember about how we were able to minimize the effects of the drought in Mali, Burkina Faso, and Cape Verde in 2026?

3 HOW WERE SOME OF THE NEW STAKEHOLDER GROUPS WE BROUGHT IN?



To achieve our vision, what were some of the surprising new partnerships we formed?

Give us an example of a new partnership we formed to achieve our vision.



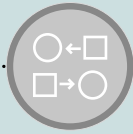
REFLECTION



Backcasting



Pathway
development
& trade-offs



Transformation
actions



Behaviour
shift mapping

TRANSFORMATIVE PATHWAYS AND TRADEOFFS



What is the Method

- Pathways outline the actions, actors and time frames necessary to achieve the agreed outcome.
- They are often called impact pathways or theories of change.



Where is it in the framework and when to apply it?

- Pathways are applied in the **REFLECTION** and **STRATEGY** stages.





CLIMATE RESILIENT PATHWAYS

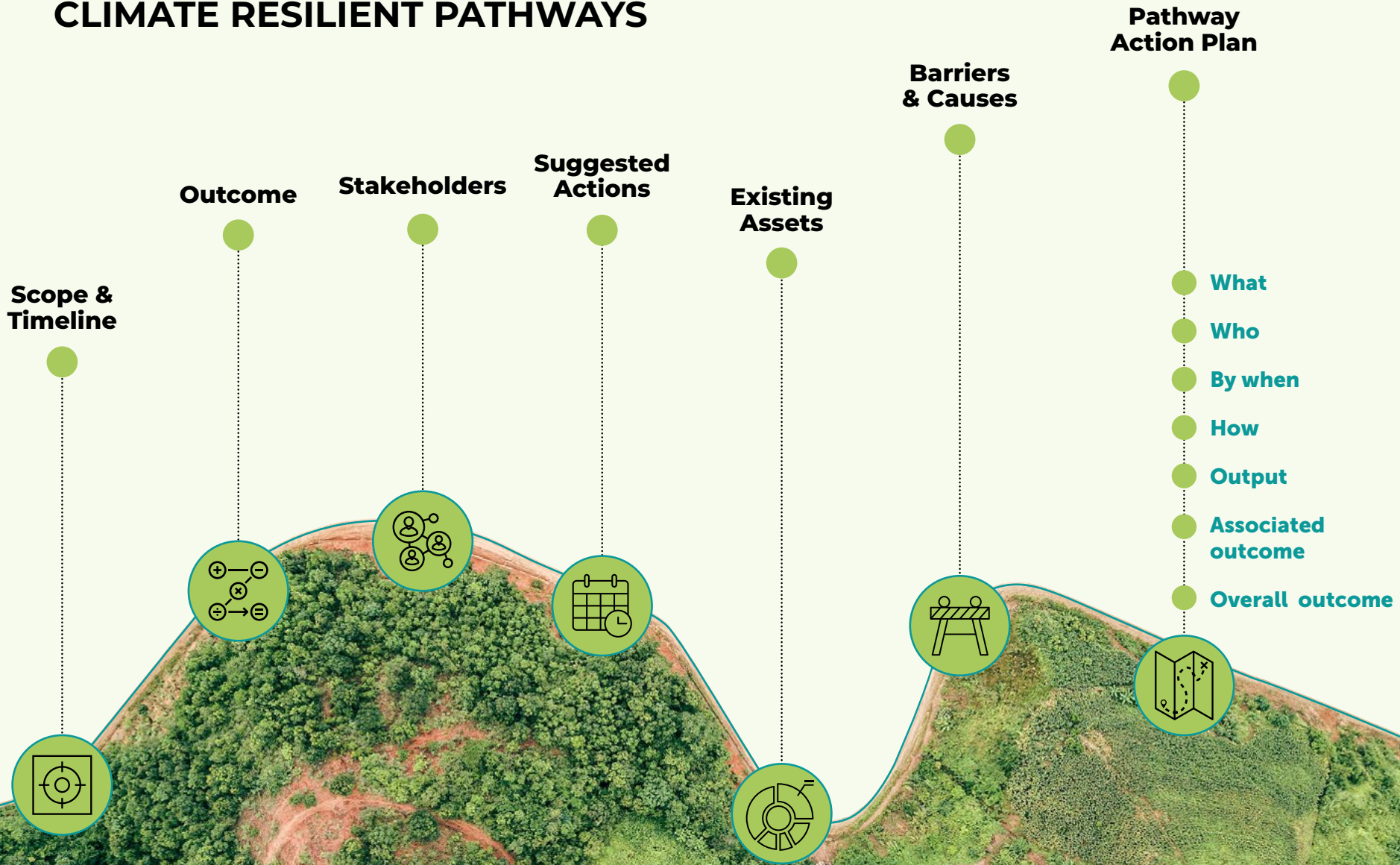


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CLIMATE RESILIENT PATHWAYS

Scope & Timeline

Identify the scope characterize the main theme, location and timeline



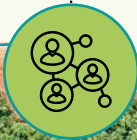
Outcome

Describe the desired outcome of the pathway, what is the ideal outcome within the time period?



Stakeholders

Who are the stakeholders involved in this theme?



Suggested Actions

What interventions, policies or partnerships can be implemented to achieve the desired outcome?



Existing Assets

What is already in place that supports the intended outcome?



Barriers & Causes

Identify current assumptions, concerns, barriers and behaviours that will keep the desired outcome of this pathway from being achieved.

Revisit stakeholders required to overcome the barriers to see if more actors need to be engaged.



Pathway Action Plan

Based on the barriers and assets, what are suggested actions to achieve the desired outcome?

What

Who

By when

How

Output

Associated outcome

Overall outcome

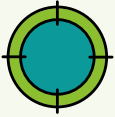


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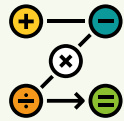


CLIMATE RESILIENT PATHWAYS



Scope and time

Climate smart, agro-ecological solutions to address water scarcity and build climate resilience in agricultural systems by 2030.



Outcome

Farmers (women, men and youth) are applying ecosystem based, agro-ecological, climate smart and water saving practices and technologies to adapt farming systems to effects of climate change and improve food security and profitability.



Suggested actions

- Promoting short distribution webs and build local markets.
- Promoting integrated farming systems to increase diversification (crops, livestock, fish, trees).
- Build capacity for sustainable land management practices and water harvesting techniques.
- Develop seed saving networks.
- Integrated pest monitoring and management.
- Labour sharing across farms.
- Promote participatory governance of food systems.
- Expand regenerative and conservation farming.



Assets

- Building off local CBO networks engaged in integrated farming training.
- Local informal labour sharing agreements.
- Agro-ecological practice promoters.
- Conservation agriculture groups.
- Existing projects and programs.



Barriers

- Lack of understanding of relationship between land management and water availability.
- Lack of diversity (crops/livestock/fish/multi-purpose trees) in farming systems.
- Separate sectoral advice to farmers (health, agricultural extension, nutrition, veterinarians, irrigation).
- Lack of integrated water management policies.



Underlying causes

- Unsustainable agricultural practices.
- Limited access to local and higher scale markets for diverse products.
- No cross-sectoral planning processes for water management and climate resilience actions.



LEARNING EXERCISE

Develop a climate smart, ecosystems based strategy / enabling environment



Activity 01



What

Develop a climate smart, ecosystems based strategy / enabling environment



Who

Agriculture, water, environment,



Research organizations working on livestock, aquaculture, climate smart agriculture and landscapes



National Farmers Associations



NGOs promoting agro-ecological and water saving approaches



FAO



By when

Year 1

How

- A technical committee / expert working group to provide evidence, technical backstopping and input into policy amendment process
- Lobby and establish key relevant policy contacts and relationships
- Draft practical guidance for implementation of climate smart and ecosystem based approaches

Associated outcome

Policy and enabling environment that promotes a policy incentive and implementation path for ecosystem based approaches in farming systems

Output

Amended language, targets and goals to relevant policy and strategic frameworks to explicitly mention ecosystem based and agro-ecological principles



Overall outcome

Farmers (women, men and youth) are applying ecosystem based, climate smart and water saving practices and technologies to adapt farming systems to effects of climate change and improve food security and profitability.

Activity 02



What

Build capacity and incentivize integrated farming systems using agro-ecological practices



Who

Agriculture, water, environment,



Extension services



NGOs



UN FAO



Farmers groups



Women's organizations & youth groups



Development partners, investors



Media



By when

Year 2 & 3

How

- Awareness campaign on value and benefits of integrated farming systems, sustainable agriculture and climate resilience
- Develop capacity materials for agro-ecological approaches and integrated farming systems
- Integrate and expand training into existing farmer groups/ farmer field schools

Associated outcome

X number farmers are trained in integrated farming systems

Output

Farmers including women, men and youth are adopting: agro-ecological practicing water harvesting measures, sustainable land management activities higher diverse systems for farming



Overall outcome

Farmers (women, men and youth) are applying ecosystem based, climate smart and water saving practices and technologies to adapt farming systems to effects of climate change and improve food security and profitability.

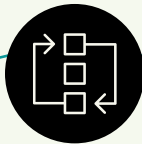


CHECKING FOR TRADE-OFFS



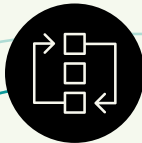
Agro-ecological climate smart processes

Develop a climate smart, ecosystem based strategy



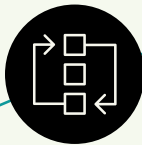
Markets for small grains

Awareness campaign on the benefits of small grains



Digital extension

Develop linked radio and mobile phone communications for distance extension service remote communities



Vested interest in small grains could result in fertilizer subsidies that may disincentivize integrated farming systems or seed saving

Would farmers potentially trade off maize subsidies for drought resilient crops

Promoting subsidies and fertilization versus agro-ecological approaches

Outcome

Enabling environment that promotes a policy incentive and implementation path for ecosystem-based approaches in farming systems

Outcome

Increased demand for producing, processing, marketing and consuming small grains

Outcome

Functioning distance extension services to support farmers in applying climate smart practices



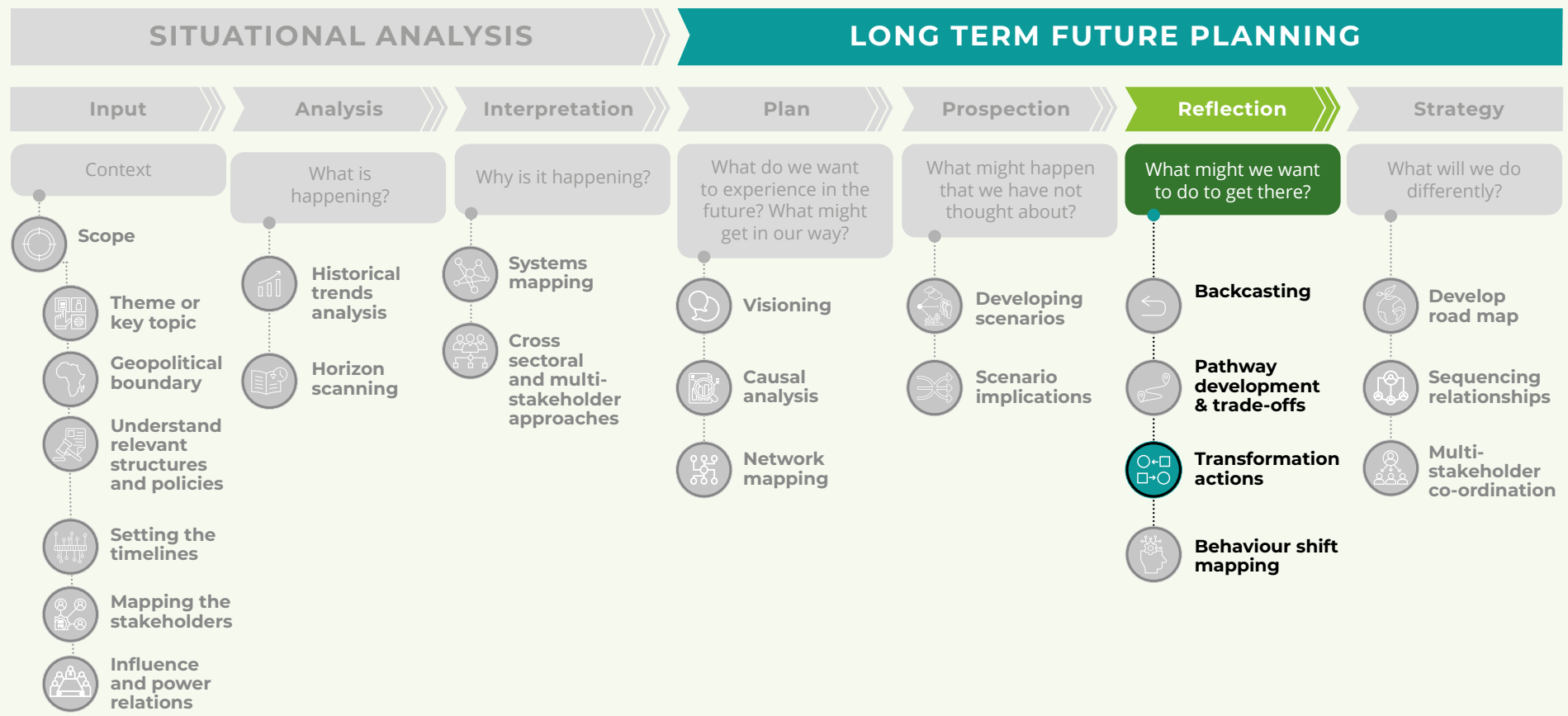
FORESIGHT KEY FRAMEWORK STAGES



DATA, EVIDENCE, KNOWLEDGE AND CREATIVITY



STAKEHOLDER ENGAGEMENT AND PARTICIPATION



REFLECTION



Backcasting



Pathway development & trade-offs



Transformation actions



Behaviour shift mapping



QUESTION?

When you hear the term transformative change what do you think of or how would you define it?

“

Today's interim report from the UNFCCC is a red alert for our planet. It shows **governments are nowhere close to the level of ambition needed to limit climate change to 1.5 degrees and meet the goals of the Paris Agreement**

Secretary-General António Guterres on the report findings (February 2021)

“

UN Climate Panel tells us we have 10 years left to begin a radical transformation of this civilization to move quickly to a zero emissions society... we need a new economic vision and a game plan ...we are moving from the age of progress to the age of resilience”

Jeremy Rifkin

”

“

As opposed to incremental adaptation, which the IPCC says aims to maintain existing systems through measures such as introducing more drought-resistant varieties of crops or using more efficient irrigation, transformative adaptation is intended to change the fundamental attributes of agricultural systems in response to actual or expected climate and its effects, often at a scale and ambition greater than incremental activities.

World Resources Institute

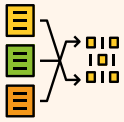
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Photo: ©Freepik

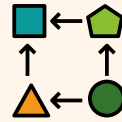
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KEY TERMS



Transformational change - includes major long-term changes in the way we operate and may shift us between or into new 'systems' and processes.



Incremental change - refers to change that occurs slowly and without necessarily modifying the essence of social structures or organizational practices.

TRANSFORMATIVE CHANGE

- The future that is coming often **requires significant change**.
- Transformative change requires sometimes **radically new interventions, policies and partnerships**.
- It requires **disruptive technology** which can be defined as any innovation that dramatically changes the way consumers, businesses and industries operate.
- Moves us **beyond incremental change and results in major long-term changes** in the way systems operate.



Photo: ©Neil Palmer (CIAT)



REFLECTIONS AND GUIDING QUESTIONS

WHAT MIGHT TRANSFORM?

Transformational Shifts

- Markets to networks
- Transactions to Flows
- Ownership to Access
- Sellers and Buyers in negotiation- to producers and users in networks
- Gross Domestic Product to Quality of Life
- Productivity to Regenerative

Jeremy Rifkin

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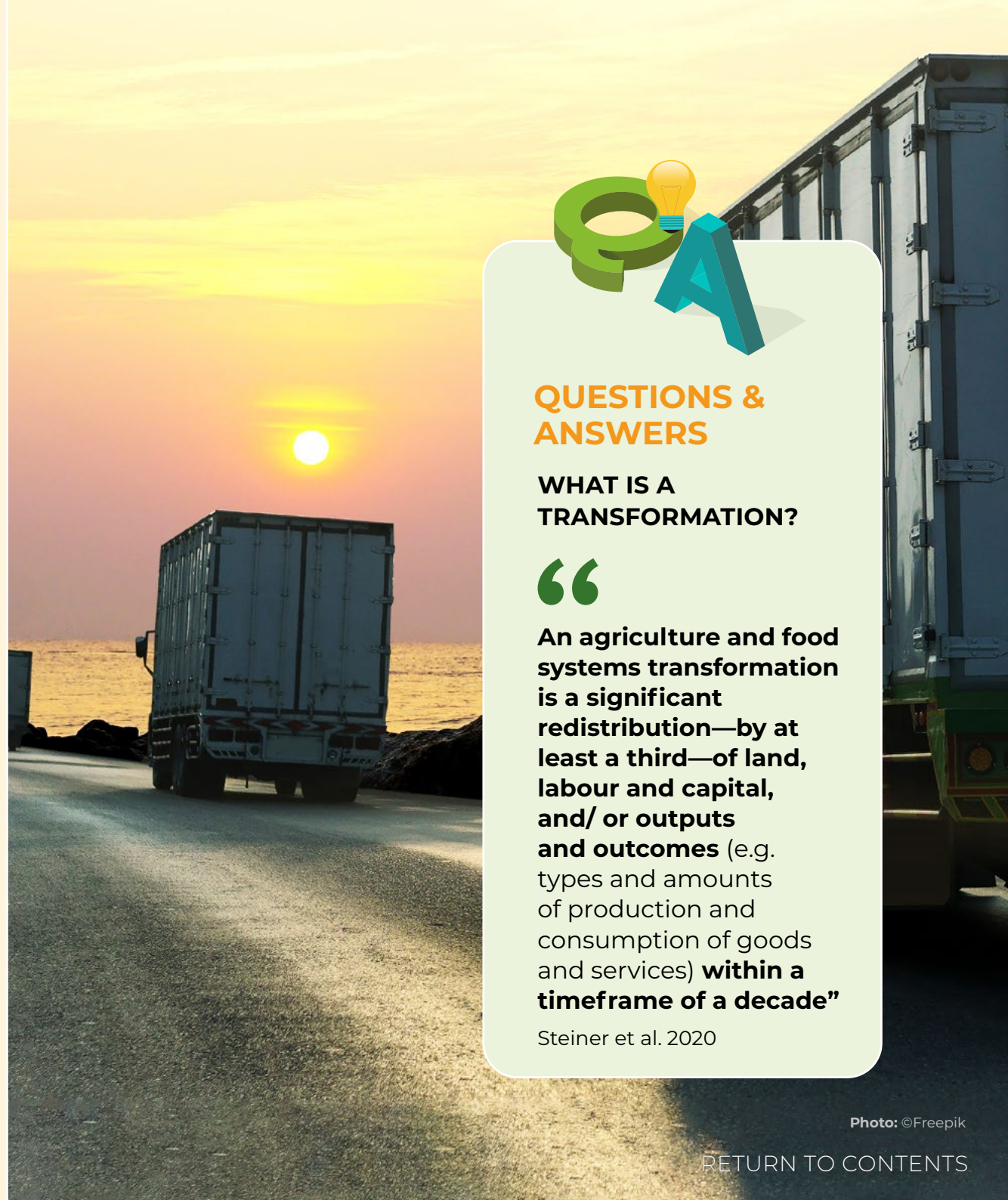
REFLECTIONS AND GUIDING QUESTIONS

WHAT MIGHT TRANSFORM?

The next industrial revolution will emphasize:

- Communications
- Power/energy
- Transportation, mobility and logistics
- Education
- Productivity to Regenerative

Jeremy Rifkin



QUESTIONS & ANSWERS

WHAT IS A TRANSFORMATION?

“

An agriculture and food systems transformation is a significant redistribution—by at least a third—of land, labour and capital, and/ or outputs and outcomes (e.g. types and amounts of production and consumption of goods and services) within a timeframe of a decade”

Steiner et al. 2020

Photo: ©Freepik

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CATEGORIES OF TRANSFORMATIVE ACTIONS



INTEGRATED AND ADAPTIVE INTERVENTIONS



FLEXIBLE, ROBUST AND SYNERGISTIC INSTITUTIONS AND POLICIES THAT DRIVE IMPLEMENTATION



NOVEL PARTNERSHIPS, CROSS SECTORAL OR MULTI-STAKEHOLDER RELATIONSHIPS

CATEGORIES OF TRANSFORMATIVE ACTIONS



INTEGRATED AND ADAPTIVE INTERVENTIONS

- A monitoring, reporting, and verification system.
- New design/infrastructure.
- **Scaling** existing innovations.
- Awareness, knowledge, skills, **empowerment development**.
- Knowledge/data platforms.
- New technology.
- A lifestyle or **behaviour change**.
- Finance/incentives/subsidies (Financial technology to get private sector to directly pay farmers for restoring land health).
- **New businesses and business models** (loan facility for smaller holder farmers that can geo-stamp).



FLEXIBLE, ROBUST AND SYNERGISTIC INSTITUTIONS AND POLICIES THAT DRIVE IMPLEMENTATION

- Changes in decision making processes (Develop formalized office in financial planning for cross sectoral coordination, joint planning and joint budgetary allocations).
- A form of decentralization or **distributed decision making**.
- Nested scale policy design.
- Time bound reflections on policies.
- **Cross sectoral policy development** and financing frameworks.



NOVEL PARTNERSHIPS, CROSS SECTORAL OR MULTI-STAKEHOLDER RELATIONSHIPS

- New set of actors working together in an informal or formal setting.
- **New cross sectoral, multi-stakeholder relationships**.
- Pooling resources, money or labour for synergy .
- **Trans-generational** and thematic partnerships.



REFLECTION



Backcasting



Pathway development & trade-offs



Transformation actions



Behaviour shift mapping

“

We often build our plans and strategies based on actions that result in incremental change – when we need actions that are transformative and suitable for the future that is coming.

“

Using foresight tools and methods, we can plan the transformational change that will be needed to move towards the future we want.

BEHAVIOUR SHIFT MAPPING

OUTCOME MAPPING

What is it

A framework developed by the International Development Research Centre (IDRC) for systematic capture and tracking of observable changes in the behaviours, actions, activities and relationships of targeted stakeholders.

Why we use it

To plan, track and adapt engagement with target stakeholders (boundary partners) to towards desired outcomes.

KEY ELEMENTS AND STEPS

- Intentional Design.
- Outcome and Performance Monitoring.
- Evaluation Planning.

OUTCOME MAPPING

INTENTIONAL DESIGN

- STEP 1: Vision
- STEP 2: Mission
- STEP 3: Boundary Partners
- STEP 4: Outcome Challenges
- STEP 5: Progress Markers
- STEP 6: Strategy Maps
- STEP 7: Organizational Practices

EVALUATION PLANNING

- STEP 12: Evaluation Plan

OUTCOME & PERFORMANCE MONITORING

- STEP 8: Monitoring Priorities
- STEP 9: Outcome Journals
- STEP 10: Strategy Journal
- STEP 11: Performance Journal

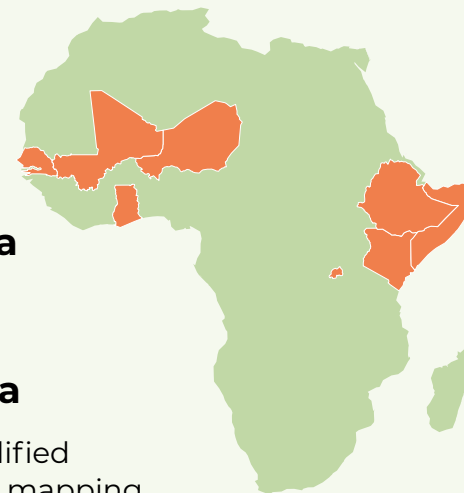


QUESTION?

Have you already witnessed a behavior shift of stakeholders you are trying to influence in your work?



Regreening Africa project working across eight countries in Africa



In this example, a simplified version of the outcome mapping



The process is:

- Being used to track project wide practice and policy influence in each country.
- Allows the project countries to reflect on progress annually to be adaptive and to include behaviour shifting activities in the next annual budget and workplan.

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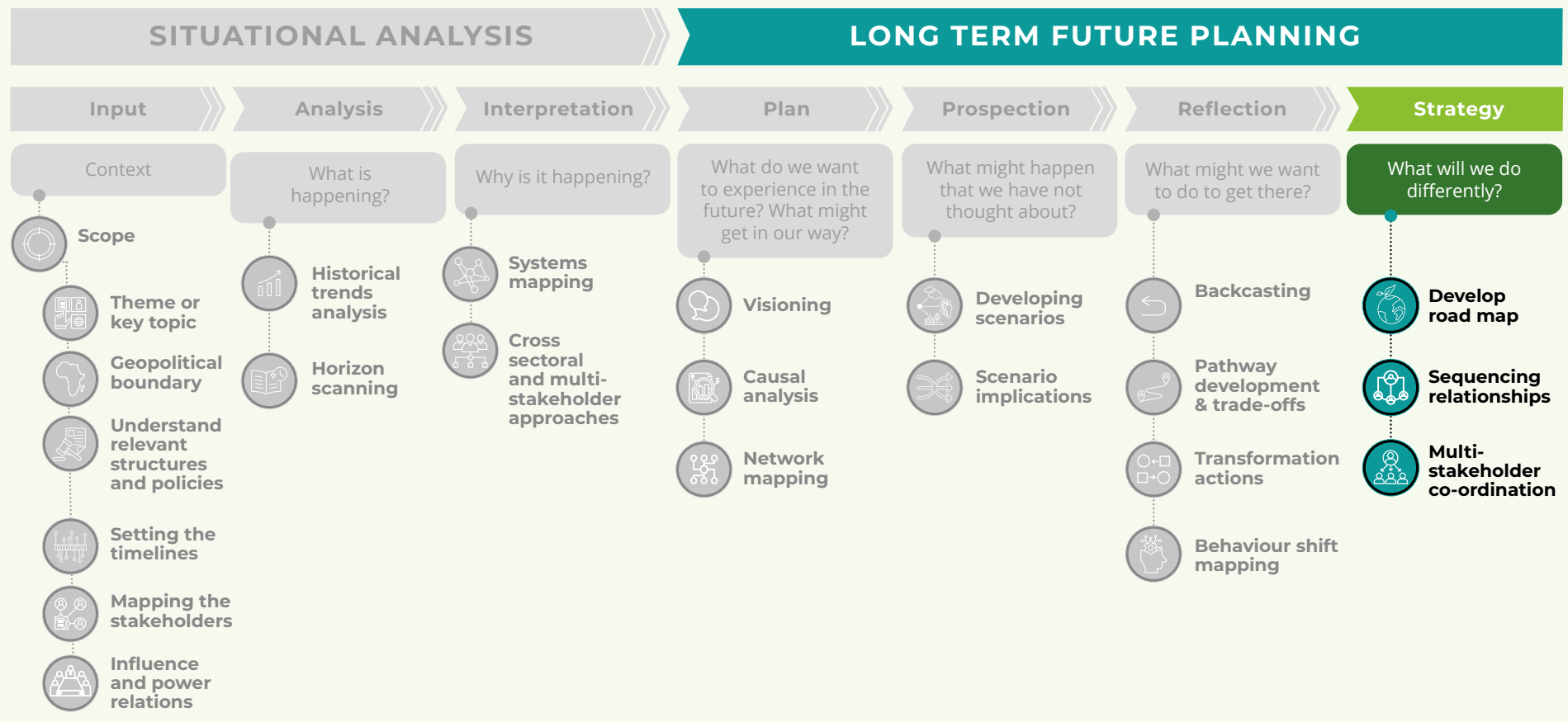
FORESIGHT KEY FRAMEWORK STAGES



DATA, EVIDENCE, KNOWLEDGE AND CREATIVITY

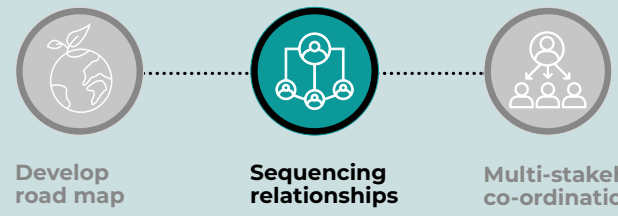


STAKEHOLDER ENGAGEMENT AND PARTICIPATION





STRATEGY



STRATEGY PHASE

SEQUENCING RELATIONSHIPS

What is it

Sequencing relationships is a partnership leveraging approach that builds on your stakeholder map and relies on shuttle diplomacy and iterative conversations and dialogues to strengthen engagement.

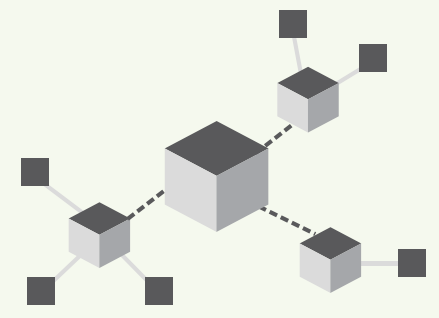
Why we use it

Understanding the stakeholder you need to engage and getting them on board in order of priority and power of requires multiple steps for relationship building.

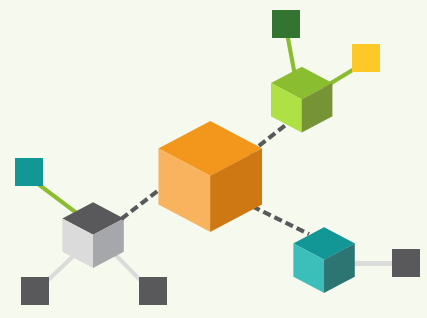
KEY STEPS

- 1 Using your stakeholder map, prioritize linkages between stakeholders that can be easily leveraged.
- 2 Outline power players – these would be strategic meetings and where you need to get buy-ins or endorsement.
- 3 Plan a set of engagements (e.g. personal introductions, phone calls, official meetings, or corridor conversation).
- 4 Analyse the feedback from each engagement which may alter your sequence.

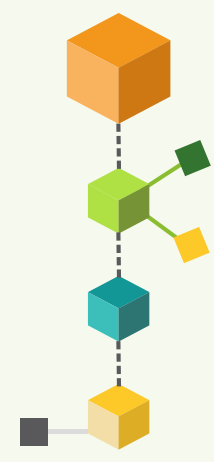
STAKEHOLDER MAP



PRIORITIZE LINKAGES AND "POWER PLAYERS"



PLAN A SET OF ENGAGEMENTS



- Personal Introduction
- Personal Meetings
- Phone Calls
- Political Meetings
- Workshops
- Corridor Conversations

Analyze feedback from each engagement

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INFORMATIONS FLOW

What is it

The approach is a systematic process to understand what information, what format, and what quality is flowing between stakeholders.

Why we use it

To get an accurate understanding of key evidence and where there are gaps in information synthesis or collaboration and to motivate for more synergy in information collection and better support stakeholder linkages.

KEY STEPS

- 1 For your relevant theme or sector, and with relevant stakeholders, start your information flow with the most local level of information collection
- 2 Trace how that information (e.g. nutrition status, dietary diversity) goes from a household level to a decision making level (e.g. district budget allocation for nutrition)
- 3 Along your flow, highlight the format of information (e.g. verbal, ledgers or hand-written) and the quality.

STRATEGY



Develop road map



Sequencing relationships



Multi-stakeholder co-ordination

MULTI-STAKEHOLDER CO-ORDINATION

What is it

- **Space for collaboration and partnerships between different interest groups** ranging from businesses, government, civil society, and science
- **Purposefully organised interactive processes** to foster participation in dialogue and decision-making about shared challenges, policy and implementation actions

Why we use it

- **Roles and mandates of MSPs vary** but the aim is to develop **collaborative decision-making and multi-level governance processes** that enable shared perspectives, new understanding, and collective commitment for solutions
- **Unlock people's potential to cooperate and innovate** to reach sustainable development goals.



KEY LESSONS FOR SUCCESSFUL MSPs



Scope, mandate and engagement design



Conduct a situation analysis, stakeholder mapping, tease out inequity issues in decision making processes and benefit sharing.



Tailor the stakeholder engagement and collaborative process design to the context:



Actors: power dynamics (gender, ethnic, economic), history of past and present initiatives, time and funding available.



Governance: control of decision making, recognition of rights, commitment to decentralisation, institutional landscape.



Social capital: developing relationships and strategies



Use visioning, root cause analysis and outcome mapping tools to prioritise issues.



Examine future scenarios, identify goals and agree on change strategies including actions and responsibilities.



Deepen understanding and trust.



Secure commitment to **processes and goals** by building consensus and political will.

KEY LESSONS FOR SUCCESSFUL MSPs



Collaborative development and implementation of actions



Build capacities of **key stakeholder** to lead and deliver - training and knowledge sharing including field visits and exchange visits.



Secure resources and support.

Co-design and implement detailed action plans.



Feedback evidence to influence national and subnational policy.



Reflective and iterative learning cycles



Implementation with reflective **learning cycles** that feeds back into adaptive management -monitoring progress against agreed criteria of success .



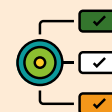
Create a learning culture and environment to generate lessons.



Knowledge co-creation and communication, ensure feedback loop mechanisms (multi directional: national, regional and local).



Sustainability and exit strategy



Reviewed periodically in relation to **goals** and associated timeframe.



Depend on available human and financial resources, **commitment** from members, institutional structure and political will.





Photo: ©Freepik

FORESIGHT PROCESS

FLOW FOR A FULL STRATEGIC FORESIGHT PROCESS

Scope, problem definition, initial system mapping

1

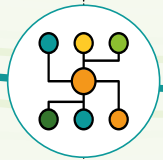


2

Trend analysis and strategic horizon scanning (signals and unknowns)

Causal analyses, drivers, uncertainties

3



4

Development of scenarios and visioning

Prioritize outcomes, backcasting, identifying transformative actions, and testing existing plans or policies

5



6

Strategy development and implementation plan

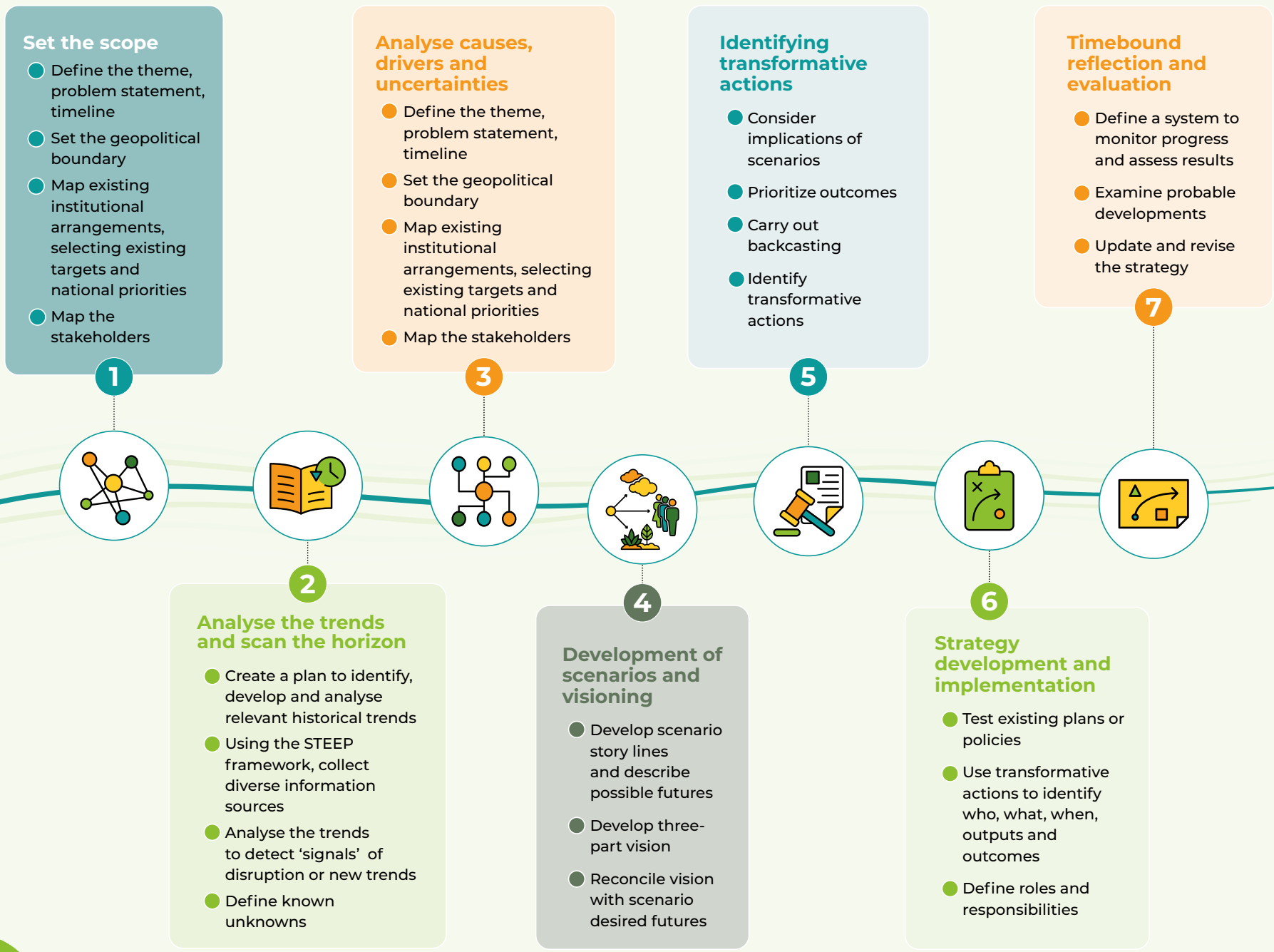
Timebound reflection current and probable developments and review strategy

7



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FLOW FOR A FULL STRATEGIC FORESIGHT PROCESS



REFLECTIONS AND GUIDING QUESTIONS

The foresight framework has been built around seven key stages with key questions:



Input - what is the context? What is happening right now?



Analysis - deepening the understanding of the above input questions;



Interpretation - why is it happening? This is where foresight differs from strategic planning, here we dig deeper to understand why something is happening;



Plan - what do we want to experience in the future and what might get in our way? Here we consider what we might do to get there;



Prospection - what might happen that we have not thought about? This is a critical stage of the foresight process and it requires thinking of multiple different potential futures;



Reflection - here we consider what we might want to do differently; and



Strategy - what will we do differently? This is where we build our new strategy based on our insights of what the future may be like.

Key points to note:

- Selected foresight tools and methods are presented, and their application demonstrated for each stage of the framework.
- It is important to note that data, evidence, knowledge, and creativity as well as stakeholder engagement and participation are steps that can be applied across the entire foresight process. Foresight is a participatory process that needs continued engagement of stakeholders as well as data and evidence as tools and methods are applied.
- Foresight application is demonstrated in the context of climate-resilient agricultural development in the WCA region. The foresight methods and tools chosen are therefore specific to this theme and may need to be reconsidered for appropriateness, in the context of your study.

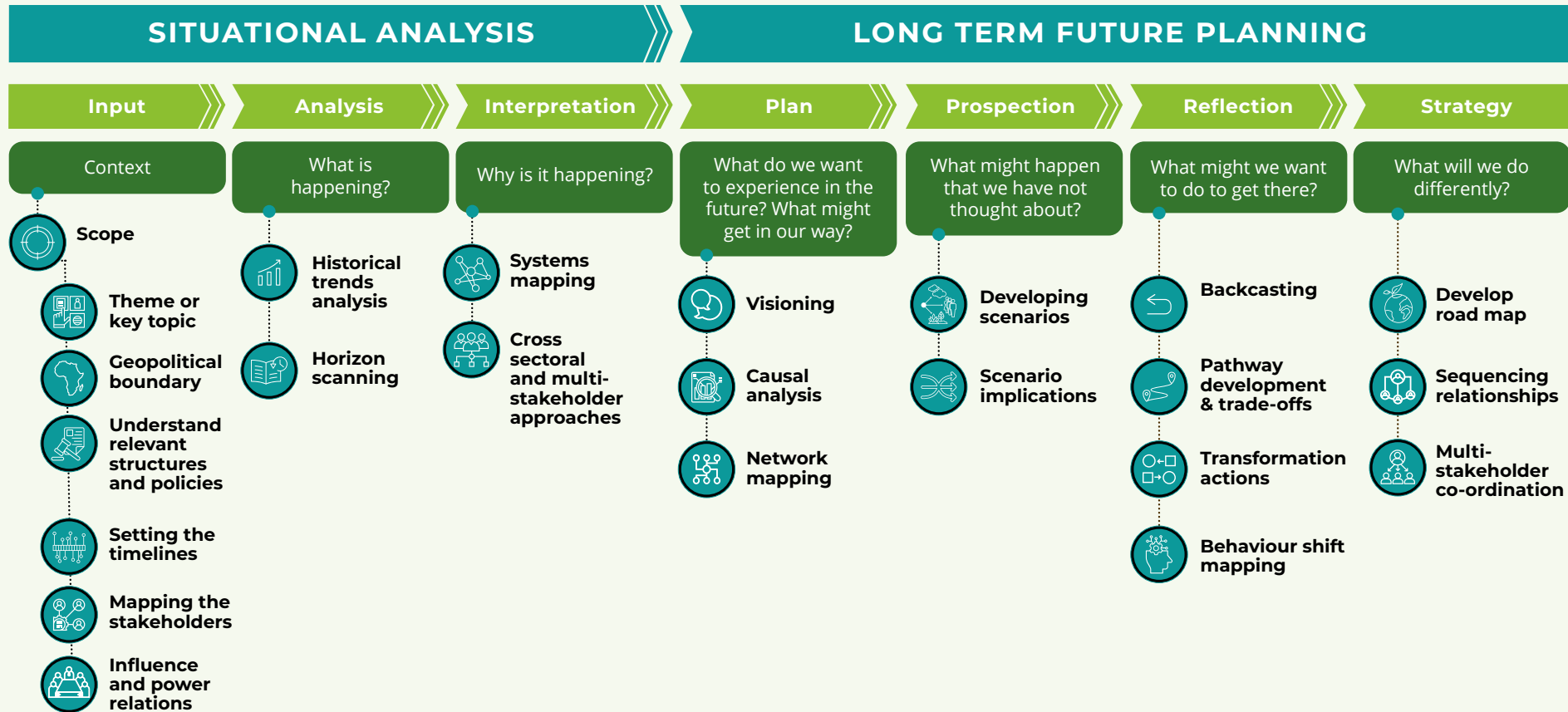
FORESIGHT KEY STAGES



DATA, EVIDENCE, KNOWLEDGE AND CREATIVITY



STAKEHOLDER ENGAGEMENT AND PARTICIPATION



REFERENCES

Chesterman S, Neely C, Gosling A, Quinn C, Chevallier R, Lipper L and Thornton P. 2020. Toolkit for Developing Skills and Capacity in Applying Foresight to Climate Resilient Agricultural Development in the SADC Region. SADC Futures: Developing Foresight Capacity for Climate Resilient Agricultural Development Knowledge Series. Wageningen, the Netherlands: CGIAR Research Program

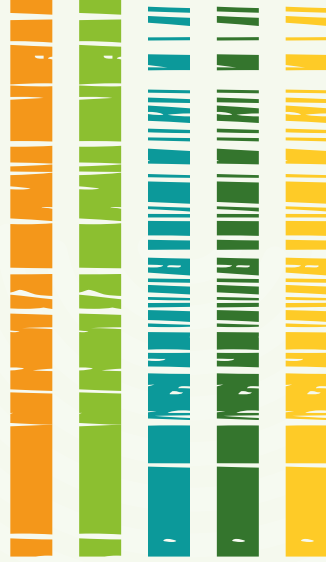
Le Coq, J.-F., Meza, L., Veeger, M., Martinez Baron, D., & Loboguerrero, A. (2019). Mainstreaming Climate-Smart Agriculture into regional policy in a fast-track formulation process: lessons from the Central American Region. Bali, Indonesia: 5th Global Science Conference on Climate Smart Agriculture.

SHARED. (n.d.). Retrieved from SHARED the Decision Hub: <http://www.worldagroforestry.org/shared>.



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