Harnessing Research for Climate Ambition and Transparency

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Defining and Assessing Transformational Impacts of Policies and Actions to Attract Finance and Raise Ambition of NDCs in alignment with SDGs

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Outline

- Enhanced ambition - Agenda 2030 (SDGs) and the Paris Agreement (NDCs), the emissions gap & 'Hothouse' risk
- Attracting finance for enhanced ambition
- Transformational impact assessment - ICAT definition & steps
- Initiative for Climate Action Transparency (ICAT) Guidance

Enhanced ambition

Global goals for a transformation to sustainable development and climate action

Two processes to define global goals for *development and climate* culminated in 2015:

- Agenda 2030 Sustainable Development Goals (SDGs) – Rio+20 process, merging MDGs with SD
- The Paris Agreement – UNFCCC climate negotiations (NDCs)

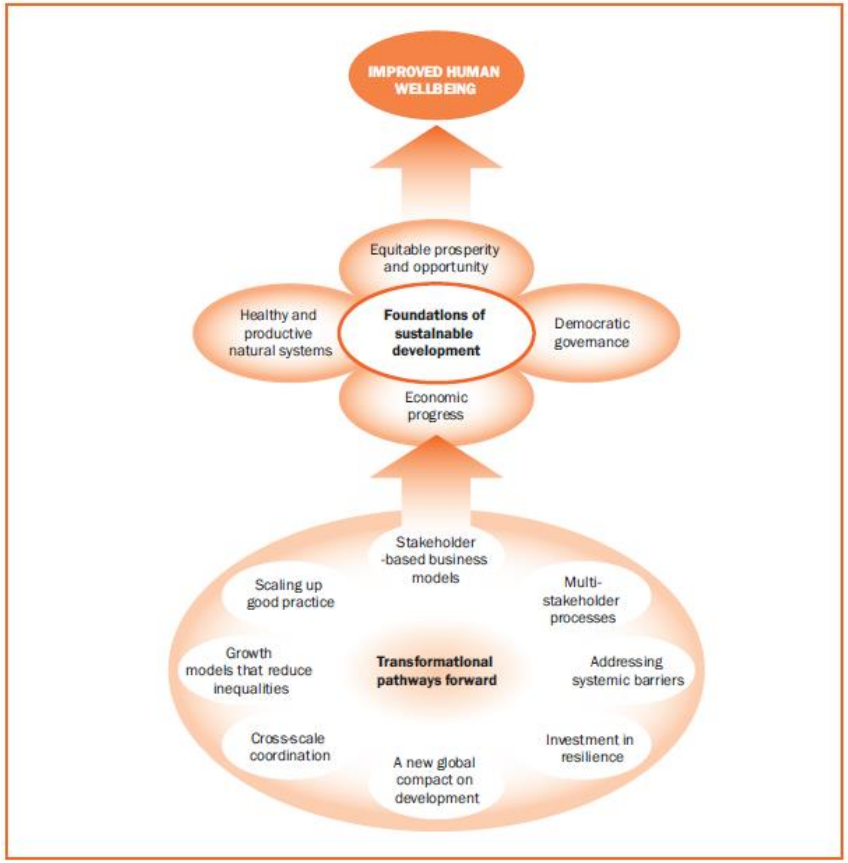
The two processes are related but institutionally separate and aim to inspire actions and targets for implementation at national level supported by international institutions

Transformational change

Common to the two processes is that they aspire to achieve transformational change (TC)

The UN High-level Panel identifies five shifts for TC to SD:

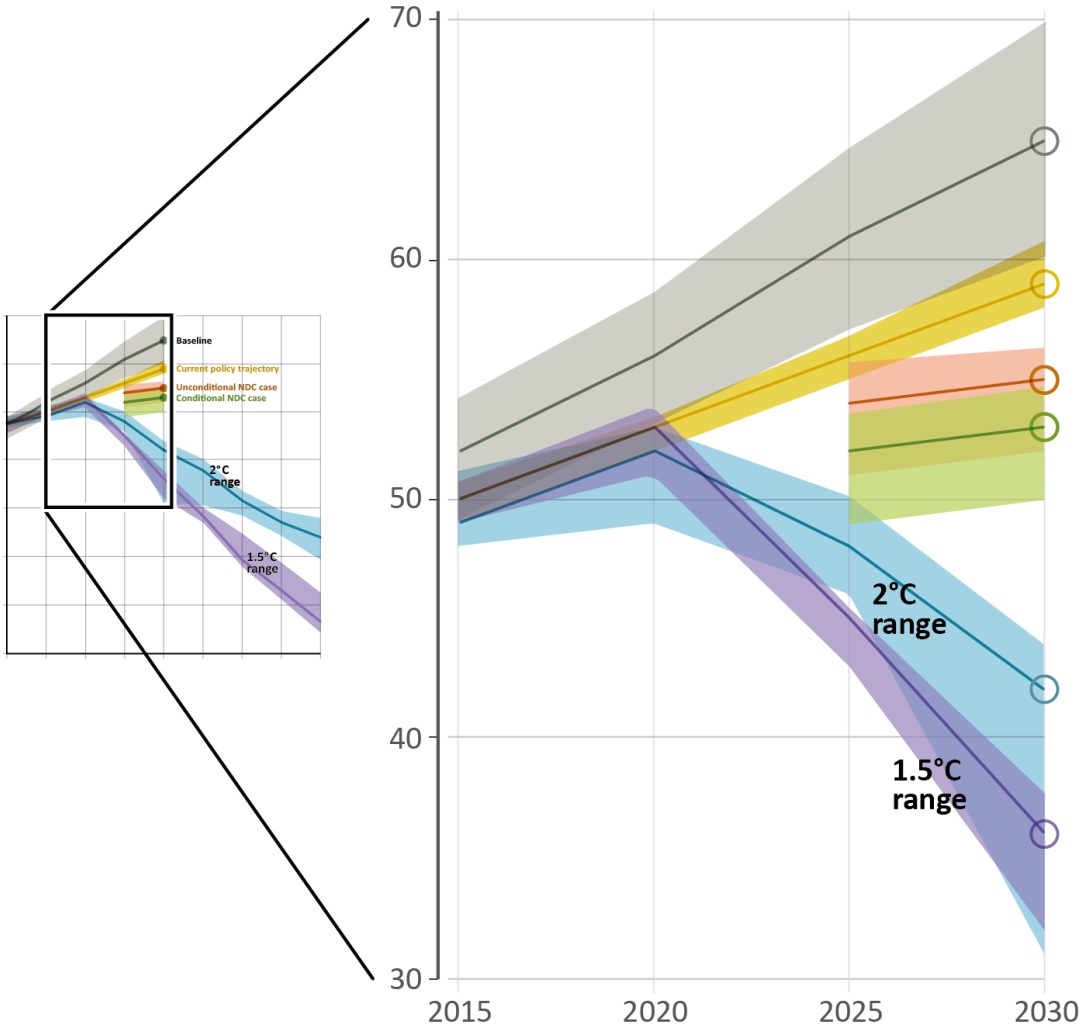
- Leave No One Behind
- Put Sustainable Development at the Core
- Transform Economies for Jobs and Inclusive Growth
- Build Peace and Effective, Open and Accountable Institutions for All
- Forge a New Global Partnership



Source: Independent Research Forum (IRF) on a Post-2015 Sustainable Development Agenda, March 2013

NDC contributions and the emissions gap

Annual global total greenhouse gas emissions ($GtCO_2e$)



Source: UNEP (2017). The Emissions Gap Report 2017. United Nations Environment Programme (UNEP), Nairobi

NDCs represent a first start to initiate the required transition, but are far from consistent with the well below 2°C / 1.5°C temperature goals

Full implementation of unconditional NDCs is consistent with staying below a 3.2°C temperature increase by 2100. Additional implementation of conditional NDCs lowers this by about 0.2°C

By 2030, carbon dioxide budgets for a likely chance of limiting temperature increase to below 2°C will be close to depleted under NDC implementation and well exceeded for the 1.5°C target

More ambitious NDCs necessary by 2020

- **Without enhanced ambition the likely global average temperature increase will be in the range of 3.0 - 3.2°C by the end of the century. The carbon dioxide budget for the 2°C scenario will be close to depleted by 2030, and the 1.5°C budget well exceeded**

- **The Emissions Gap in 2030 is in the order of 11 to 13.5 $GtCO_2e/yr$ compared with 2°C scenarios and 16 to 19 $GtCO_2e/yr$ compared with 1.5°C**

- **The Facilitative Dialogue in 2018 and the 2020 revisions of the NDCs are the last opportunity to get on a path to close the 2030 emissions gap**

- **Enhanced ambitions should build on the existing, extensive knowledge about the cost-effective policies and measures that can be taken total sectoral emission reduction potentials presented in the report amounts to 30–36 $GtCO_2e$, which is more than double the 2030 emissions gap**

Hothouse Earth risks

- Crossing a planetary threshold can set Earth on a 'Hothouse Earth' pathway, even as emissions are reduced
- Tipping points (thresholds for specific geophysical and biosphere feedback mechanisms) exist at lower tempetures than 2°C (as shown in Fig. 3)
- Avoiding the threshold requires radical/transformational change towards a stabilized earth pathway involving decarbonisation of the global economy, enhanced carbon sinks, value and behavioural changes and technological innovation.

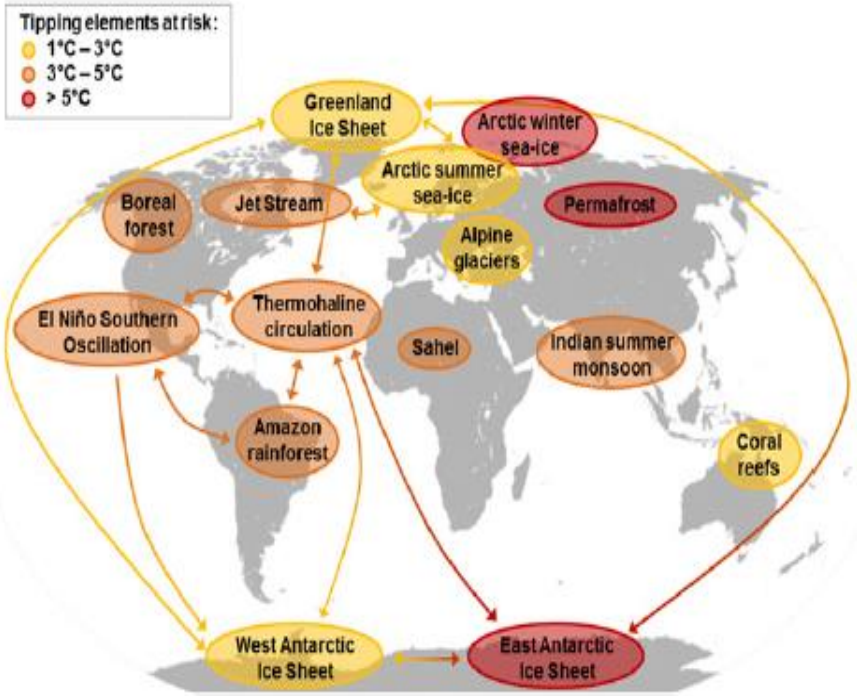
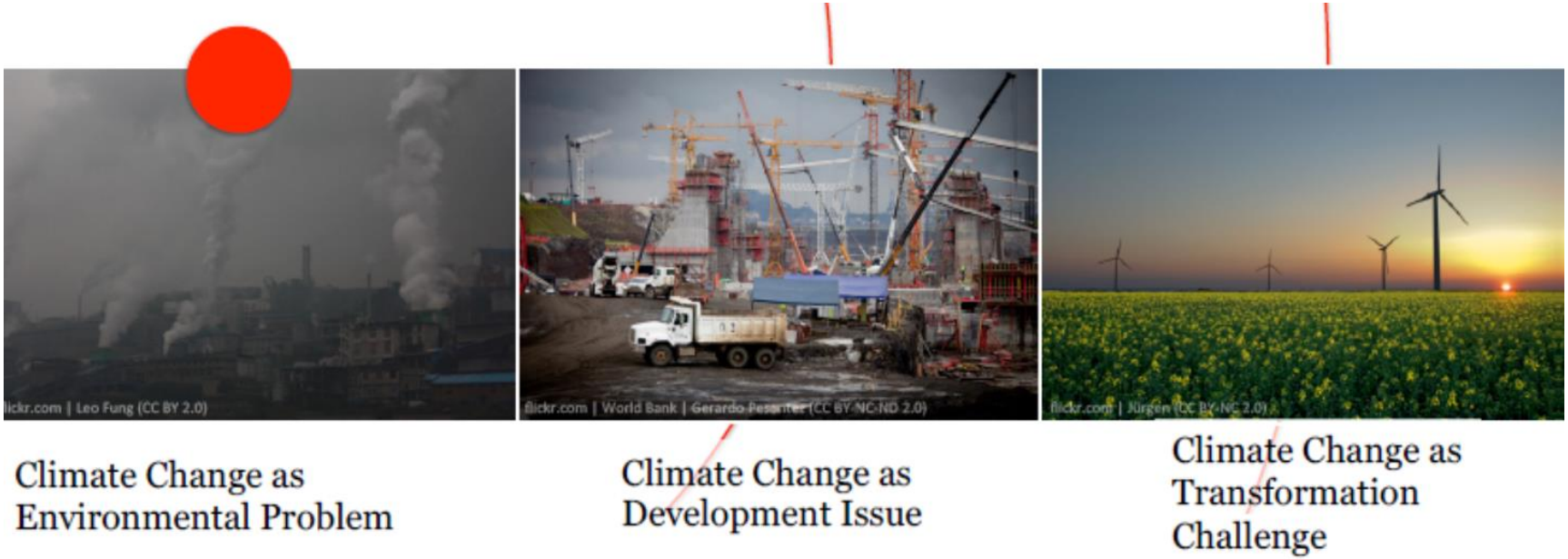


Fig. 3. Global map of potential tipping cascades. The individual tipping elements are color- coded according to estimated thresholds in global average surface temperature (tipping points) (12, 34). Arrows show the potential interactions among the tipping elements based on expert elicitation that could generate cascades. Note that, although the risk for tipping (loss of) the East Antarctic Ice Sheet is proposed at >5 °C, some marine-based sectors in East Antarctica may be vulnerable at lower temperatures (35–38).

Source: Steffen et. al. (2018): Trajectories of the Earth System in the Anthropocene, PNAS, US

Climate change as a transformational challenge



Source: Hermwille 2017, www.interconnections2017.org/papers

Attracting finance

Growing interest to invest in transformative actions

- Financial institutions and donors are increasingly prioritizing actions that bring transformational change/ paradigm shift (e.g., CIF, GCF, GIZ, NAMA Facility)
- Actions focused on incremental progress also remain significant
- Practically, no commonly used guidance yet exists on how to clearly assess and demonstrate the transformational potential/impact

How to demonstrate transformational potential/impact

- Through its framing of process-outcome characteristics, the ICAT Transformational Change guidance provides a way to think through factors that can catalyze transformational change
- It provides a methodology for those developing and implementing actions - as well as those investing in these – to assess & communicate how a given policy or action faciliates a paradigm shift to low carbon development

Transformational impact assessment

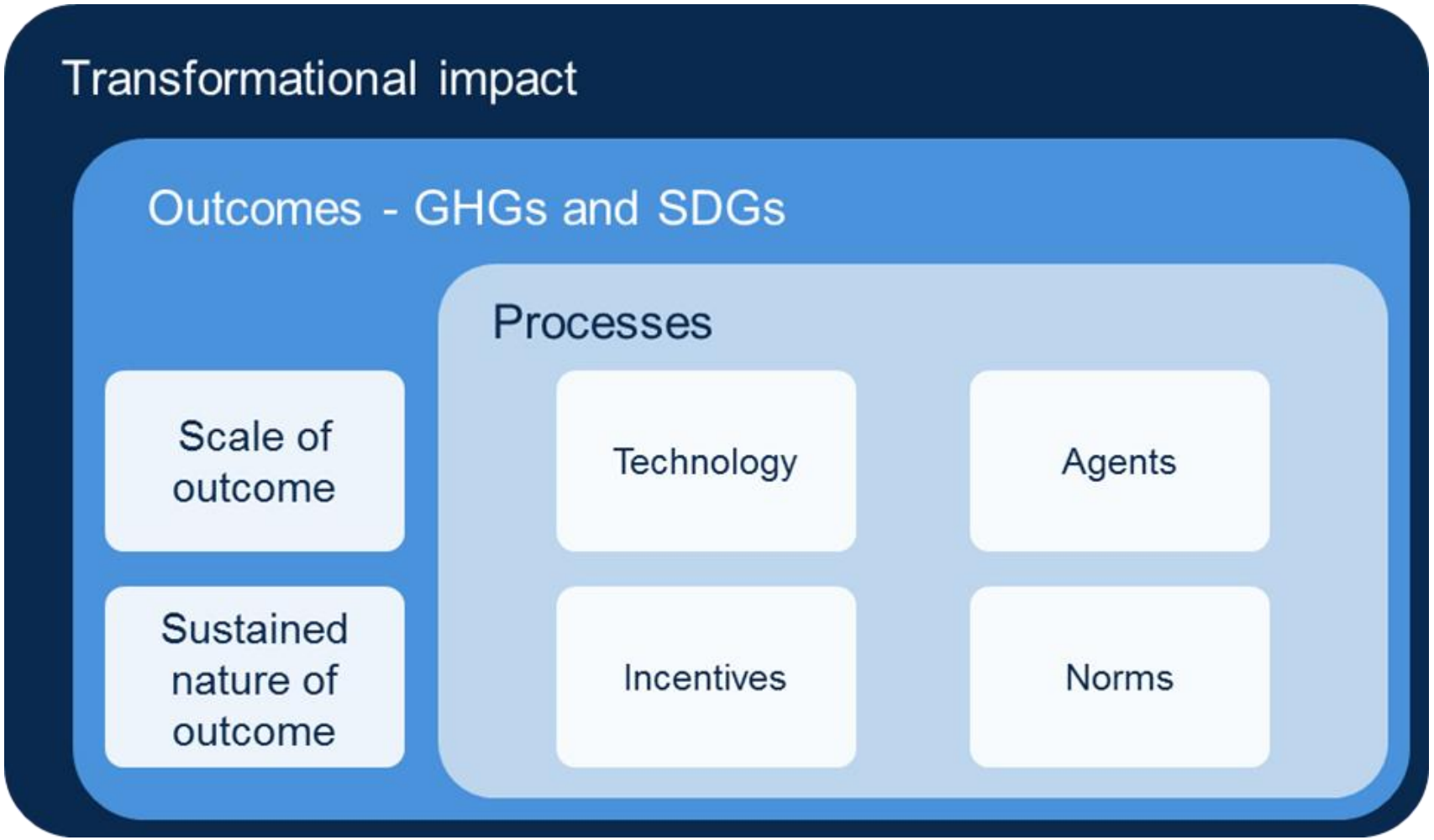
- ICAT definition

Definition of transformational change

- Transformational change is defined in this guidance as:

  A fundamental, sustained change of a system that disrupts established high-carbon practices and contributes to a zero-carbon society in line with the Paris Agreement goals to limit global warming to 1.5 - 2°C and the UN Sustainable Development Goals.

Characteristics of transformational change



Purpose of the guidance

- To help users assess the extent of transformation expected or achieved by policies or actions
- To help decision makers develop effective strategies for transformational change through better understanding of how policies or actions can set in motion processes that lead to transformational outcomes
- To support transparent and consistent reporting of transformational impacts

Guidance structure

Part I: Introduction, objectives and steps

Understand the purpose, applicability and limitations of the guidance (Chapter 1)

Determine the objectives of the assessment (Chapter 2)

Understand what is meant by transformational change (Chapter 3)

Understand key concepts, steps and assessment principles (Chapter 4)

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Part II: Defining the assessment

Describe the policy or action to be assessed and the vision for transformational change (Chapter 5)

Choose which transformational change characteristics to assess (Chapter 6)

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Part III: Impact assessment

Assess the starting situation (Chapter 7)

Estimate transformational impacts ex-ante (Chapter 8)

Estimate transformational impacts ex-post (Chapter 9)

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Part IV: Monitoring and reporting

Monitor the performance of the policy or action over time (Chapter 10)

Report the results and methodology used (Chapter 11)

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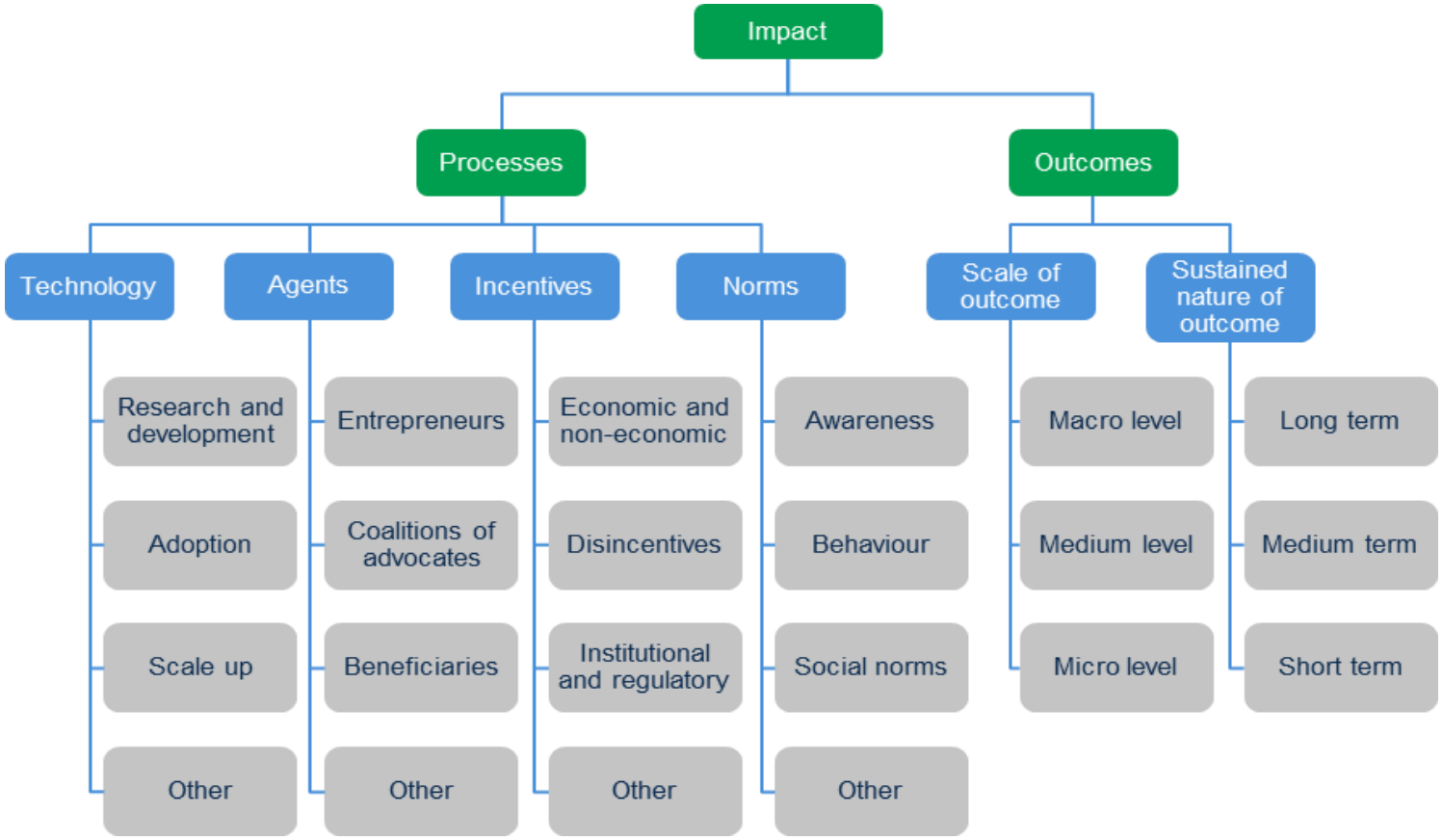
Part V: Decision-making and using results

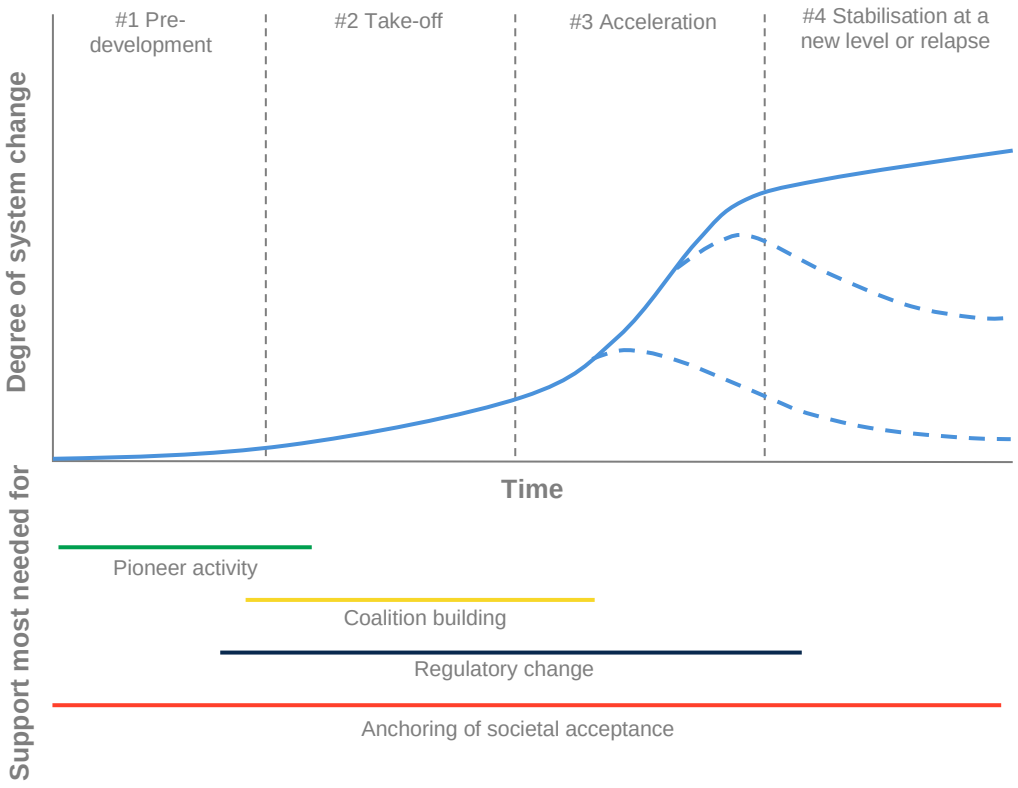
Learning, decision-making and interpreting results (Chapter 12)

Chapter 6: Choosing which transformational change characteristics to assess



Chapters 7-9: Impact assessment

Identify the phase of transformation:



Chapter 7: Assessing starting situation

Identify barriers for transformation

Barriers	Explanation	Characteristics affected
Limited availability of PV technology	There is very little manufacturing capacity for solar PV components in the country so components need to be imported. This barrier hampers adoption and scale-up of new PV technology.	Scale up

Describe starting situation

Process category	Process characteristic	Description of the starting situation	Indicators
Technology	Scale-up	Relevant. Solar rooftop has a negligible share in the solar energy sector. There is a huge amount of untapped potential in the solar rich country. Several barriers exist to large scale deployment of rooftop PV (e.g., lack of manufacturing facilities and high skilled workforce, high upfront cost)	➢ Share of installed PV rooftop in the solar sector (nationwide or statewide) ➢ Number of training workshops/ certifications for solar workforce ➢ Number of manufacturing facilities for solar PV

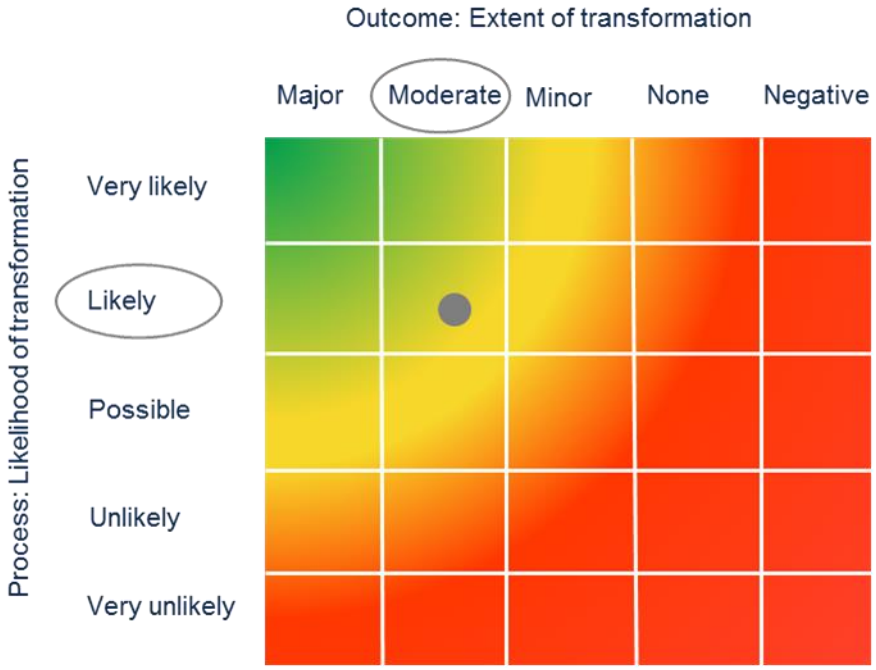
Chapters 8-9:Transformational impact

- Assess characteristics

Score	Rationale justifying the score	Indicators
3 Likely that the policy will have a significant positive impact on this characteristic over the assessment period	Financial subsidy and feed-in tariff have been widely used to scale up clean technology across the world. Together, these will address the barrier of high upfront financial investment needed for solar PV and improve the payback period on solar. It is realistically expected that these will lead to a significant uptake of solar in the country over the assessment period while addressing the barrier of limited availability of both technology and skilled workforce for installation and maintenance by kick starting the local manufacturing and service industry.	Share of solar PV rooftop generation in the national solar sector Starting situation – 5% Expected value – 30%

Chapters 7-9: Impact assessment

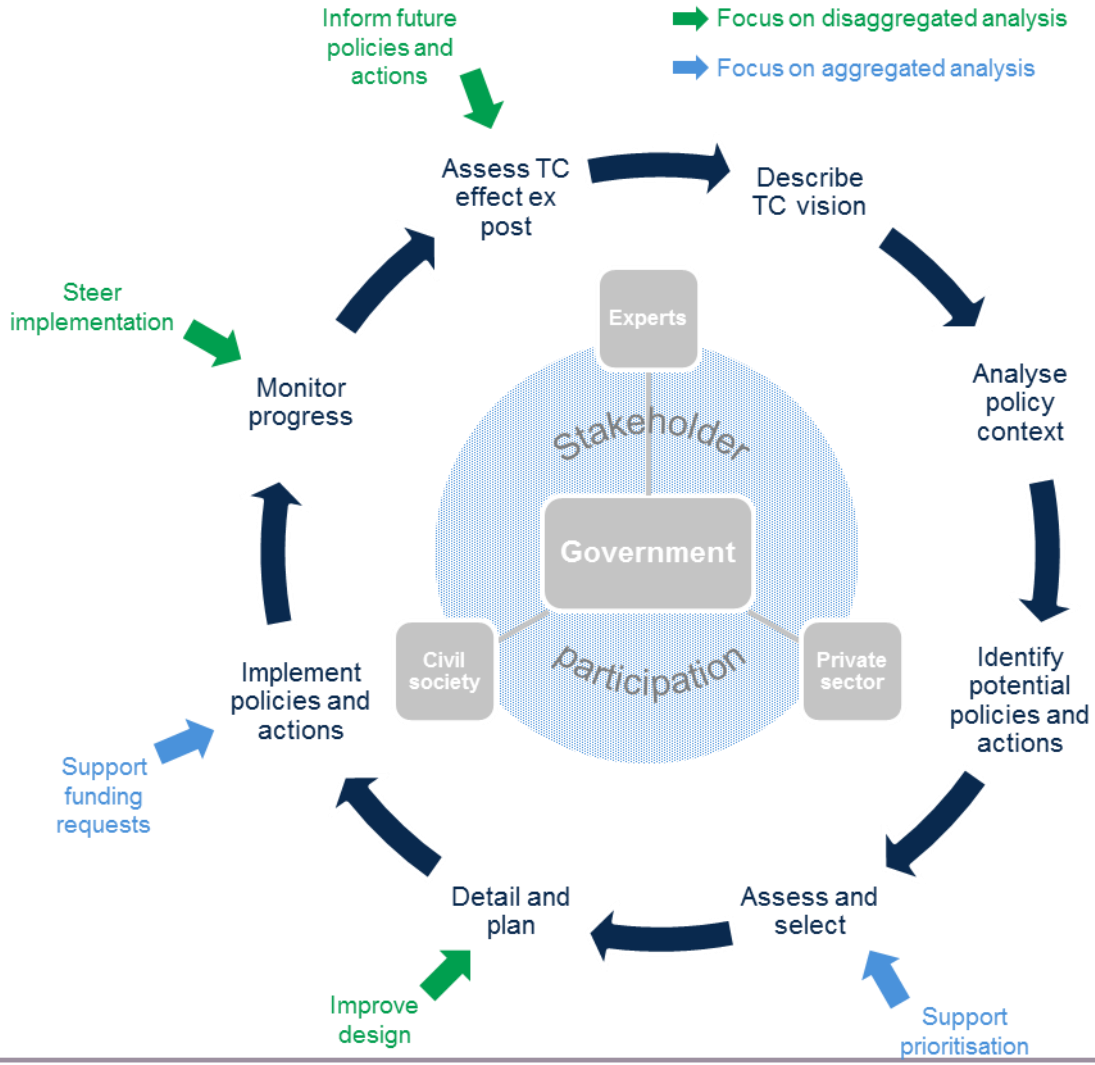
Transformational impact:



Chapters 10-11: Monitoring & Reporting

- Develop a monitoring plan
- Monitor indicators over time
- Communicate to your audience the recommended information, including:
  - Information about the policy and vision of transformational change
  - Assessment results & how will these be used to inform policy design or implementation
  - Underlying assumptions, data sources, etc.

Chapter 12: Learning, decision making, interpreting results



ICAT Guidance

ICAT objectives

Provide policymakers around the world with tools and support to assess the impacts of their climate policies and actions, to further transparent and ambitious climate action.

Two components:

- ICAT series of guidance
- Country support to build capacity

Multi-stakeholder partnership

DONORS

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

CIFF CHILDREN'S INVESTMENT FUND FOUNDATION

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE

ClimateWorks

GRANT MANAGEMENT

UNOPS

IMPLEMENTATION PARTNERS

UNEP DTU PARTNERSHIP

VCS VERIFIED CARBON STANDARD

WORLD RESOURCES INSTITUTE

SUPPORTING PARTNERS

Rainforest Alliance

CCBA The Climate, Community & Biodiversity Alliance

NEW CLIMATE INSTITUTE

INFRAS

ghg management institute

CDP DRIVING SUSTAINABLE ECONOMIES

THE CLIMATE GROUP

-- Introductory Guide --

Impact Assessment Guidance

Greenhouse gas impacts:

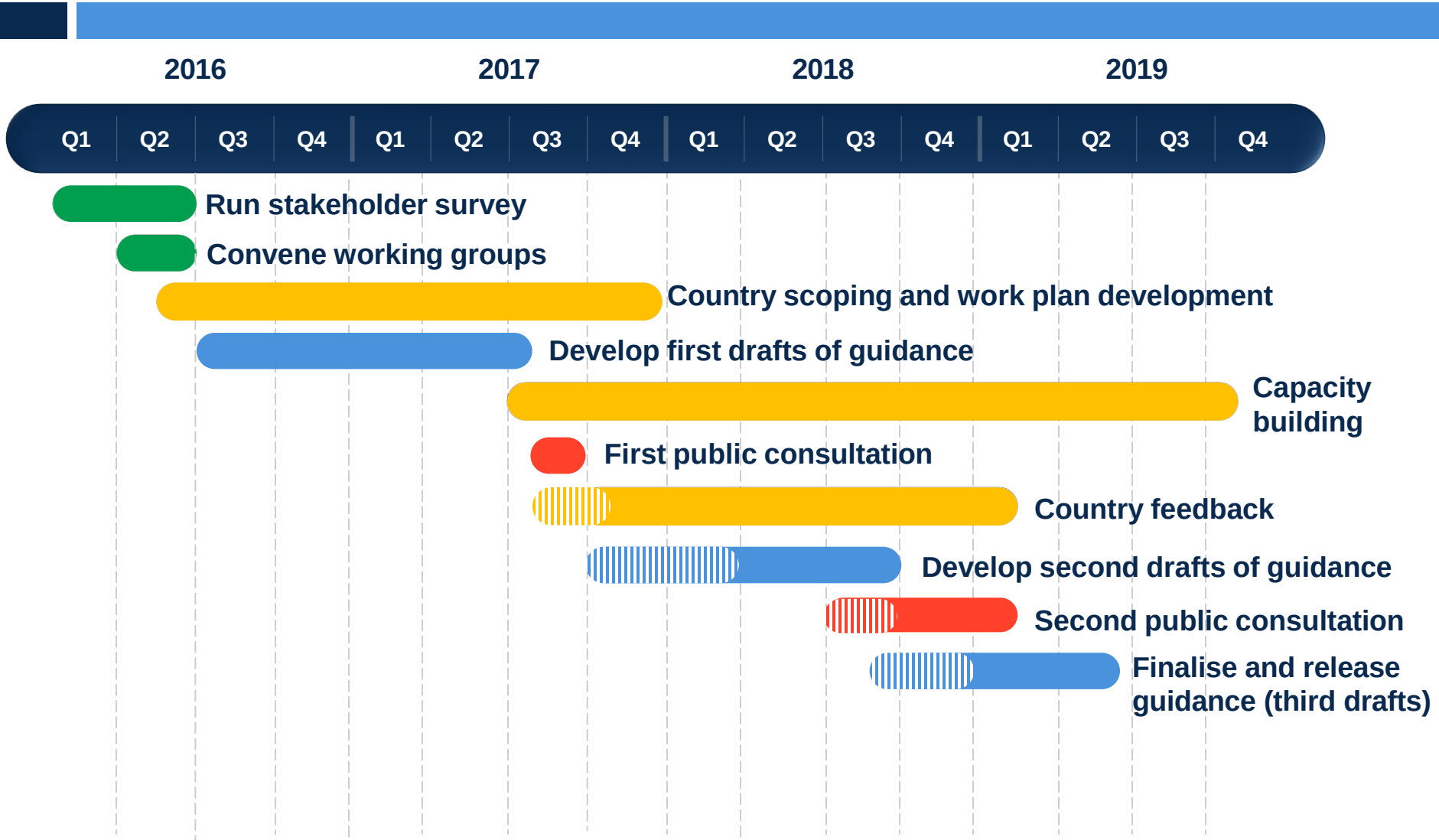
- Renewable Energy
- Buildings Efficiency
- Transport Pricing
- Agriculture
- Forest

- Sustainable Development
- Transformational Change

Supporting Guidance

- Stakeholder Participation
- Technical Review
- Non-State and Subnational Action

An inclusive, multi-stakeholder process



INITIATIVE FOR
Climate Action
Transparency

More information

Download the ICAT Transformational Change Guidance here:

http://www.climateactiontransparency.org/icat-guidance/transformational-change/

CHAPTERS 1 & 2	What is the guidance and why should I use it?
CHAPTER 3	What is transformational change?
CHAPTER 4	Overview of the methodology
CHAPTER 5	How to describe the policy or action being assessed and the vision for transformational change
CHAPTER 6	How to choose which transformational change characteristics to assess
CHAPTERS 7 & 8	How to assess impacts ex-ante
CHAPTERS 7 & 9	How to assess impacts ex-post
CHAPTERS 10 & 11	How to monitor performance over time and report results
CHAPTER 12	How to interpret results to facilitate learning and decision-making

Thanks!

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