ELCA

Climate Protection Management Handbook 1

Empowering Local Climate Action

Gesellschaft fur Nachhaltige Entwicklung (GNE)

August, 2024

Introduction to the ELCA Project

Welcome to the Climate Action Handbook, a comprehensive guide designed to equip you with the essential knowledge and tools to understand and address climate action effectively, and a curated resource that aims to bridge the gap between scientific understanding, policy development, and practical action in the fight against climate change. This handbook is a key output of the Empowering Local Climate Action (ELCA) project, produced following the successful completion of the initial training sessions. The ELCA project is designed to enhance the capacity of climate protection managers, enabling them to initiate and sustain vibrant local climate networks that foster effective cooperation on climate action in the Czech Republic and Romania.

The project is led by the Gesellschaft für Nachhaltige Entwicklung (GNE) from Germany, in partnership with People in Need (PIN) from Czech Republic and Politehnica University of Timișoara (UPT) from Romania. It is specifically targeted at local governments, civil society, non-governmental organizations, and associations, with the overarching aim of strengthening their capacity for climate protection management. The project commenced with a six-month training program developed in collaboration with the Society for Sustainable Development in Witzenhausen, Germany. This program was divided into two intensive phases. The first phase, conducted from 16 April to 31 June 2024, focused on introducing participants to the fundamental concepts, methods, and instruments of climate protection management. This phase was delivered through online sessions, accompanied by a training handbook and a networking platform that provided access to helpful materials and resources. Over 13 weeks, participants engaged in 40 hours of presentations covering key areas such as climate action and protection, stakeholder engagement, planning and implementation strategies, and building resilient communities.

Following this, the second phase of training is scheduled to begin in September 2024. This phase will be dedicated to the review and development of climate action plans, with an emphasis on the transfer of mitigation strategies and management instruments tailored to the specific conditions of the Czech Republic and Romania. Over another 13 weeks, with 40 hours allocated to workshop sessions, participants will engage in practical learning experiences, including a study tour to Germany, workshops on climate action plans and project proposals, and opportunities for a three-month internship. The training program will culminate in a final, intensive week of advanced learning and reflection in Witzenhausen, Germany.

The need for this project arose from the specific challenges faced by the Czech Republic and Romania. In these countries, agricultural practices and land management policies have often remained unsustainable, increasing the vulnerability of landscapes to climate change-related challenges such as soil erosion, biodiversity loss, and flash floods. Landowners, farmers, and municipalities frequently lack the necessary knowledge or resources to implement sustainable land use practices. Recognizing these challenges, the ELCA project aligns with the EU's Common Agricultural Policy (CAP), EU directives, and national climate change strategies, positioning local climate action plans as crucial instruments for change.

This handbook, developed from the initial phase of the Climate Protection Management (CPM) training, provides a comprehensive guide to the methods and strategies introduced during the program. It will be followed by a second handbook, which will cover the subsequent phases of the ELCA project, ensuring that all stakeholders are equipped with the knowledge and tools necessary to drive effective climate action at the local level.

Introduction to the ELCA - Climate Protection Management Handbook 1

The Climate Protection Management Handbook 1 is meticulously structured to provide a holistic understanding of climate science, policy frameworks, practical skills, and strategic approaches necessary for impactful climate action. It serves as a vital resource for policymakers, researchers, climate action professionals, and anyone committed to contributing to a sustainable future. Each chapter is designed to build upon the last, ensuring that readers gain a comprehensive and integrated perspective on the complexities of climate change and the myriad ways we can address it. Throughout this handbook, you will find detailed explorations of fundamental topics, such as the science behind climate change, the global and regional impacts of climate variations, and the essential policies and regulations that govern climate action within the European Union. You will also gain practical skills in data analysis, risk and vulnerability assessments, project management, and more.

One of the core themes of this handbook is the importance of collaboration and engagement. Whether through multi-stakeholder partnerships or citizen participation, the fight against climate change requires a collective effort. We delve into these aspects, providing guidance on fostering effective collaborations and ensuring that all voices are heard and valued. Another key aspect we address is the implementation of Monitoring, Evaluation, Accountability, and Learning (MEAL) systems. These systems are vital for tracking the progress and impact of climate initiatives, ensuring accountability, and fostering a culture of continuous improvement. Most importantly, we bring a practical perspective by focusing on the activities of climate protection staff at the municipal level in Germany. This provides real-world examples and insights into how local administrations can effectively contribute to national and global climate goals.

By the end of this handbook, you will have a thorough understanding of the multifaceted approach required for effective climate action, encompassing scientific knowledge, policy frameworks, practical skills, and strategic collaboration. This journey has been an incredible learning experience, and we hope it inspires and empowers you to contribute to a sustainable future.

Disclaimer: This handbook contains materials derived from 13 online sessions conducted as part of the ELCA project for our trainees. These sessions were led by external trainers, who are professionals in their respective fields, and all the content included in this handbook is based on their expert input, and not a personal publication or academic work of Gesellschaft fur Nachhaltige Entwicklung (GNE).

Clarification: To enhance the clarity and accessibility of the content, several figures have been incorporated into this handbook. These visuals, which were developed and explained by experts during the training sessions, serve to better illustrate key concepts and methodologies discussed. Their inclusion is intended to provide readers with a more comprehensive understanding of the material, making complex ideas more visually interpretable and easier to grasp.

Chapter I: Climate Science and Climate Change Impacts: Starts with the fundamental scientific basis and impacts of climate change to provide a foundational understanding.

Chaper II: Overview of Climate Change Policies and Regulations: Introduces global and regional climate policies and regulations that set the framework for climate action.

Chapter III: The Agenda 2030 for Sustainable Development: Presents the overarching global sustainable development framework that encompasses climate goals.

Chapter IV: Climate Legislation and Implementation in Municipal Administrations in Germany: Discusses specific legislative frameworks and how they are applied at the municipal level in Germany, transitioning from global/regional policy to local implementation.

Chapter V: Activities of Climate Protection Staff in Municipal Administrations in Germany: Details the roles and responsibilities of municipal climate protection staff, building on the previous chapter's legislative framework.

Chapter VI: Urban and Regional Planning for Climate Resilience: Focuses on practical planning approaches for enhancing climate resilience in urban and regional contexts.

Chapter VII: Data Analysis and Research Skills for Climate Action: Emphasizes the importance of data analysis and research skills in addressing climate challenges and implementing sustainable solutions.

Chapter VIII: Risk and Vulnerability Assessments: Discusses methods for assessing climate risks and vulnerabilities, an essential step in planning and implementation.

Chapter IX: Citizens' Engagement and why it matters: Highlights the importance of engaging citizens in climate initiatives, emphasizing community involvement and support.

Chapter X: Multi-Stakeholder Partnerships (MSPs) for Sustainable Development: Explores the role of partnerships among various stakeholders in achieving sustainable development goals, following citizen engagement.

Chapter XI: Financial Planning and Resource Allocation: Covers financial aspects, including budgeting and securing funds for climate initiatives, crucial for practical implementation.

Chapter XII Project Management for Climate Initiatives: Provides guidance on managing climate-related projects effectively, building on previous chapters on planning and finance.

Chapter XIII: Introduction into MEAL: Introduces Monitoring, Evaluation, Accountability, and Learning (MEAL) to ensure continuous improvement and accountability in climate initiatives.

Chapter XIV: Crisis Management & Emergency Response: Concludes with strategies for managing climate-related crises and emergencies, rounding out the practical implementation of climate resilience.

This order ensures a structured flow from understanding the basics of climate science and policy to practical steps for implementing and managing climate initiatives at various levels.

Chapter I: Climate Science and the Impacts of Climate Change

Introduction

Climate change is a critical issue facing our planet today. This chapter will delve into the science of climate change, exploring the differences between weather and climate, the functioning of the climate system, and the key processes involved. We will also examine the impacts of climate change and the importance of mitigation and adaptation strategies.

Weather vs. Climate
A fundamental concept in climate science is understanding the difference between weather and climate. Weather refers to the current state of the atmosphere at a specific location, including temperature, humidity, precipitation, and wind. In contrast, climate is the long-term pattern of weather in a particular area, typically assessed over a period of at least 10 years. While weather can change from day to day, climate represents the average conditions and variations over extended periods.

The Climate System

The climate system is complex and involves various components and processes. Temperature is a crucial state variable in this system, serving as a key metric for climate change policymaking. The rise in global temperatures is primarily driven by the increase in greenhouse gases, such as carbon dioxide (CO_2), which trap heat in the atmosphere through the greenhouse effect.

Greenhouse Gases and the Greenhouse Effect: Greenhouse gases like CO_2, methane (CH_4), and nitrous oxide (N_2O) play a significant role in regulating Earth's temperature. These gases allow shortwave radiation from the sun to pass through the atmosphere and reach the Earth's surface. The surface absorbs this radiation and re-emits it as longwave radiation (heat). Greenhouse gases trap some of this heat, preventing it from escaping back into space, thereby warming the planet. Without greenhouse gases, Earth's average temperature would be about -18°C instead of the current 15°C.

The Role of Water in the Climate System: Water is another critical component of the climate system. The water cycle, which includes processes such as evaporation, condensation, and precipitation, responds dynamically to climate changes. Water vapor is a potent greenhouse gas and significantly influences radiation and energy balance. The albedo effect, which describes how different surfaces reflect sunlight, is also essential. Light-colored surfaces like ice and snow reflect more sunlight, whereas darker surfaces absorb more heat.

Land Use and Albedo: Land use changes, such as deforestation, agriculture, and urban development, impact the albedo effect and, consequently, the climate. For example, replacing forests with agricultural land or urban areas can decrease albedo, leading to increased absorption of heat and higher local temperatures. These changes in land use can influence the energy balance and heat distribution on Earth.

Heat Distribution and Global Warming

The heat absorbed by the planet needs to be distributed globally to maintain a balanced climate. Major wind systems, like the trade winds, and ocean currents, such as the Gulf Stream, play crucial roles in transferring heat across different regions. The current global warming, approximately 1.1°C above pre-industrial levels, is primarily due to increased greenhouse gas concentrations from human activities like burning fossil fuels and deforestation.

Sources of Greenhouse Gases

Carbon Dioxide (CO_2): CO_2 emissions mainly originate from burning fossil fuels (coal, oil, and natural gas) and transportation. Industrial processes and land use changes, such as deforestation, also contribute significantly to CO_2 levels.
Methane (CH_4): Methane emissions come from livestock, particularly ruminants like cows, as well as from rice production systems. Natural sources include wetlands and peatlands, where anaerobic conditions lead to methane production by bacteria.
Nitrous Oxide (N_2O): N_2O emissions are largely from the agricultural sector, especially the use of nitrogen fertilizers. These fertilizers affect the nitrogen cycle through processes like nitrification and denitrification.

Industrial Gases and Aerosols

In addition to greenhouse gases, certain industrial gases and aerosols also impact the climate. Aerosols, such as sulfur dioxide from fossil fuel combustion, can reflect incoming sunlight and cool the planet. Volcanic eruptions also release aerosols that can cause temporary global cooling by reflecting sunlight.

Climate Engineering

Climate engineering, or geoengineering, involves deliberate interventions in the Earth's climate system to counteract global warming. One proposed method is releasing large amounts of aerosols into the atmosphere to reflect sunlight and cool the planet, mimicking the natural cooling effect of volcanic eruptions. However, this approach is controversial and does not address the root causes of climate change.

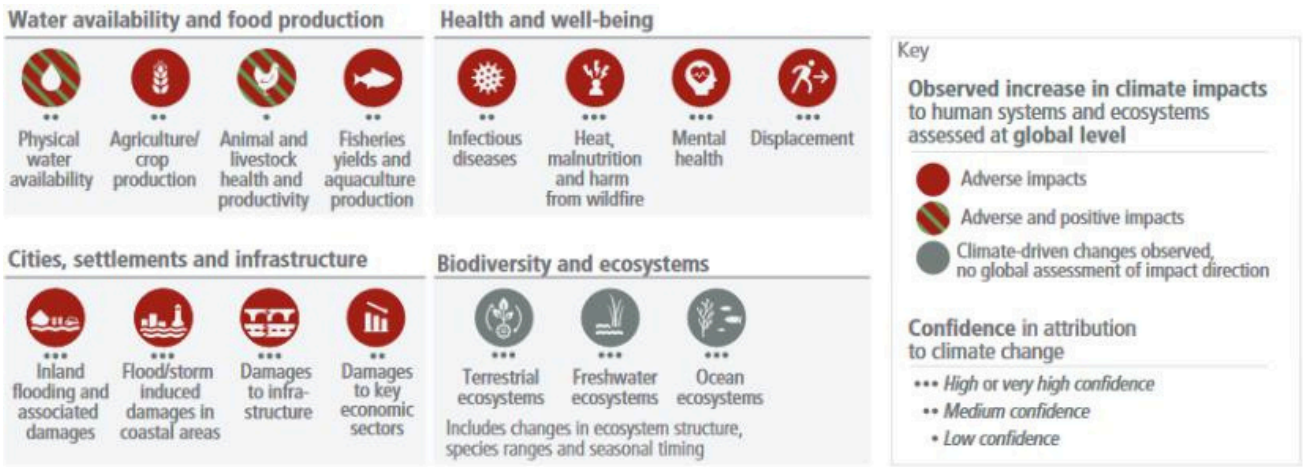
Impacts of Climate Change

Water Availability and Food Production: Climate change affects water availability and food production in various regions. Changes in precipitation patterns and soil moisture can lead to both positive and negative impacts. For example, some areas might experience increased water availability, while others face severe droughts. Similarly, food production can be disrupted due to changes in temperature and precipitation.

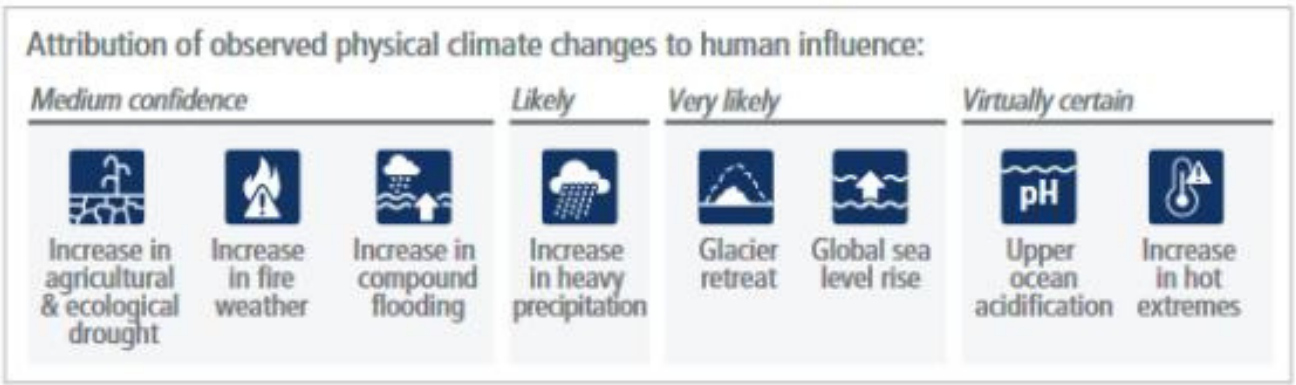
Health and Human Well-being: Heat waves and higher temperatures pose significant health risks, especially for vulnerable populations like older adults. Prolonged heatwaves can lead to higher mortality rates and increased health issues.

Settlement and Infrastructure: Climate change impacts infrastructure and settlements, necessitating climate adaptation plans to mitigate adverse effects. Urban planning and building designs must consider the increasing frequency and intensity of extreme weather events, such as floods and heatwaves.

a.) Observed widespread and substantial impacts and related losses and damages attributed to climate change

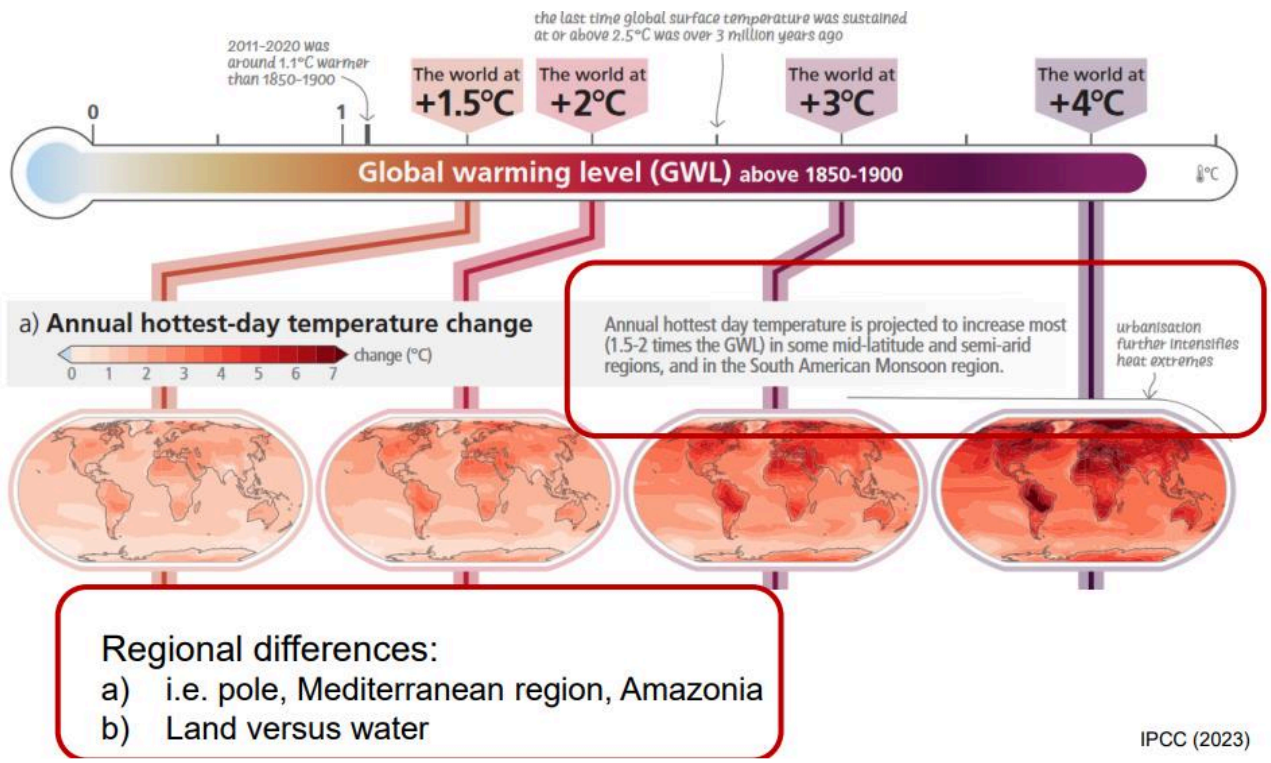


b.) Impacts are driven by changes in multiple physical climate conditions, which are increasingly attributed to human influence



Regional Impacts and Variability

The impacts of climate change vary significantly by region. For example, polar areas may experience more pronounced increases in temperatures compared to the global average. Land areas generally warm more than water areas, affecting ecosystems and human activities. With every increment of global warming, regional changes in mean climate and extremes become more widespread and pronounced:

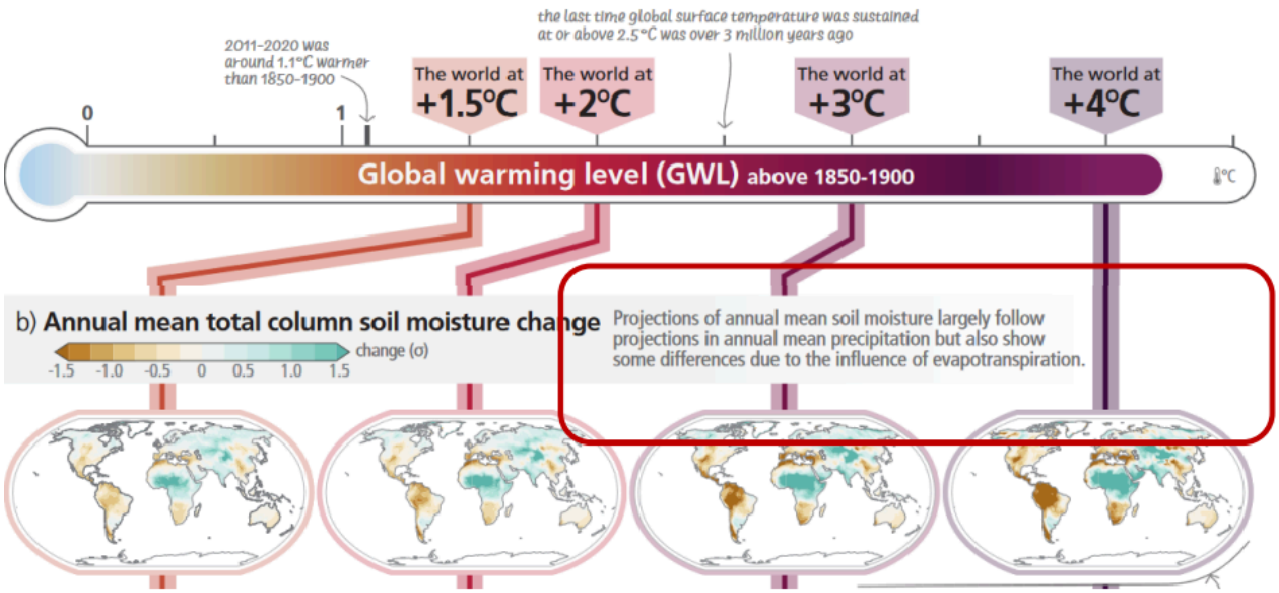


Regional differences:

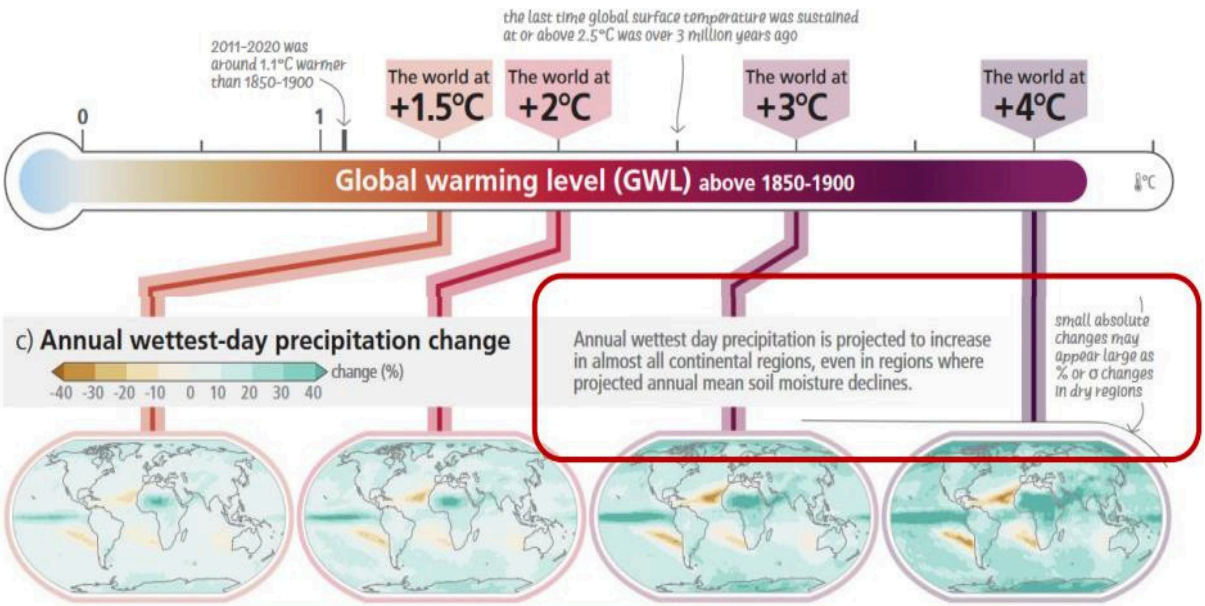
a) i.e. pole, Mediterranean region, Amazonia

b) Land versus water

IPCC (2023)



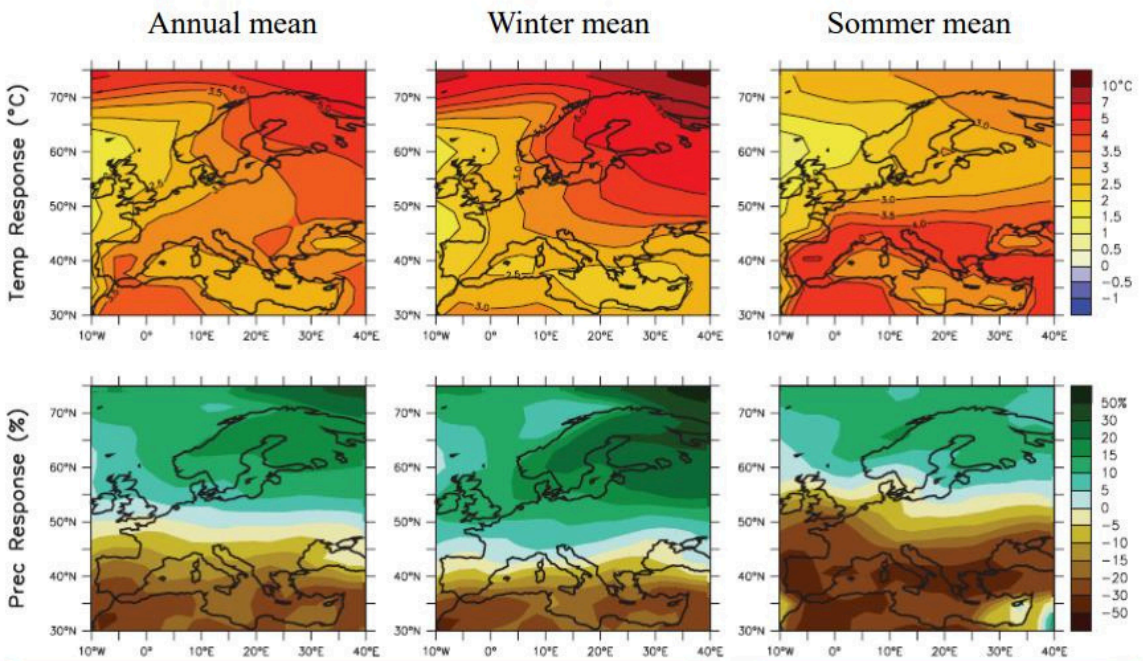
Strong regional differences on terrestrial land



Regional differences:
a) i.e. Saharra, pole rigons

Accelerating Impacts

The impacts of climate change can accelerate, leading to more severe and frequent extreme weather events. This acceleration is evident in the increased intensity and occurrence of heatwaves, storms, and other climatic disruptions.



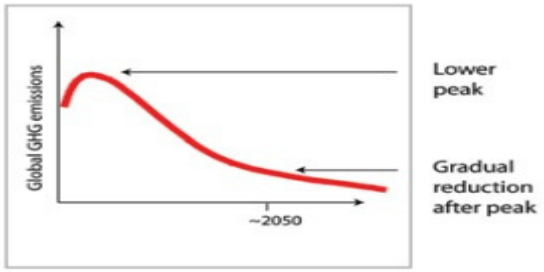
Comparing:
a) Seasonal aspects
b) Precipitation and temperature trends

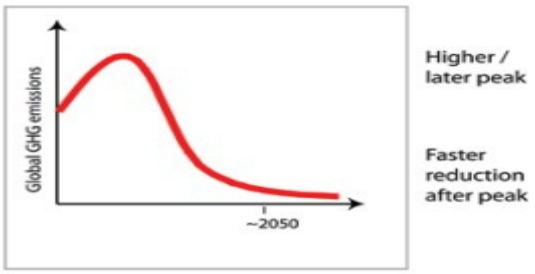
Mediterranian region
Hotspot of CC!

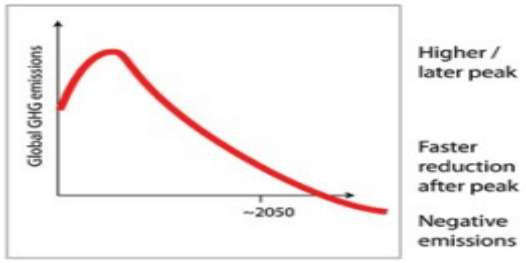
Future Climate Change Impacts

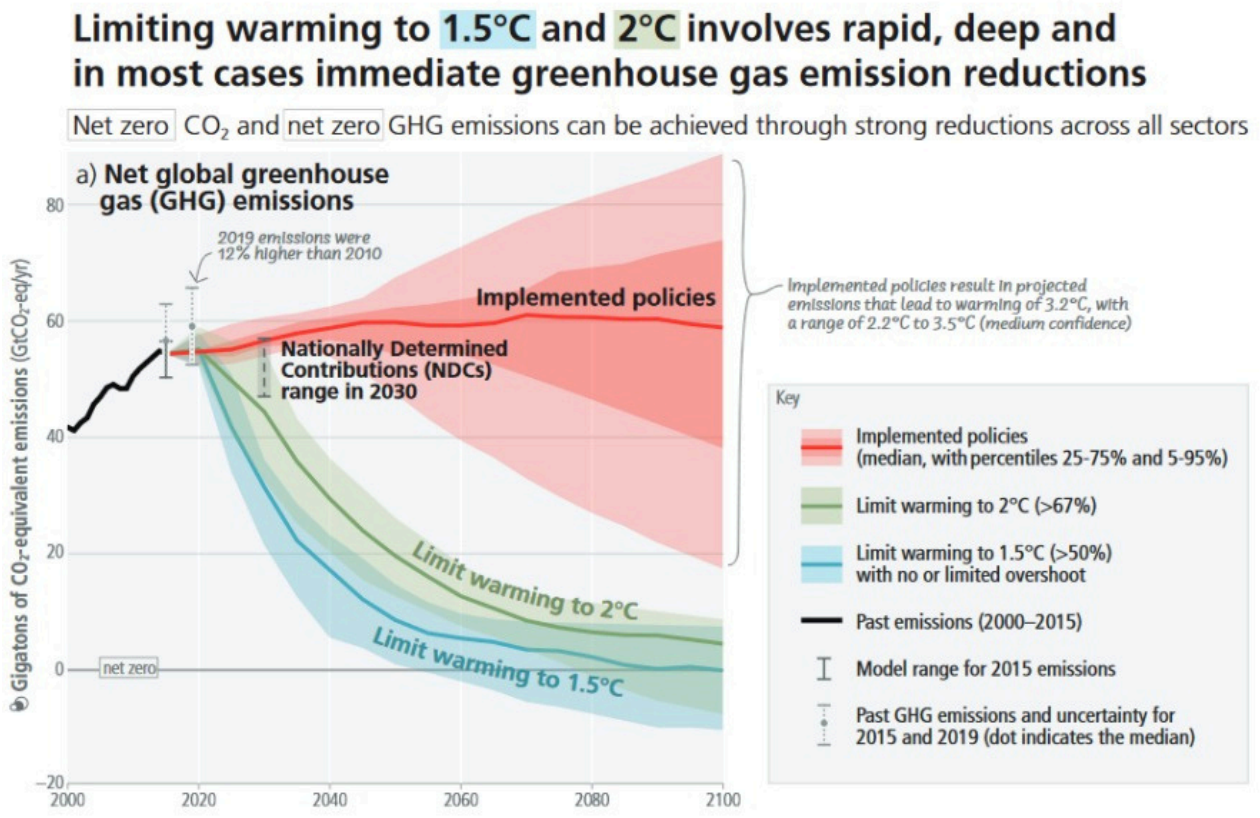
Mitigating Climate Change

Mitigating climate change involves reducing greenhouse gas emissions in the short term. According to the IPCC (2023), the global greenhouse gas emissions in 2030, implied by nationally determined contributions (NDCs) announced by October 2021, make it likely that warming will exceed 1.5°C during the 21st century, making it harder to limit warming below 2°C.





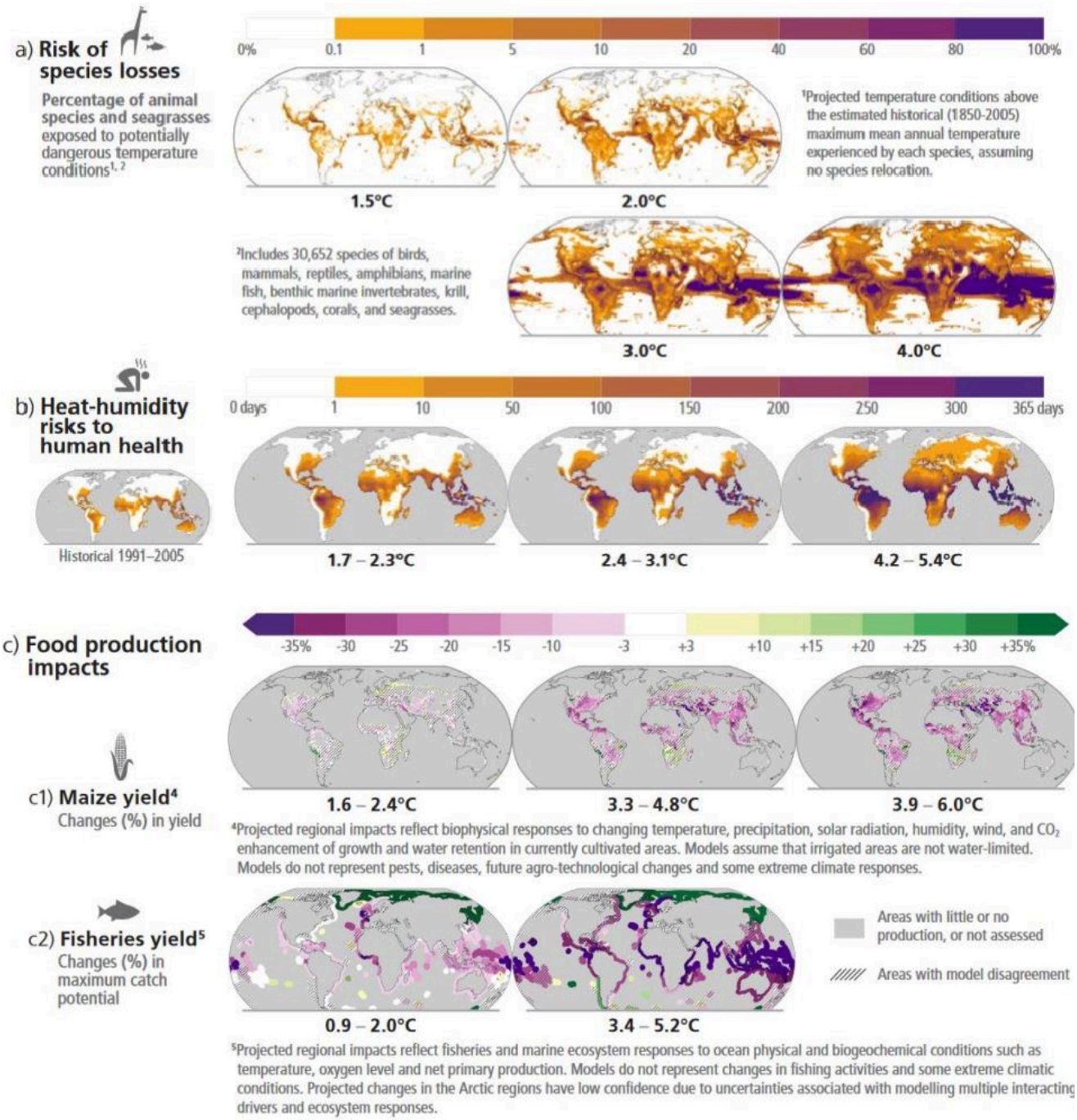




IPCC (2023)

Regional Impacts of Global Warming

Future climate change is projected to increase the severity of impacts across natural and human systems and will increase regional differences. Examples of impacts without additional adaptation include the following:



Regional specification of a Social-Ecological System at risk

The Western Amazon social-ecological system at risk of tipping: A transdisciplinary modelling approach

Regional impacts of global warming are profound in areas like the Western Amazon. This region is at risk of tipping points due to changes in its social-ecological system. A transdisciplinary modeling approach highlights the vulnerabilities and potential tipping points in this critical area.

Fig: Steffen et al. (2018)

Fig: Armstrong McKay et al. (2022)

Tipping element: Amazon

Drought → Transformation of the evergreen rainforest into a seasonal forest/ savannah.

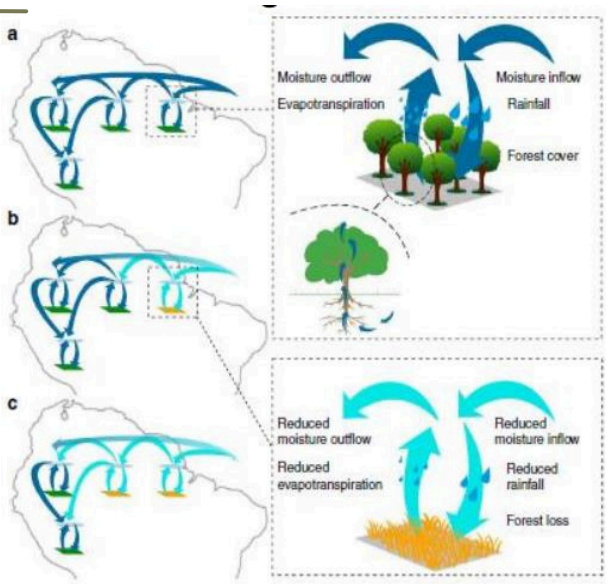
Global drivers → **Droughts** ← Regional drivers

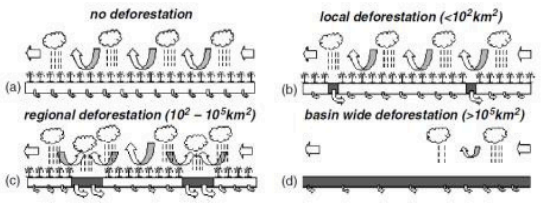
Motivation

Investigating drivers in the regional SES

Drivers of Drought

In the Western Amazon, 70% of the precipitation depends on evapotranspiration. Deforestation significantly reduces evapotranspiration, exacerbating drought conditions (Boers et al., 2017). This highlights the interdependence of regional ecological conditions and climate change impacts.

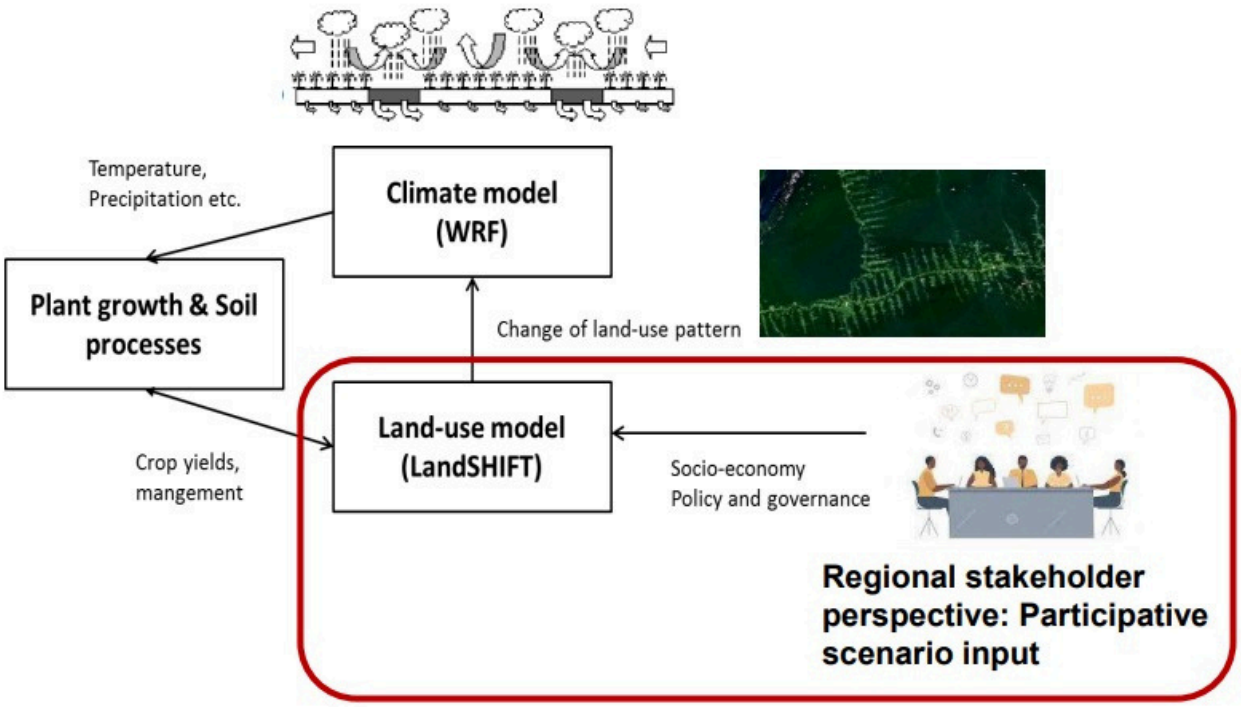


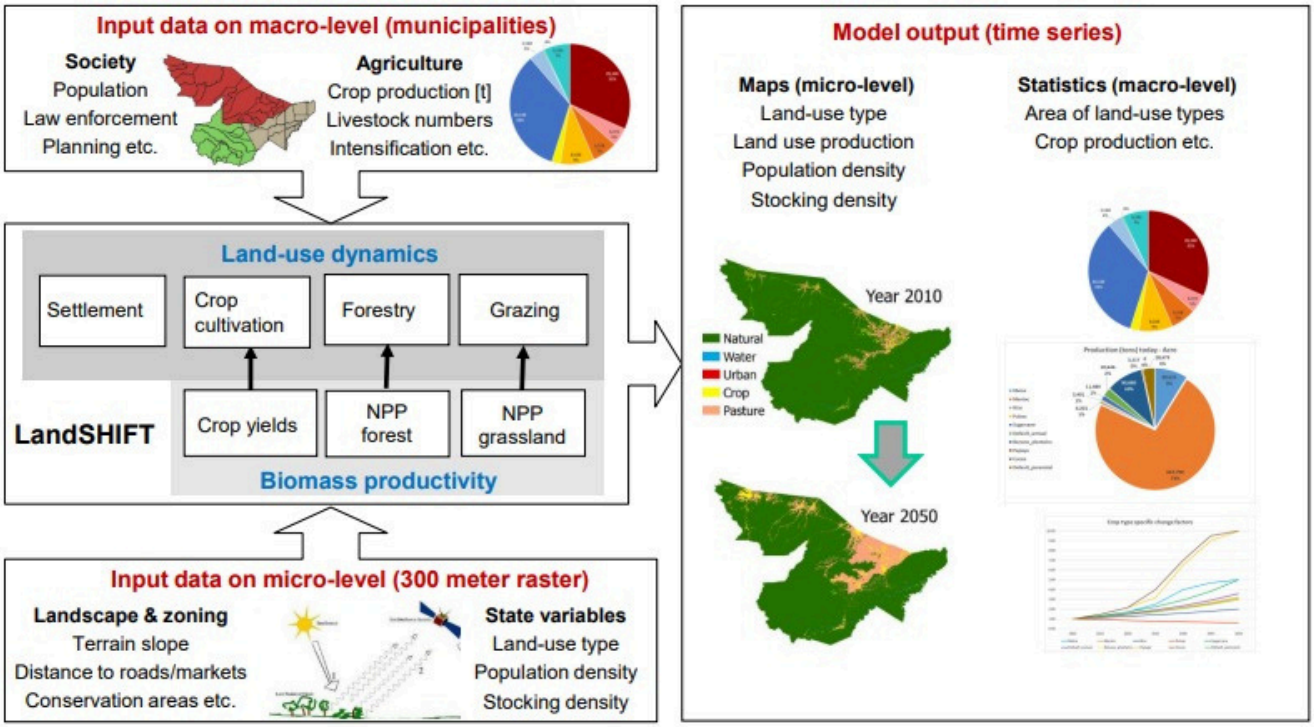


Framework for Modelling and Scenario Analysis

Study Area and Methodology

Frameworks such as LandSHIFT (Schaldach et al., 2011) are used for modeling land use and land cover changes. These models project future agricultural areas and respective deforestation at a spatial resolution of 300x300 meters, providing detailed insights into potential future scenarios.





Spatial Modelling and Scenario Analysis

Spatial modeling and scenario analysis are critical for understanding and predicting the impacts of climate change on specific regions. These tools help in visualizing future changes and developing strategies for mitigation and adaptation.

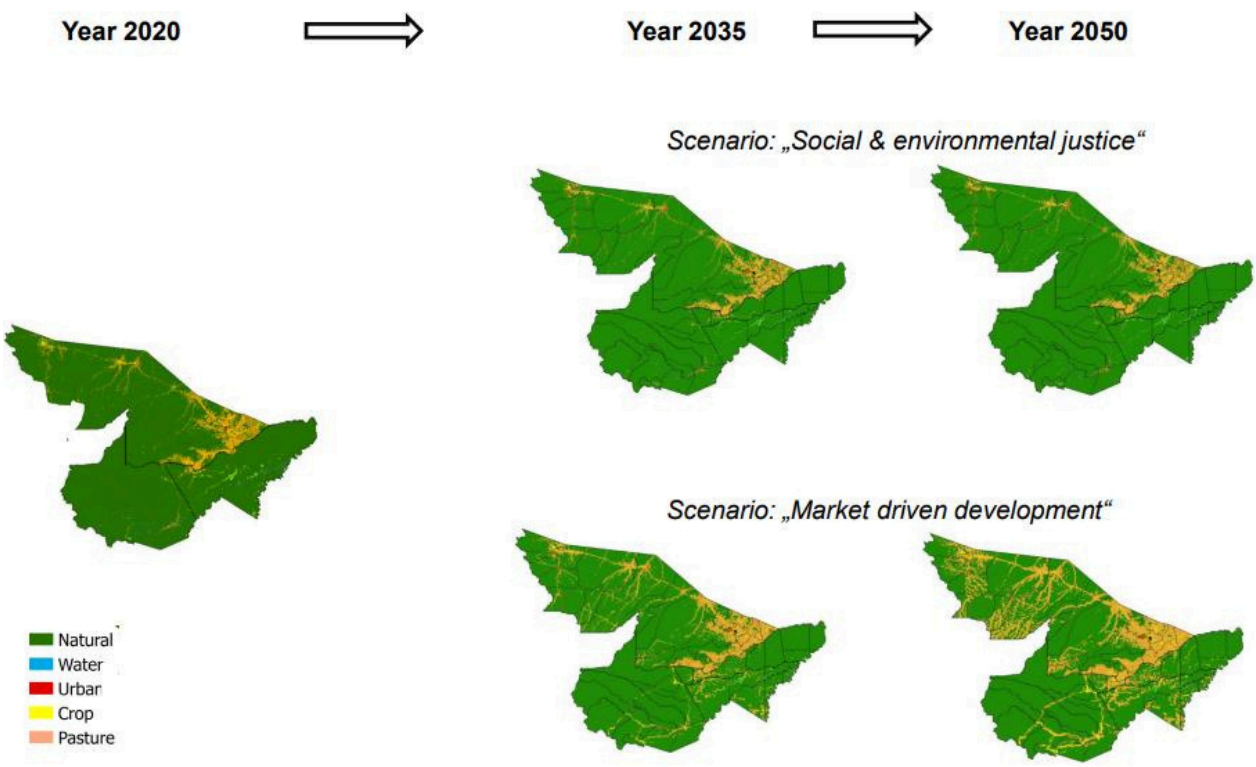
Projection of future agricultural areas - and respective deforestation -at a spatial resolution 300*300 meters-

Basemap: Land Use Change Model
Year 2020

Sceanrios about future agricultural production:
Years 2020 - 2050

Scenarios: Land Use Change Maps
Years 2025 – 2050

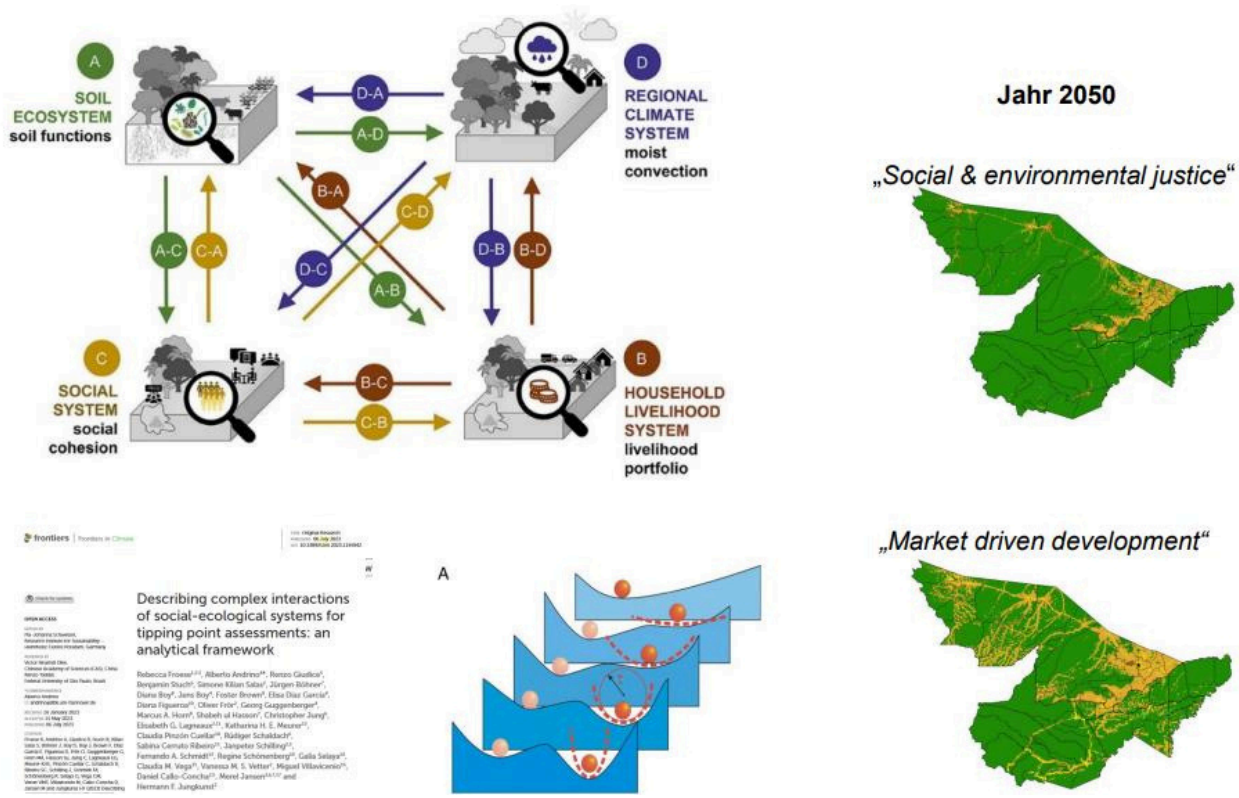
Spatial modelling and scenario analysis:



Tipping Points in Social-Ecological Systems

Tipping points are critical thresholds where small changes can lead to significant, irreversible impacts on the climate system. Examples include the melting of the Greenland ice sheet and the potential transformation of the Amazon rainforest into a savanna ecosystem. These tipping points can have cascading effects, further exacerbating global climate change.

Identifying and understanding tipping points in social-ecological systems are crucial for managing and mitigating the adverse effects of climate change. Research and modeling efforts aim to pinpoint these critical thresholds and develop strategies to avoid crossing them.



Source: DOI: 10.3389/fclim.2023.1145942

Adaptation and Mitigation Strategies

Green Roofs and Urban Vegetation: Green roofs and increased urban vegetation can help mitigate the urban heat island effect, improve air quality, and manage water runoff. These measures contribute to local climate adaptation but have limited impact on global climate change.

Afforestation and Reforestation: Afforestation (planting new forests) and reforestation (restoring lost forests) are effective strategies for carbon sequestration. These measures help mitigate global climate change by absorbing CO_2 from the atmosphere. However, they must be balanced with land use needs for food production.

Conclusion

Understanding the science of climate change and its impacts is crucial for developing effective mitigation and adaptation strategies. Addressing climate change requires a comprehensive approach that includes reducing greenhouse gas emissions, enhancing carbon sequestration, and preparing for the inevitable impacts on ecosystems and human societies. As we continue to learn more about the climate system, it is essential to translate scientific knowledge into actionable policies and practices to safeguard our planet for future generations.

Chapter II: Overview of Climate Change Policies and Regulations

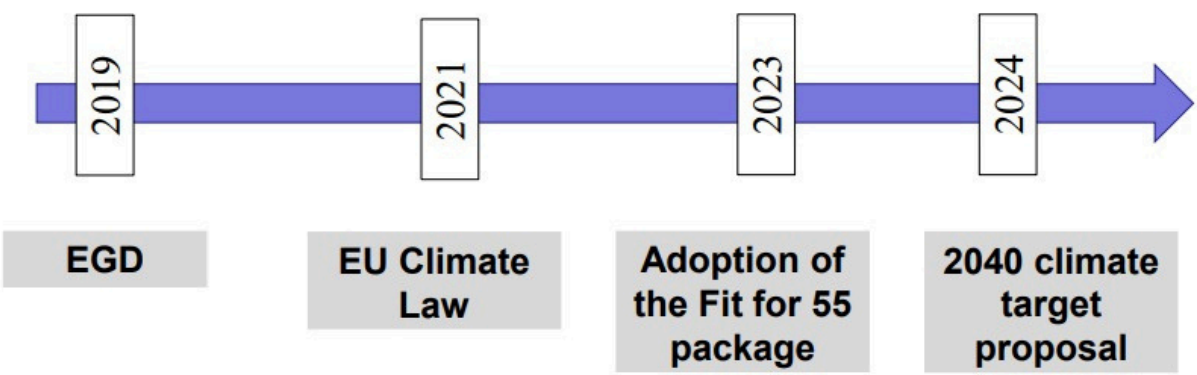
I. Introduction

Climate change policies and regulations have evolved significantly over the past few decades, responding to the growing urgency of environmental sustainability and the need for global cooperation. This chapter provides a comprehensive overview of major climate change agreements, EU policies, and legislative frameworks that shape climate action at the municipal level and beyond.

II. Paris Agreement

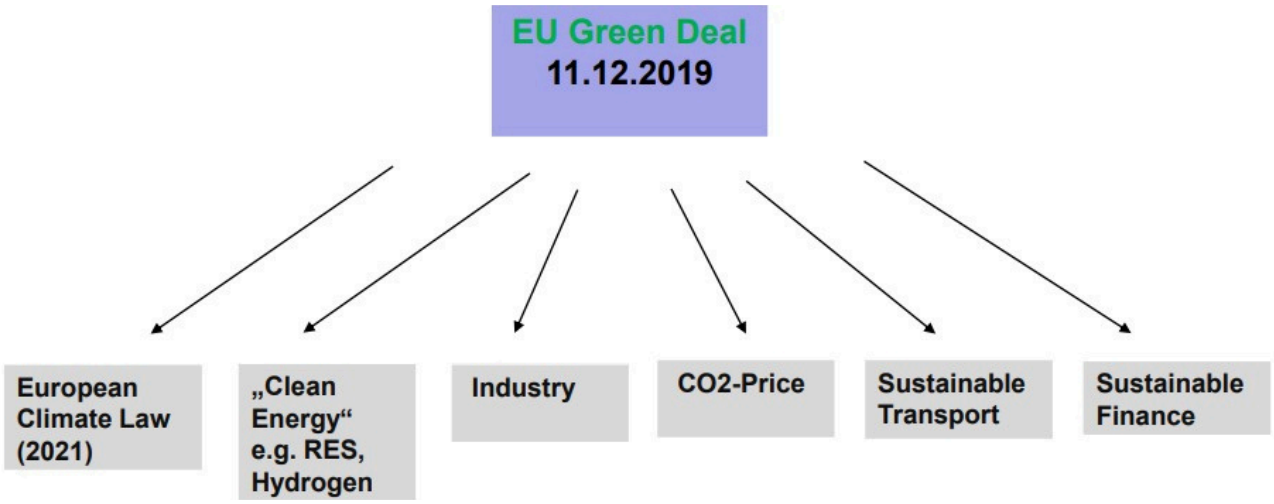
The Paris Agreement, adopted at COP 21 in Paris on December 12, 2015, marks a critical milestone in the global fight against climate change. Entering into force on November 4, 2016, it aims to limit global temperature rise to well below 2 degrees Celsius above pre-industrial levels, with efforts to limit the increase to 1.5 degrees Celsius. The agreement requires all Parties to submit nationally determined contributions (NDCs) and update them every five years. Regular reporting on emissions and implementation efforts, along with a global stock take every five years, ensures collective progress toward these goals.

EU Climate Legislation Timeline: Main milestones between 2019 – 2024



III. The European Green Deal

Launched by the European Commission in December 2019, the European Green Deal is an ambitious roadmap for making the EU climate-neutral by 2050. It integrates initiatives across various sectors including climate, environment, energy, transport, industry, agriculture, and sustainable finance. This holistic approach aims to transform the EU into a fair and prosperous society with a modern, competitive economy.



IV. From Climate Goals to European Climate Law

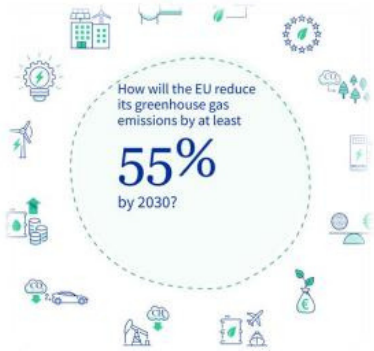
The European Climate Law, which enshrines the goal of climate neutrality by 2050, includes a legally binding target to reduce net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. The law establishes measures to track progress and adjust actions, aligning with the global stocktake under the Paris Agreement. It also sets a trajectory for emission reductions from 2030 to 2050 and includes the establishment of the European Scientific Advisory Board for Climate Change.

V. European Scientific Advisory Board for Climate Change

European Scientific Advisory Board on Climate Change

Established in 2021, this independent body provides scientific knowledge, expertise, and advice to the EU on climate change. Comprising 15 senior scientific experts, the board identifies policy options for cost-effective greenhouse gas emission reductions and assesses policy and implementation gaps. Recent publications include advice on the 2040 climate target and an assessment of progress towards EU climate neutrality.

VI. Is Europe Fit for 55?



The Fit for 55 package, proposed in July 2021, aims to align EU policies with the climate-neutrality objective by 2050. It includes new and revised legislation to reduce emissions by at least 55% by 2030 compared to 1990 levels. The REPowerEU plan, launched in May 2022, further enhances energy resilience and security, targeting a 57% reduction in net greenhouse gas emissions by 2030.

VII. What's Next on the EU Agenda? 2040 Climate Target

In February 2023, the European Commission proposed a 90% reduction in net greenhouse gas emissions by 2040 compared to 1990 levels. This recommendation, based on the Commission's impact assessment and advice from the European Scientific Advisory Board, will shape future legislative proposals and debates.

The tracking of the efforts of the EU member states: Germanwatch, in collaboration with partners (e.g. Centre for Transport and Energy from Czech Republic) from other EU countries, has developed a **tracker** that shows the extent to which member states are achieving or failing to meet their climate targets in various sectors.

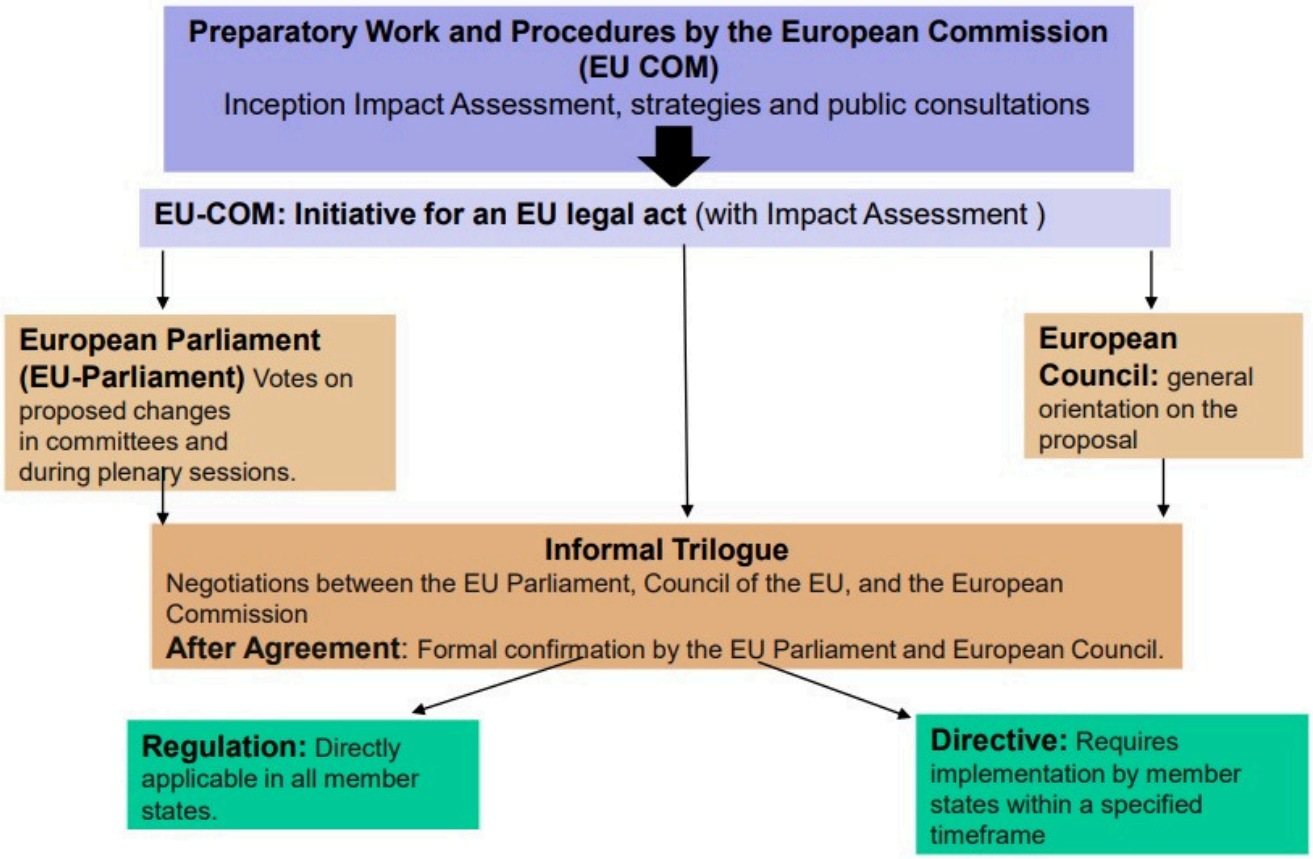
Link to the Tracker: https://1point5.caneurope.org/necps-tracker/

VIII. National Energy and Climate Plans (NECP)

NECPs are critical tools for ensuring coherence between climate and energy policies over the next decade. EU member states outline their strategies for emissions reduction, energy efficiency, and renewable energy use in these plans. The current revision cycle for NECPs, concluding in June 2024, aims to align with the 2030 emissions reduction target.

IX. EU Restoration Law & Biodiversity Strategy

The EU Biodiversity Strategy for 2030 aims to restore biodiversity by addressing threats like climate change and illegal wildlife trade. The Nature Restoration Law, part of this strategy, sets binding restoration targets for specific habitats and species, covering at least 20% of the EU's land and sea areas by 2030 and all ecosystems in need by 2050.



X. The Role of Climate Policy in the Next Legislative Cycle

The upcoming legislative cycle will focus on further developing and implementing climate policies, potentially introducing a Green Deal 2.0. The EU Strategic Agenda will guide these efforts, ensuring continued progress toward climate neutrality and sustainability.

XI. The EU LULUCF (Land Use, Land Use Change, and Forestry) Regulation

This regulation is a key component of the European Union's climate policy, aimed at ensuring that emissions and removals of greenhouse gases from land use, forestry, and agriculture are accounted for in the EU's climate targets. It sets binding targets for each Member State to ensure that carbon emissions from land use activities do not exceed carbon removals, supporting the EU's broader goal of achieving climate neutrality by 2050. The regulation also promotes sustainable land management practices and the conservation of natural carbon sinks.

2023 climate target plan: The upcoming legislative cycle will focus on further developing and implementing climate policies, potentially introducing a Green Deal 2.0. The EU Strategic Agenda will guide these efforts, ensuring continued progress toward climate neutrality and sustainability.

XII. Funding for Cities and Climate Action

The EU and the European Commission provide extensive support for climate action through various funding programs. These initiatives offer funding opportunities and advice to cities and municipalities on accessing and effectively utilizing these resources to advance local climate goals. For more information on EU funding for cities, visit EU Funding for Cities.

Conclsion:

This chapter introduced and elaborated global and regional climate policies and regulations that set the framework for climate action.

Chapter III: The 2030 Agenda for Sustainable Development

Introduction The 2030 Agenda for Sustainable Development, adopted by the United Nations in 2015, is an ambitious global initiative aimed at transforming our world. The agenda is designed to promote prosperity, protect the planet, and ensure peace for all people by 2030. This handbook offers a comprehensive overview of the goals, principles, and targets that form the backbone of this transformative agenda.

Historical Context 2001 to 2015:

The Millennium Development Goals (MDGs)

From 2001 to 2015, the Millennium Development Goals (MDGs) focused on reducing poverty and meeting basic needs in developing countries. These eight goals laid the groundwork for the broader and more inclusive Sustainable Development Goals (SDGs).

Key International Milestones:

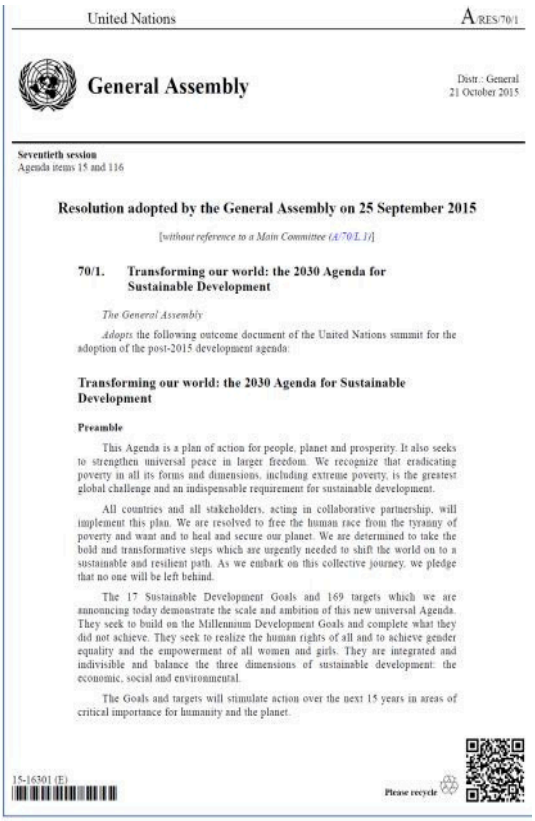
- **1972**: Club of Rome's "Limits to Growth" report highlighted the environmental and economic limits to growth.
- **1987**: The Brundtland Report, "Our Common Future," introduced the concept of
- sustainable development.
- **1992**: The Rio Earth Summit led to the creation of Agenda 21, a comprehensive plan of action for sustainable development.
- **1997**: The Kyoto Protocol established legally binding commitments for reducing
- greenhouse gas emissions.
- **2012**: The Rio+20 Conference, "The Future We Want," called for the development of Sustainable Development Goals.
- **2015:** The Paris Agreement on climate change set ambitious targets to limit global temperature rise to 1.5°C/2°C above pre-industrial levels.

Development of the Agenda 2030

Open Working Group (OWG): In 2012, the Rio+20 conference established the Open Working Group (OWG) with the mandate to develop a proposal for the post-2015 development agenda. By July 2014, the OWG submitted a proposal comprising 17 goals and 169 targets.

Adoption of the Agenda: On September 25, 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development, with 193 countries signing the declaration "Transforming our world: the 2030 Agenda for Sustainable Development." This marked a historic commitment to addressing global challenges through a unified and comprehensive approach.

UNITED NATIONS SUSTAINABLE DEVELOPMENT SUMMIT 2015
25 - 27 SEPTEMBER



United Nations A/RES/70/1

General Assembly

Distr.: General
21 October 2015

Seventieth session
Agenda items 15 and 116

Resolution adopted by the General Assembly on 25 September 2015

[without reference to a Main Committee (A/70/L.1)]

70/1. Transforming our world: the 2030 Agenda for Sustainable Development

The General Assembly

Adopts the following outcome document of the United Nations summit for the adoption of the post-2015 development agenda:

Transforming our world: the 2030 Agenda for Sustainable Development

Preamble

This Agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. We recognize that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.

All countries and all stakeholders, acting in collaborative partnership, will implement this plan. We are resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet. We are determined to take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind.

The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what they did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

The Goals and targets will stimulate action over the next 15 years in areas of critical importance for humanity and the planet.

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Key Elements of the 2030 Agenda

Five Dimensions of Sustainable Development ("the 5Ps")

The agenda is structured around five critical dimensions, known as the 5Ps, highlighting the interconnected nature of sustainable development:

1. **People:** End poverty and hunger, ensuring dignity and equality for all.

2. **Planet:** Protect the planet's natural resources and climate for future generations.

3. **Prosperity:** Ensure prosperous and fulfilling lives in harmony with nature.

4. **Peace:** Foster peaceful, just, and inclusive societies.

5. **Partnerships:** Implement the agenda through a robust global partnership.

Core Principles

1. **Universality**: The 2030 Agenda is universal, applying to all countries regardless of income levels or development status. Every nation is called upon to contribute to sustainable development efforts.

2. **Inclusiveness**: The agenda emphasizes the participation of all societal segments, irrespective of race, gender, ethnicity, or identity, ensuring no one is left behind.

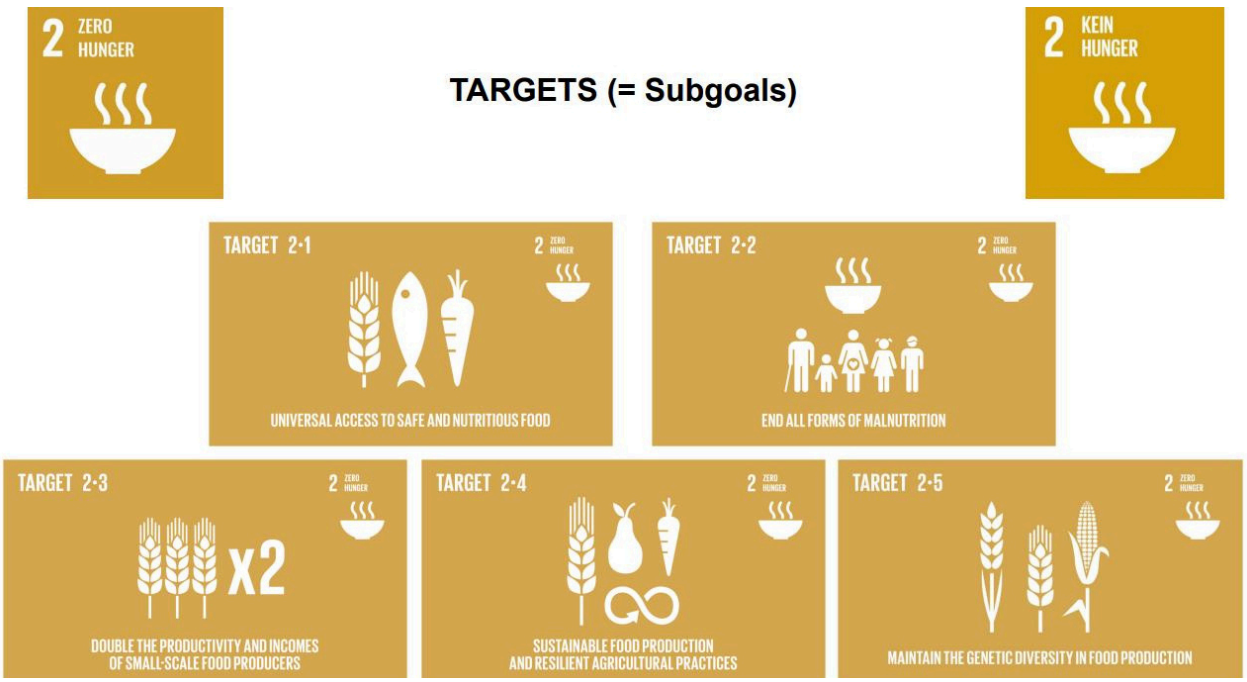
3. **Multi-Stakeholder Partnerships**: Encourages collaboration across various sectors, mobilizing and sharing knowledge, expertise, technology, and financial resources.

4. **Leaving No One Behind**: Commits to reaching all people, especially the most ulnerable, ensuring that no one is left behind by targeting specific challenges and vulnerabilities.

5. **Interconnectedness and Indivisibility**: The SDGs are interconnected and indivisible, requiring integrated and holistic approaches rather than treating them as standalone objectives.

Goals, Targets, and Indicators

For example: SDG Goal 2: End Hunger, Achieve Food Security and Improved Nutrition, and Promote Sustainable Agriculture



- **Target 2.1**: End hunger and ensure access to safe, nutritious, and sufficient food all year round for all people, especially the poor and vulnerable.
    - **Indicators**: Prevalence of undernourishment, food insecurity based on the Food Insecurity Experience Scale (FIES).
- **Target 2.2**: End all forms of malnutrition, focusing on children under 5, adolescent girls, pregnant and lactating women, and older persons.
    - **Indicators**: Prevalence of stunting, malnutrition, and anemia.
- **Target 2.3**: Double agricultural productivity and incomes of small-scale food producers, ensuring secure access to resources, knowledge, and markets.
    - o **Indicators**: Volume of production per labor unit, average income of small-scale food producers.
- **Target 2.4**: Ensure sustainable food production systems and implement resilient agricultural practices.
    - **Indicators**: Proportion of agricultural area under sustainable agriculture.
- **Target 2.5**: Maintain the genetic diversity of seeds, plants, and animals, promoting fair and equitable sharing of benefits.
    - **Indicators**: Number of genetic resources secured, proportion of breeds at risk of extinction.

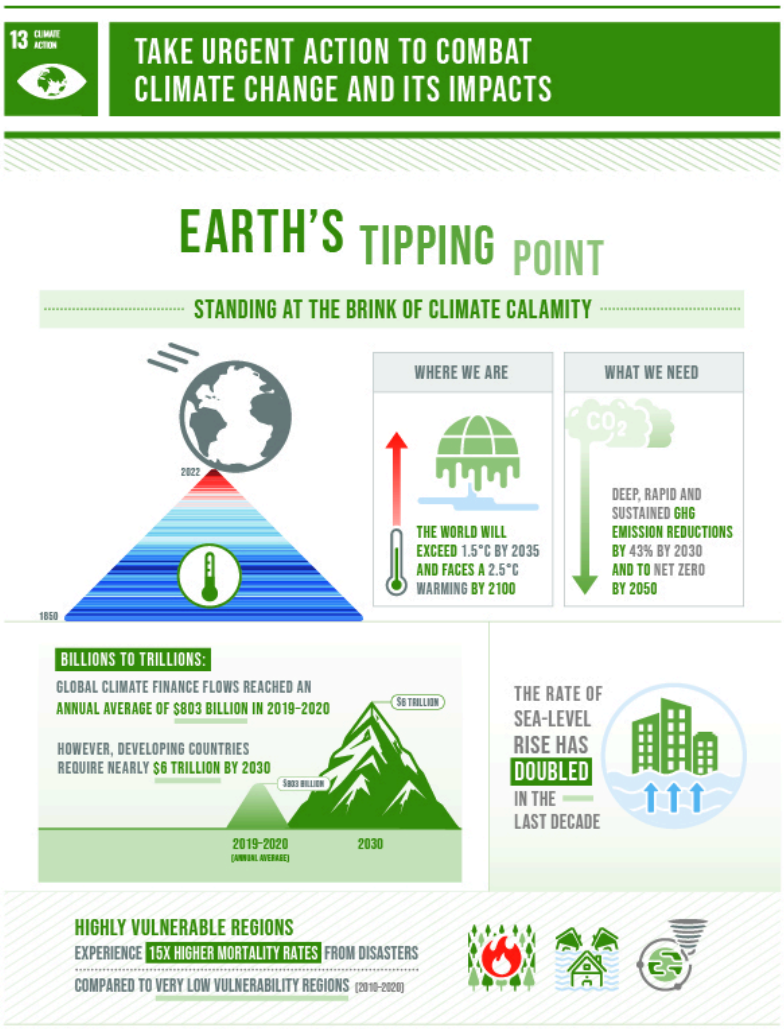
For example: Goal 12: Ensure Sustainable Consumption and Production Patterns

- **Target 12.1**: Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead.
  - **Indicators**: Number of countries with policies supporting sustainable consumption and production.
- **Target 12.2**: Achieve sustainable management and efficient use of natural resources.
  - **Indicators**: Material footprint, domestic material consumption.
- **Target 12.3**: Halve per capita global food waste at the retail and consumer levels.
  - **Indicators**: Food loss index, food waste index.
- **Target 12.4**: Achieve environmentally sound management of chemicals and wastes.
  - **Indicators**: Hazardous waste generation, treatment of hazardous waste.
- **Target 12.5**: Substantially reduce waste generation through prevention, reduction, recycling, and reuse.
  - **Indicators**: National recycling rate.
- **Target 12.6**: Encourage companies to adopt sustainable practices and integrate sustainability information into their reporting cycle.
  - **Indicators**: Number of companies publishing sustainability reports.
- **Target 12.7**: Promote sustainable public procurement practices.
  - **Indicators**: Implementation of sustainable procurement policies.
- **Target 12.8**: Ensure people everywhere have the information and awareness for sustainable development.
  - **Indicators**: Mainstreaming of global citizenship and sustainable development education
- **Target 12.a**: Support developing countries to strengthen their scientific and technological capacity for sustainable consumption and production.
  - **Indicators**: Installed renewable energy capacity.
- **Target 12.b**: Develop tools to monitor sustainable development impacts for sustainable tourism.
  - **Indicators**: Implementation of tourism sustainability accounting tools.
- **Target 12.c**: Rationalize inefficient fossil-fuel subsidies.
  - **Indicators**: Amount of fossil-fuel subsidies per GDP.

Important example: SDG 13 'Climate action'.

The aim of SDG 13 is to take measures to combat climate change and its effects. This includes reducing greenhouse gas emissions, promoting renewable energy, adapting to the consequences of climate change and raising awareness of environmental issues. SDG 13 is closely linked to other goals of the 2030 Agenda, as climate change has an impact on many areas such as health, food security, the economy and social justice. It emphasises that sustainable development can only be achieved if climate action is implemented.

Of course, SDG 13 (Climate action) is closely linked to other goals of the 2030 Agenda, in particular SDG 7 (Affordable and clean energy), SDG 11 (Sustainable cities and communities) and SDG 15 (Life on land). These links show that climate protection plays a fundamental role in achieving sustainable development. For example, the reduction of greenhouse gas emissions (SDG 13) is crucial for the promotion of renewable energy (SDG 7) and the creation of sustainable cities (SDG 11). In addition, protecting ecosystems (SDG 15) contributes to climate change adaptation. It is important to recognise these links and develop holistic solutions to achieve the goals of the 2030 Agenda.



THE SUSTAINABLE DEVELOPMENT GOALS REPORT 2023: SPECIAL EDITION- UNSTATS.UN.ORG/SDGS/REPORT/2023/

Source: https://sdgs.un.org/goals/goal13

List of sub-targets for this SDG goals include the following:

1. greenhouse gas emissions per capita
2. share of renewable energies in total energy consumption
3. number of weather and climate-related disasters
4. investments in climate-resilient infrastructure
5. proportion of the population with early warning systems for extreme weather events
6. measures to adapt to climate change in particularly vulnerable areas
7. implementation of national strategies to reduce greenhouse gas emissions

Conclusion

The 2030 Agenda for Sustainable Development represents a comprehensive and inclusive plan to address global challenges. By focusing on interconnected goals and principles, the agenda aims to create a sustainable future for all. This handbook serves as a guide to understanding and implementing the goals and targets of the agenda. For further details and updates, refer to official UN documentation and resources.

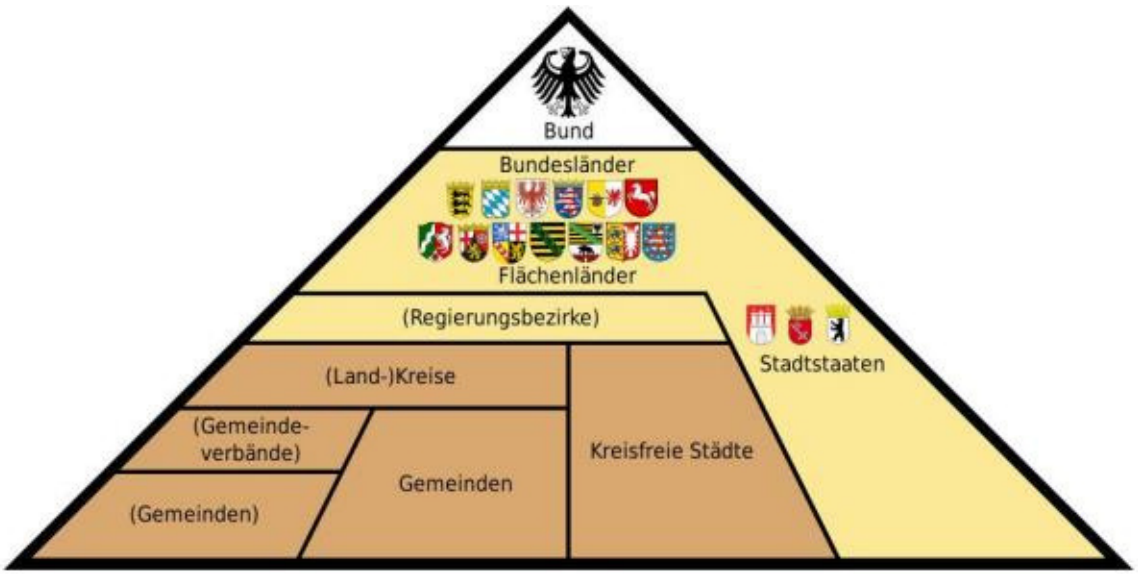
For more detailed information, visit:

- UN Sustainable Development Goals
- UN Global Indicator Framework

Chapter IV: Climate Legislation and Implementation in Municipal Administrations in Germany

1Basics of Municipal Administration

Municipal Law



Municipal law in Germany is a branch of public law that governs the organization and activities of municipalities, districts, and municipal associations within a federal state. It ensures the right to local self-government, as guaranteed by the Basic Law (Article 28). This includes:

- **Territorial sovereignty**: The right to self-govern within defined municipal or district boundaries.
- **Planning sovereignty**: The ability to create independent plans.
- **Statutory authority**: The power to create local laws through statutes.
- **Financial sovereignty**: The capability to generate and manage their own income.
- **Personnel and organizational sovereignty**: The authority to determine internal
- organization and staffing.

Municipal Constitution

The municipal constitution regulates the organization, responsibilities, and relationship between political bodies and administration. Each federal state has its own municipal constitution, such as:

- Lower Saxony's Municipal Constitution Act (NKomVG)
- Hessian Municipal Code (HGO)
- Thuringian Municipal and District Code (ThürKO)

The Governing Bodies of a Municipality

The governing bodies include the representative body (e.g., district council), the main committee (e.g., district committee), and the chief administrative officer (e.g., district administrator). Their responsibilities range from deciding on the municipality's development objectives to managing day-to-day administration.

Current Climate Legislation in Germany

Federal Climate Protection Act

The Federal Climate Protection Act, passed on December 12, 2019, sets climate protection targets and defines annual emission levels for various sectors by 2030. It mandates immediate programs if targets are not met, emphasizing the urgency of climate action.

State-Level Climate Laws

Each federal state in Germany may have additional climate protection regulations and targets that complement the federal law, tailored to their specific regional needs and priorities.

Climate Protection in Municipalities

Financing of Staff and Projects

The National Climate Protection Initiative (NKI), established in 2008 and funded by the Federal Ministry of Economics and Climate Protection, supports local climate protection projects. Key funding programs include:

- **Kommunalrichtlinie (Municipal Guideline)**: Supports strategic and investive climate protection measures like energy management, feasibility studies, and infrastructure for climate-friendly mobility.
- **KfW Grants**: Provides up to 90% funding for green spaces, biodiversity projects, and climate-friendly mobility solutions.
- **NOW GmbH**: Supports hydrogen and fuel cell technology for climate-friendly mobility.

Staffing Levels in Municipalities

A 2023 survey by the Federal Environment Agency indicates that 10% of German municipalities have dedicated climate protection staff, with 60-70% of these positions being full-time.

Tasks of Climate Protection Staff in Municipalities

Preparation of Climate Protection Concepts

Climate protection staff are responsible for developing comprehensive climate protection concepts, which involve:

- Analyzing the current status of climate protection activities.
- Engaging all municipalities within their district through surveys and questionnaires.
- Gathering input on climate policy, administrative organization, and specific activities.

Control of Climate Protection Activities

This involves:

- Monitoring the implementation status of action plans.
- Conducting evaluations and adjusting measures as needed.
- Producing climate reports every four years to assess the impact of climate activities on GHG accounting.

Greenhouse Gas Accounting in Municipalities

Greenhouse gas accounting helps municipalities:

- Survey current energy consumption and GHG emissions.
- Monitor progress towards climate neutrality.
- Demonstrate the impact of climate protection measures.

Current Implementation of Measures in the District of Northeim

Implementation includes:

- Developing sustainable procurement guidelines that consider environmental and social criteria.
- Coordinating training for facility managers on energy management.
- Organizing public campaigns on topics like thermal insulation and heating.

Communication, Networking, and Cooperation with Stakeholders

Climate protection staff also play a crucial role in:

- Networking with other climate protection managers at district, state, and national levels.
- Collaborating with local stakeholders, neighboring municipalities, and regional organizations on topics like energy management and green hydrogen.

- Engaging with the Climate Protection and Energy Agency of Lower Saxony and the Consumer Center of Lower Saxony for events, consulting, and advice on climate protection measures.

Conclusion

The above mentioned structured approach ensures that climate protection efforts are well-coordinated, effectively implemented, and continually monitored to achieve the desired environmental impact at the municipal level in Germany.

Chapter V: Activities of Climate Protection Staff in Municipal Administrations in Germany

Current Status of Climate Protection at Municipal Level

Financing of Staff and Projects

Effective climate protection at the municipal level in Germany relies significantly on the availability of financial resources for both staffing and project implementation. Several key initiatives and funding programs have been established to support municipalities in these efforts.

The National Climate Protection Initiative (NKI): Established in 2008, the NKI is a pivotal program financed by the Federal Ministry of Economics and Climate Protection. Its primary objective is to promote and initiate climate protection projects across Germany. Since its inception, the NKI has been instrumental in advancing over 52,400 projects, with a substantial funding volume amounting to approximately 1.8 million euros from 2008 to 2023. More details an be found on the NKI website.

Agency for Municipal Climate Protection: This agency provides vital assistance and guidance to municipalities, helping them navigate the complexities of climate protection initiatives. Additional information about the agency's offerings is available on their website.

The Funding Program for Municipalities: Die Kommunalrichtlinie (The Municipal Guideline)

The NKI supports cities, municipalities, and districts through the "Kommunalrichtlinie," which aims to bolster local climate protection efforts. The funding program focuses on two main categories of measures:

- **Strategic Climate Protection Measures**:
  - Introduction of energy management systems.
  - Conducting feasibility studies.
  - Development of focus concepts.
  - Creation and implementation of climate protection concepts with dedicated personnel.

- **Investive Climate Protection Measures**:
  - Renovation of outdoor and street lighting.
  - Development of infrastructure for climate-friendly mobility (e.g., bicycle parking facilities, mobility stations, bicycle lanes).
  - Construction of biowaste fermentation plants.
  - Implementation of energy-saving measures in drinking water supply systems.

Other Funding Opportunities for Municipalities Municipalities can also explore additional funding avenues, such as grants from KfW, a bank with a funding mandate, which supports natural climate protection initiatives. Grants cover 80% to 90% of costs for projects focusing on green spaces, native biodiversity, tree planting, and related material and personnel expenses.

Moreover, NOW GmbH (National Organization Hydrogen and Fuel Cell Technology) offers funding for climate-friendly mobility solutions, including vehicles, feasibility studies, and charging infrastructure.

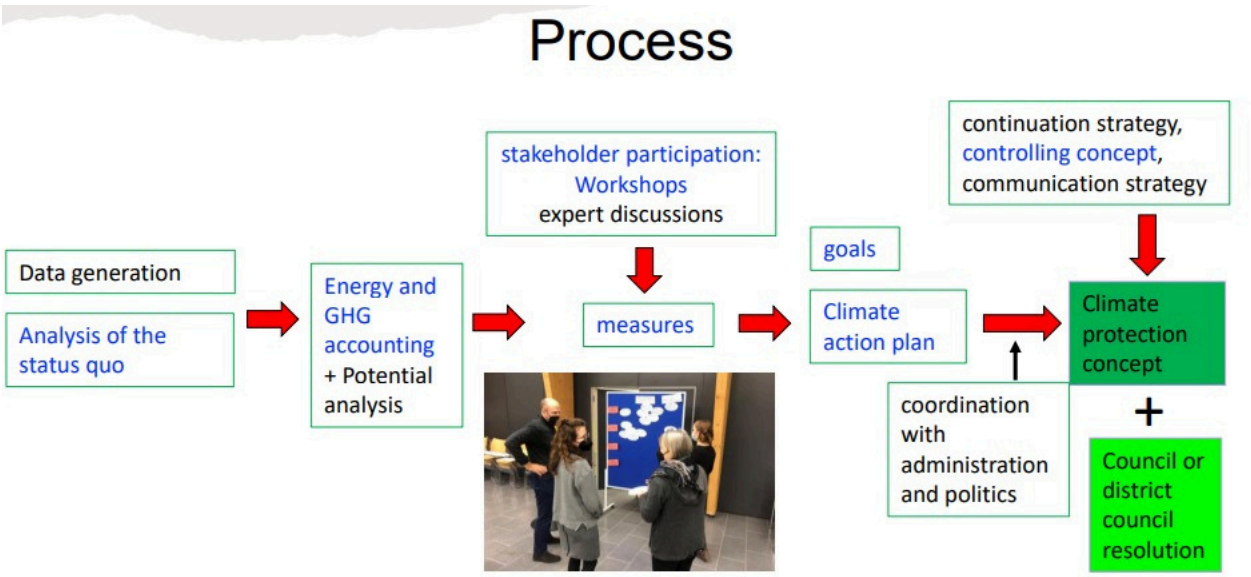
Staffing Levels in Municipalities

The extent of climate protection staffing in German municipalities is not centrally recorded. However, a Federal Environment Agency titled "Climate Protection in Municipalities" provides insights into the current situation. The survey indicates that approximately 10% of municipalities in Germany have dedicated climate protection staff. Of these, around 60% to 70% employ full-time positions within their administration.

Tasks of Climate Protection Staff in Municipalities

Climate protection staff in municipalities play a crucial role in developing, implementing, and monitoring climate initiatives. Their responsibilities encompass a broad range of tasks, from preparing comprehensive climate protection concepts to ensuring effective communication and cooperation with various stakeholders.

Preparation of Climate Protection Concepts



The preparation of climate protection concepts is a foundational task for climate protection staff. This process involves several key steps:

Analysis of the Status Quo:

- o Conduct surveys to assess previous climate protection activities.
- o Engage all 11 municipalities in the district of Northeim.
- o Distribute questionnaires to gather information on:
  - Climate protection policies.
  - Organizational structures within the administration.
  - Activities within their areas of responsibility.
  - Challenges faced.
  - Suggestions, wishes, and examples of best practices.

For more information, refer to the integrated climate protection concept of the district Northeim.

The action plan

No.	Fields of action	Number of measures
1	Cooperation and networking	5
2	Mobility	9
3	Buildings and procurement	7
4	Economy und private households	2
5	Renewable energies and energy efficiency	3
6	Sustainability	3
7	Public relations	3
8	Success monitoring and control	3
	Sum	**35**

Example of a measure profile:

Field of action:	Measure number:	Measure type:	Introduction:	duration:
Buildings and procurement	3.3	Building measure	Short-term 0 – 3 years	2 years
Measure title:	Self-sufficient heat supply for the multifunctional center in Northeim (Wallstraße 40)			
Objective and strategy:	Complete conversion of the heating system to renewable energies, no natural gas connection			
Initial situation:	The heat supply is currently based on a heating system using fossil natural gas (gas condensing boiler heating).			
Description:	The plan is to switch to a heat pump with ice storage. A solar thermal system on the south-facing roof is required to charge the ice storage tank.			
Initiator/ main actor:	Department 42 - Building and Transport Infrastructure			
Other players:	R40 - climate protection management			
Target group	District administration			
Action steps and timetable:	1. Provision of money in the budget 2. Application for funding 3. Contract awarded to a planning office 4. Coordination with all parties involved in planning 5. Realization			
Success indicators/milestones:	Funding commitment Installation of the complete system			
Costs:	approx. 900,000 euros (gross) including planning			
GHG savings (t/a)	with current consumption: 130.5 t/a with consumption after renovation of the building envelope: 68 t/a			

Control of Climate Protection Activities

Effective control and monitoring are essential to ensure the successful implementation of climate protection measures. This involves several reporting and evaluation processes:

- **Controlling of the Action Plan**:

  o Regularly assess the implementation status of measures outlined in the climate action plan
  o Integrate this process with GHG accounting to understand the impact of measures, recognizing that not every measure directly reduces greenhouse gases.
  o Implement a two-year cycle for controlling.

- **Evaluation Report**:

  o Evaluate the results of action plan controlling, making necessary adjustments to measures.
  o Follow a four-year cycle for evaluation, post two controlling cycles.

- **Climate Report**:

  o Document all climate protection activities, correlating them with the action plan. o Assess the impact on GHG accounting.

o Conduct this report every eight years, after two GHG accounting cycles at the district level.

Controlling concept for the district of Northeim:

Instrument	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
GHG accounting administration level			x		x		x		x		x	
GHG accounting district level	x				x				x			
Controlling of action plan				x		x		x		x		x
Evaluation report				x				x		x		x
Climate report						x						

Greenhouse Gas Accounting in Municipalities

Greenhouse gas (GHG) accounting is a critical tool for municipalities aiming to achieve climate neutrality. The process includes:

- **Sense and Purpose**:
  o Surveying the current situation to determine current energy consumption and GHG emissions.
  o Utilizing GHG accounting as a monitoring tool to track progress towards climate neutrality and demonstrate the impact of implemented measures.
- **Accounting Principles at District Level**:
  o Employing the end-energy-based territorial principle, while applying the polluter-pays principle (with upstream chain) for the electricity and district heating sectors.
- **BISKO**:
  o Standardizing accounting methods to align with international requirements (e.g., Greenhouse Gas Protocol), adjusted to German needs.
  o Published by ifeu in 2015.

Current Implementation of Measures in the District Northeim

The implementation of climate protection measures in the district of Northeim covers various aspects:

- **Sustainable Procurement**:
  - Ensuring procurement processes consider environmental and social criteria alongside price and quality.
  - Background:
    - Germany's commitment to the 17 Sustainable Development Goals (SDGs)
    - The ongoing development of the German sustainability strategy since 2002.

- **Introduction of a Sustainable Procurement Guideline**:
  - **Ecological Criteria (Selection)**:
    - Handling and use of chemicals.
    - Water consumption during production.
    - Utilization of renewable energies in production.
    - Quality and treatment of wastewater.
    - Product disassembly for recycling.
  - **Social Criteria (Selection)**:
    - Adherence to International Labor Organization (ILO) core labor standards:
      - Prohibition of forced labor.
      - Prohibition of child labor.
      - Equal pay.
      - Health and safety at work.
      - Non-discrimination.
  - **Procedure**:
    - Draft guidelines based on existing municipal examples.
    - Conduct online research and training on the sustainability compass (an online tool for public procurement).
    - Include annexes on quality seals and life cycle cost calculation.
    - Coordinate internally within the administration.
    - Seek political approval for guideline implementation.

- **Regular Exchanges and Coordination**:
  - Conduct online meetings on current issues with municipal climate protection managers every eight weeks, with in-person meetings 1-2 times a year.

- **Training Coordination**:
  - Organize training for facility managers on energy management and heating maintenance for administrative buildings, covering logistics such as room booking, catering, lecturer arrangements, participant lists, and communications.

- **Campaigns for Private Households**:
  - In 2024, implement a campaign with the Energy Agency and the Consumer Advice Center of Lower Saxony focused on thermal insulation and heating.
  - Engage in public relations activities, set up information stands at weekly markets, organize events, and forward consultation requests.

Communication, Networking, and Cooperation with Stakeholders

Effective communication, networking, and cooperation with various stakeholders are vital components of successful climate protection strategies. Climate protection staff engage in these activities at multiple levels.

Networking with Other Climate Protection Managers

- **District Level**: Regular meetings every eight weeks.
- **State Level**: Annual meetings.
- **National Level**: Biennial national network meetings.

Communication and Cooperation with Regional Stakeholders

- **Neighboring Municipalities**: Collaborate on topics such as energy management and local heat planning.
- **Local Institutes, Associations, and Foundations**: Engage on issues like green hydrogen and addressing the shortage of skilled workers in "climate jobs."

Climate Protection and Energy Agency of Lower Saxony (KEAN)

- Provide information on mandatory climate protection tasks and legislative changes.
- Organize events and network meetings.
- Offer advice to various target groups: municipalities, companies, and private households.

Consumer Center of Lower Saxony

- Organize events and support municipalities with energy consulting for private households.

Conclusion

This chapter provided a comprehensive overview of the activities of climate protection staff in municipal administrations in Germany, highlighting the critical roles they play in financing, staffing, preparing and implementing climate protection measures, and fostering communication and cooperation with stakeholders.

Chapter VI: Urban Planning in the Context of Climate Change

Introduction

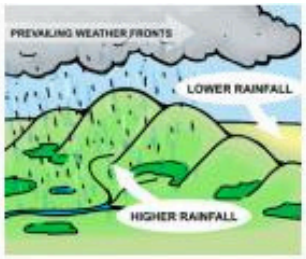
Urban planning is increasingly influenced by the pressing challenges posed by climate change. Cities, as concentrated hubs of human activity, are particularly vulnerable to the impacts of climate change, including heat stress and altered precipitation patterns. Effective urban planning must integrate climate considerations to ensure sustainable and livable environments.

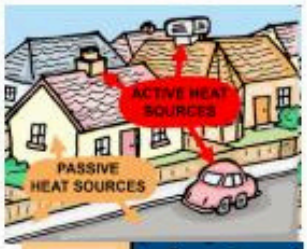
The Role of Meteorology in Urban Planning

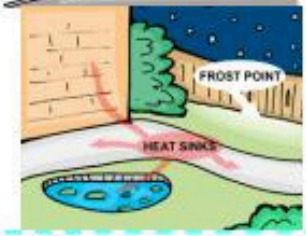
Meteorology, the study of atmospheric phenomena, plays a crucial role in urban planning. Understanding the interactions between the Earth's surface and the atmosphere is essential for designing open spaces and housing that can adapt to climate change. Urban planners must consider factors such as radiation, air pollution, and energy emissions from buildings to create resilient cities.

Legal Framework and Guidelines in Germany

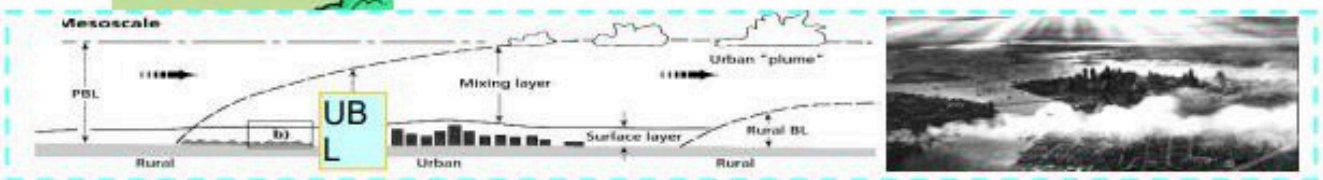
In Germany, the Federal Building Code mandates the inclusion of climate considerations in all planning and design processes. However, the implementation of these requirements is often unclear. To address this, standards and guidelines for urban climate planning, heat stress management, and climate adaptation have been developed. While these guidelines are not legally binding, they provide valuable tools for addressing climate-related conflicts and challenges in urban planning.





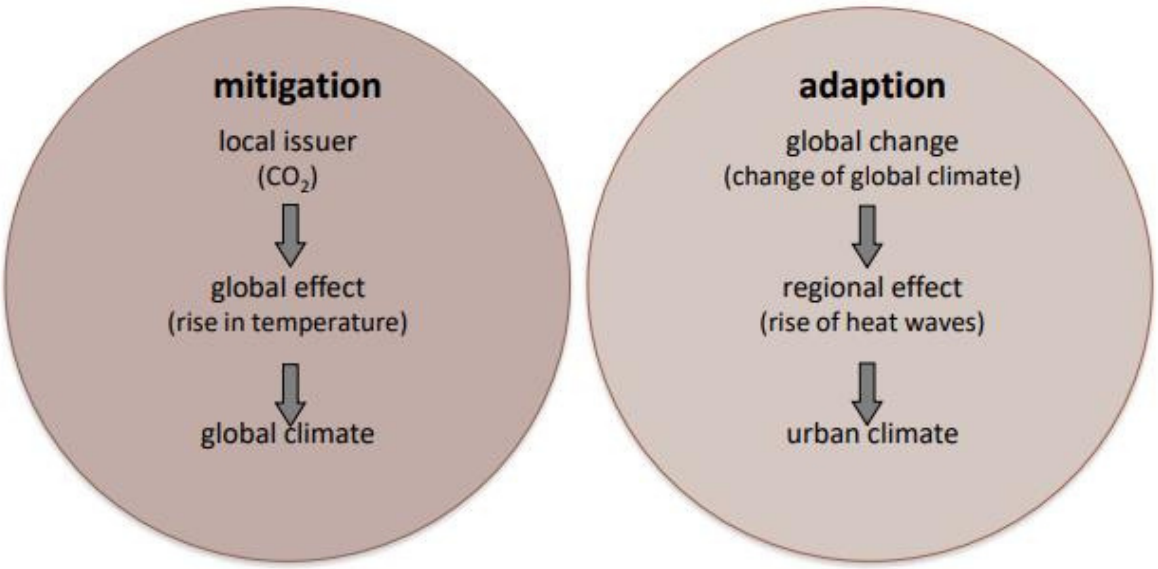


Administration level	Planning level	Climatic scale	Urban climate issue
region	regional development plan M 1: 100.000	meso scale	regional wind circulation
city	urban develop-ment, master plan M 1: 25.000	meso scale	heat island effects; ventilation and air paths
neigh-bour-hood	urban structures M 1: 5.000	meso scale	thermal comfort, air pollution
block	open space design M 1: 2.000	micro scale	thermal comfort
building	building design M 1: 500	micro scale	radiation and ventilation effects



The Three-Dimensional Nature of the Atmosphere

Understanding the three-dimensional nature of the atmosphere is vital for urban planning. Planners must consider not only air temperature but also radiation, air pollution, and other atmospheric factors. Technological advancements and traffic policies have significantly reduced air pollution in many cities, but challenges such as heat stress remain. Mitigation and adaptation strategies are crucial for addressing the localized effects of climate change, such as heatwaves and heavy precipitation.

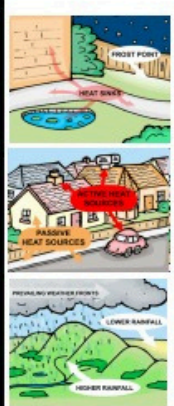


The Importance of Detailed Climate Data

Global climate models offer broad insights, but localized data is essential for effective urban planning. Detailed information at a local level, often on a grid of ten meters, is necessary for understanding the specific climatic conditions of urban areas, forests, and agricultural land. This granular approach allows planners to develop targeted solutions for different local climates.

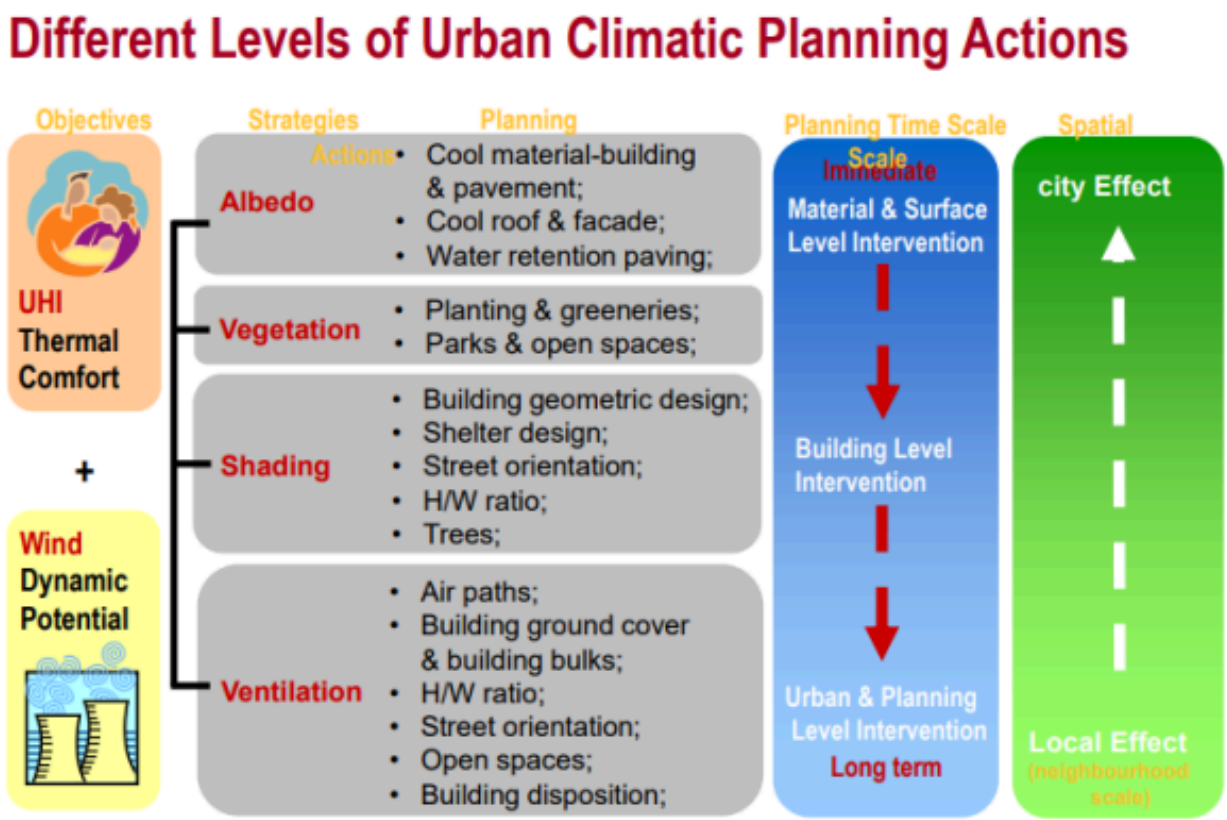
The Link between Policy and Urban Climate Scales

Physical Scale	Policy / Strategy Scale	Urban Climate Scale
Individual Building /Street (façade and roof construction materials, design and orientation).	Building regulations and Building Control, Urban design strategy Local Development Framework	**1 – 10 m.** Indoor climate and street canyon
Urban Design (arrangement of buildings, roads, green space)	Urban Design Strategy Area Action Plan Local Development Framework	**10 – 1000 m.** Neighbourhood scale, sub-urban variations of climate
City Plan (arrangement of commercial, industrial, residential, recreational and green space)	Sub Regional Spatial Strategy Regional Spatial Strategy	**1 - 50 km.** City/Metropolitan scale, UHI form and intensity.



The Challenge of Global Temperature Increase

Despite efforts to reduce CO2 and greenhouse gas emissions at local levels, global temperature increases remain a significant challenge. Urban planners must adapt to diverse local situations and consider factors such as jet stream changes and radiation dynamics. Detailed radiation studies, including incoming and outgoing radiation, are essential for understanding the urban heat balance and developing effective mitigation strategies.



Urban Heat Island Effect: The urban heat island effect, where cities are significantly warmer than surrounding areas, is a critical consideration in urban planning. Strategies to mitigate this effect include the use of green facades, green streets, and other methods to alter the radiation balance. Evidence shows that these measures can effectively reduce urban temperatures and improve environmental conditions.

Heat Storage and Radiation Management: Managing heat storage and long-wave radiation from buildings is crucial for urban climate planning. Urban planners must understand the differences in heat storage capacities and develop strategies to manage nocturnal cooling. Effective management of long-wave radiation can help mitigate health issues caused by ncreased radiation exposure.

Ventilation and Air Circulation: Ventilation is a key factor in urban planning, as proper air circulation can reduce heat and improve air quality. Planners must consider regional air circulation patterns and ensure these patterns reach individual buildings. This involves creating open spaces and ventilation corridors to facilitate air flow and reduce the urban heat island effect.

Principles of design for the four basis climate types

Climate type	Protection against	Control required	Typical characteristics
cold	wind, cold, snow drift, snow load	minumum heat loss wind protection	f.e. eskimo igloo, few openings, wind protection and insolation
moderate	rain, snow cold winds, summer heat, winter cold	minimum heat loss (winter), insolation (summer), shading, ventilation	insolation (winter), gain of winter sun through window shadow in summer
hot and dry	insolation, sand, dust, dryness	utilise rain, level out large air temperature amplitudes	shaded verandah facing courtyard, heavy wall with large time-lag
hot and humid	rain, heat, humidity, insolation	ventilation, cooling, shading	shaded verandah, cross ventilation, ventilated roof space

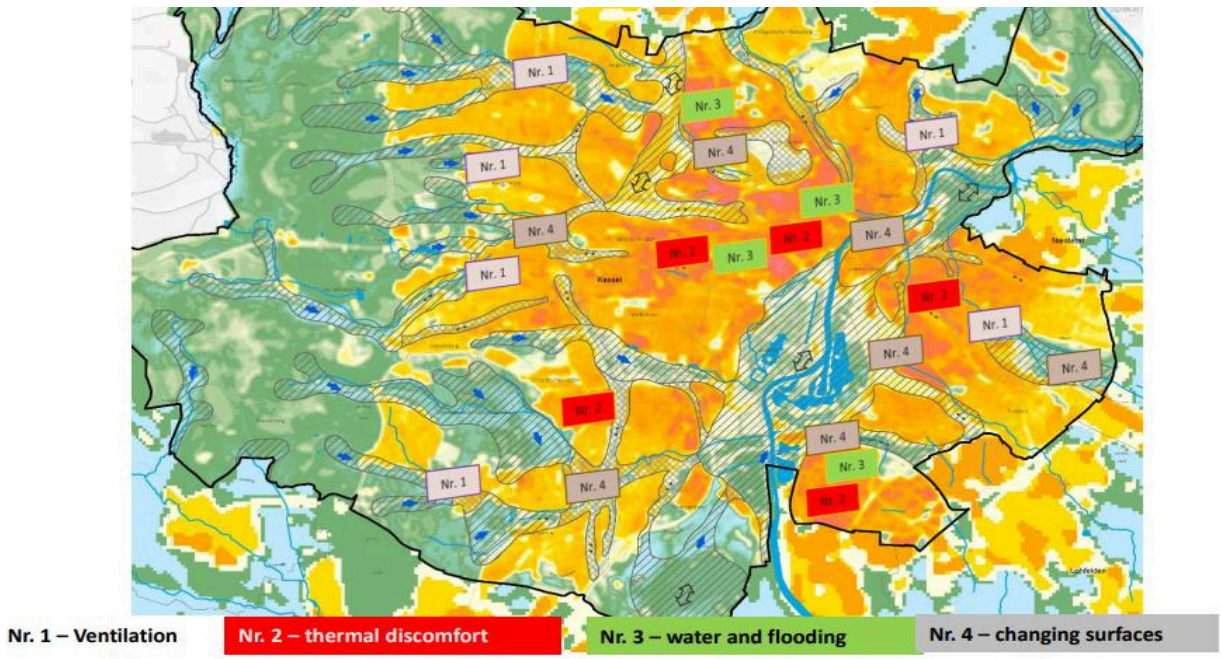
Case Studies Overview

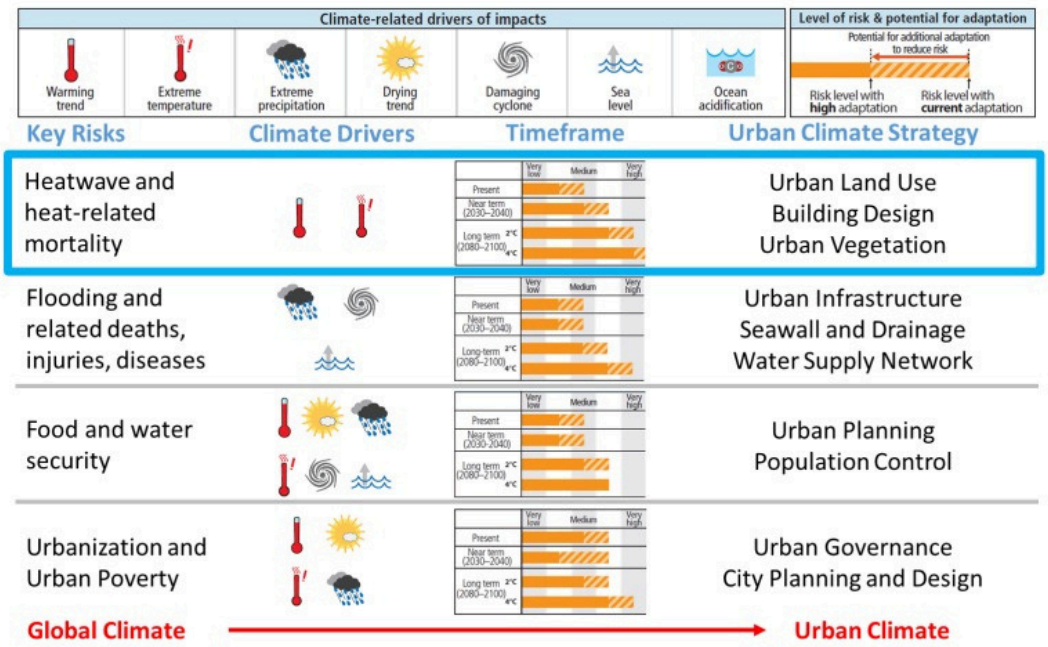
Frankfurt provides a valuable case study in effective urban planning. The city has developed comprehensive measures to manage heat and improve air circulation, including the creation of green belts and open spaces. Other cities, such as Vienna and Munich, also demonstrate the importance of understanding local microclimates and integrating climate adaptation strategies into urban design.

Greening Urban Areas

Greening urban areas is essential for improving air quality and reducing pollution. Measures such as green roofs, water retention systems, and increased vegetation can significantly mitigate the urban heat island effect. Urban planners must consider factors such as building density and wind direction to enhance ventilation and improve environmental conditions.

Urban Climate map with problem areas for Kassel, Germany :

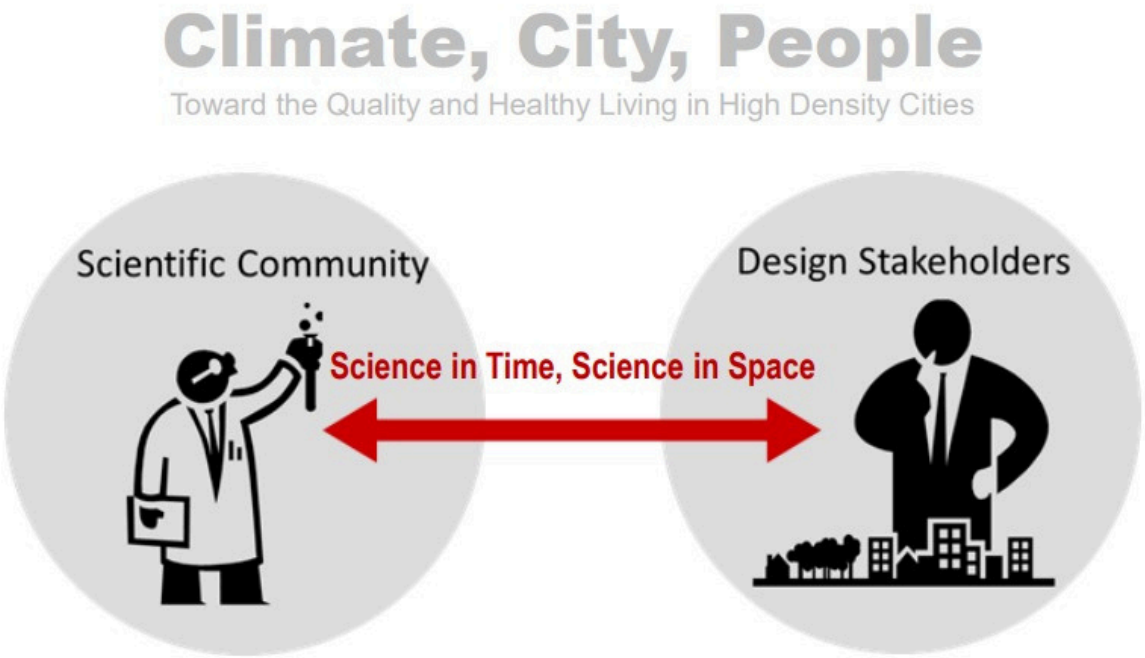




Key risks are driven by different climate drivers and have various levels of impact on different timescales.

Challenges and Innovations

Urban planning faces numerous challenges, including the need for education and continuous learning. Many municipalities lack the necessary resources and expertise to implement innovative climate adaptation strategies. However, there are promising developments, such as autonomous buildings that produce and store energy using photovoltaic facades. These innovations demonstrate the potential for sustainable urban design.



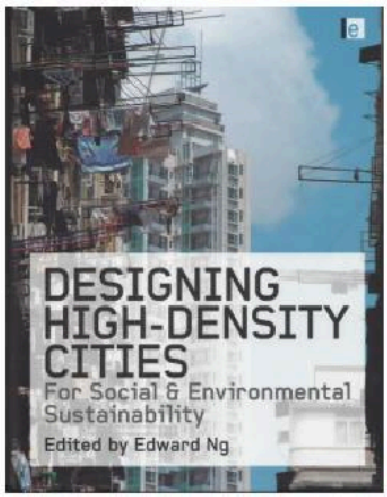
Conclusion

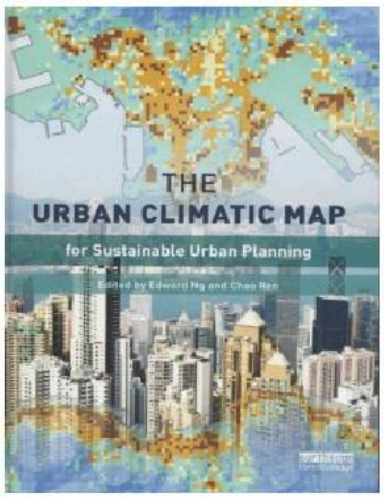
Urban planning in the context of climate change requires a comprehensive approach that integrates climate considerations at multiple scales. Planners must develop guidelines and standards that are regularly updated and include detailed information at various scales. Effective urban planning involves understanding local climates, managing heat storage and radiation, and ensuring proper ventilation. By adopting these strategies, cities can become more resilient and sustainable, providing better living conditions for their residents.

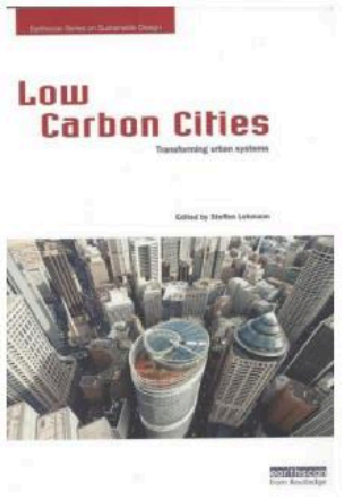
Definition of an ideal urban climate (Katzschner 1999)

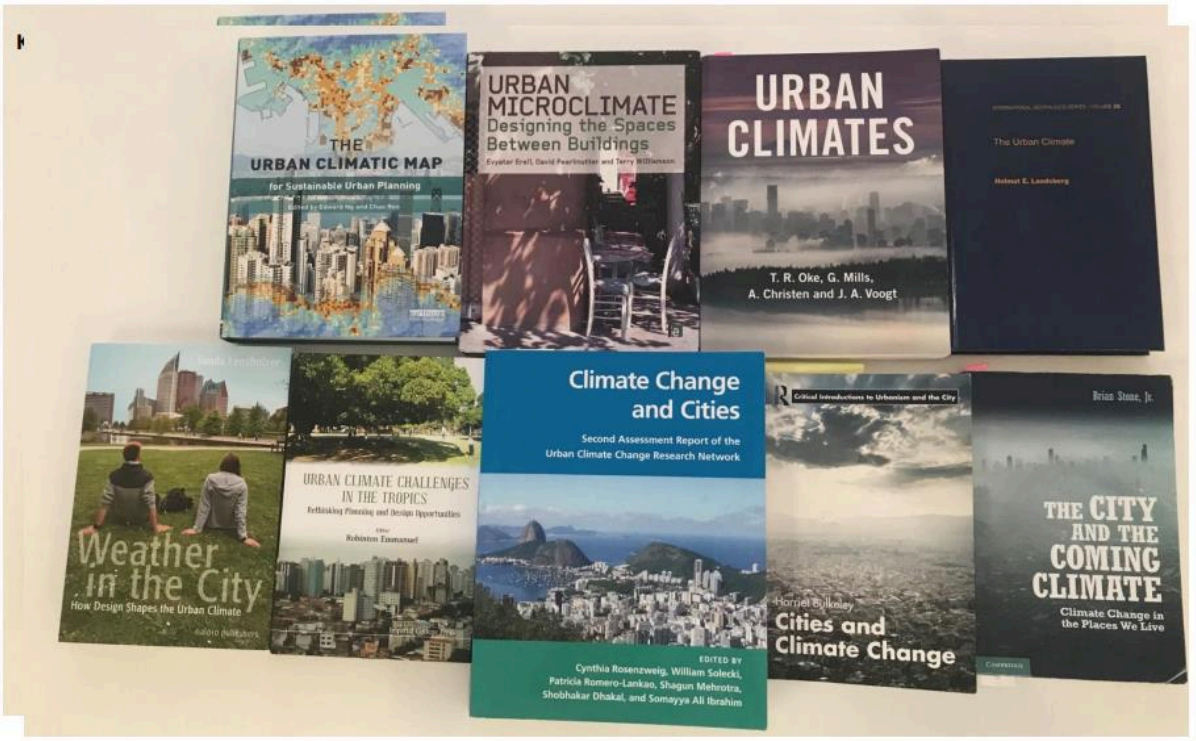
The" ideal urban climate" is an atmospheric situation within the UCL with a high variation in time and space to develop inhomogeneous thermal conditions for man within 150 m. It should be free from air pollution and thermal stress considering the differences in regional climates by means of more shadow and ventilation (tropical and warm climates) or wind protection (moderate and cold climates).

It should also consider possible climate adaptations of people.


DESIGNING
HIGH-DENSITY
CITIES
For Social & Environmental
Sustainability
Edited by Edward Ng


THE
URBAN CLIMATIC MAP
for Sustainable Urban Planning


Low
Carbon Cities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URBAN CLIMATIC MAP
for Sustainable Urban Planning
URBAN
MICROCLIMATE
Designing the Spaces
Between Buildings
URBAN
CLIMATES
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A. Christen and J. A. Voogt
The Urban Climate
Weather
in the City
How Design Shapes the Urban Climate
URBAN CLIMATE CHALLENGES
IN THE TROPICS
Climate Change
and Cities
Second Assessment Report of the
Urban Climate Change Research Network
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Climate Change
Brian Stone, Jr.
THE CITY
AND THE
COMING
CLIMATE
Climate Change in
the Places We Live

Chapter VII: Data Analysis and Research Skills for Climate Action

Introduction

Data analysis and research skills for climate action encompass a broad spectrum of activities aimed at developing innovative and sustainable solutions for water and climate change, particularly in rural development and agricultural practices. This chapter draws on extensive experience in planning, implementing, and evaluating environmental research and technical assistance projects. The focus includes renewable energies and climate change mitigation, with particular emphasis on solar energy for water treatment systems designed to operate with photovoltaic systems without needing batteries, utilizing gravity-based systems with water reservoirs.

Online Databases and Research Initiatives for Climate Data

Numerous online databases provide extensive access to open data crucial for climate mitigation and adaptation efforts. These resources are invaluable for developing and implementing climate strategies at city, state, or community levels, and potentially for national policies. Key databases include the following:

- **The UNFCCC's climate action website**: This platform offers comprehensive information on global climate actions, showcasing examples of best practices and policy measures from around the world. It serves as a valuable resource for cities and states looking to align their climate strategies with international standards and commitments.
- **The NDC Partnership**: The NDC Partnership supports countries in achieving their climate goals under the Paris Agreement. It provides a wealth of data and resources that help local and national governments design, implement, and enhance their climate action plans, ensuring they meet their Nationally Determined Contributions (NDCs).
- **The European Environment Agency:** The EEA offers detailed reports and data on environmental issues, including climate change. Its databases help policymakers and researchers assess climate-related problems, evaluate risks, and identify effective adaptation and mitigation measures, fostering evidence-based decision-making.
- **The Green Environmental Fund**: This fund provides financial support for climate
- projects worldwide. It offers access to data on funded projects, best practices, and
- lessons learned, enabling other cities and communities to replicate successful initiatives and secure funding for their own climate action projects.
- **The UN Environment Programme's Climate Technology Centre and Network**: The CTCN facilitates the transfer of climate technologies to developing countries, offering a rich repository of information on innovative technologies and solutions for climate mitigation and adaptation. It supports countries in overcoming technical barriers and implementing effective climate strategies.

These resources collectively support the planning and implementation of effective climate actions. By offering access to a variety of examples, best practices, and policy measures, these databases enable users to assess climate challenges, evaluate risks, and identify appropriate solutions tailored to their specific needs.

IPCC Reports and other Key Resources

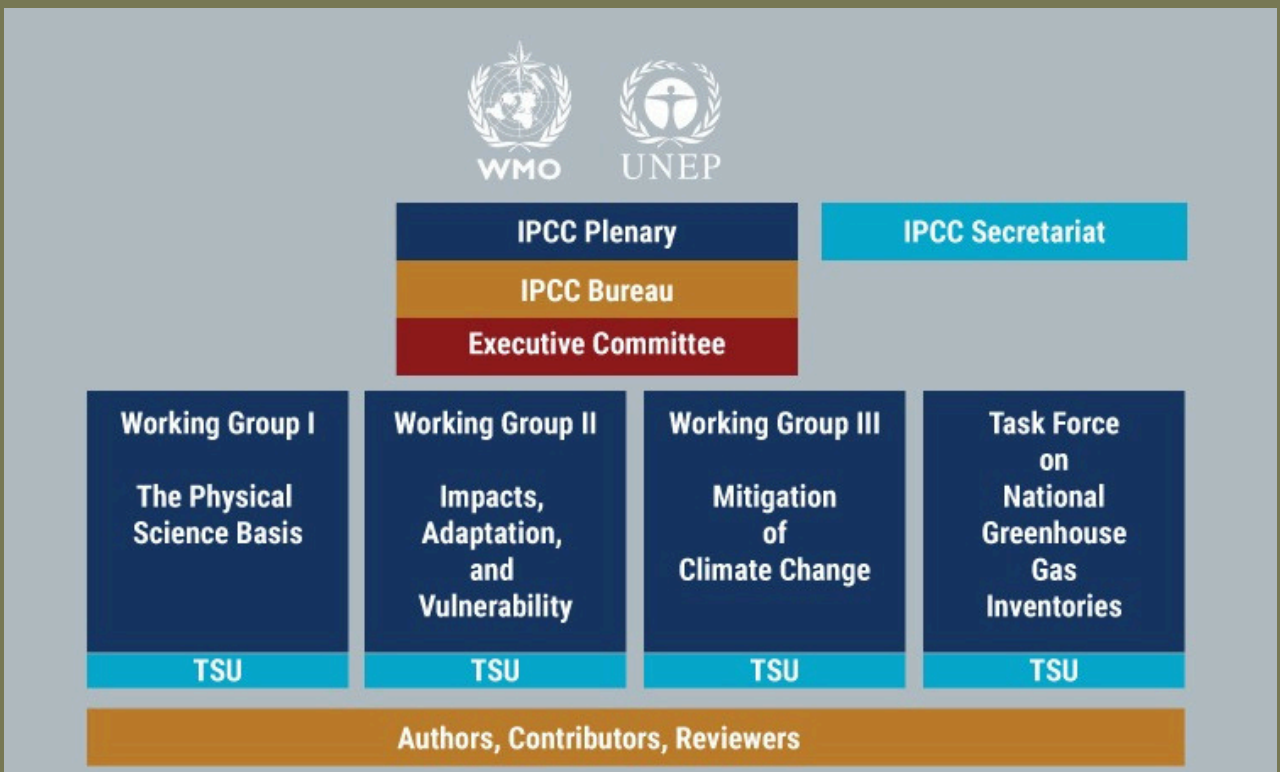
The IPCC Reports serve as a cornerstone for understanding climate change, offering comprehensive and widely recognized insights into the current state of the climate, observed and projected trends, potential future risks, and appropriate responses. These reports compile the latest scientific research from around the globe, presenting an authoritative assessment of the evidence on climate change. They detail how climate change is progressing, the factors driving it, and the possible impacts on natural and human systems. By providing a clear and thorough analysis, the IPCC Reports equip policymakers, researchers, and the public with essential knowledge to inform decision-making and develop effective strategies to mitigate and adapt to the changing climate.

IPCC Report Structure

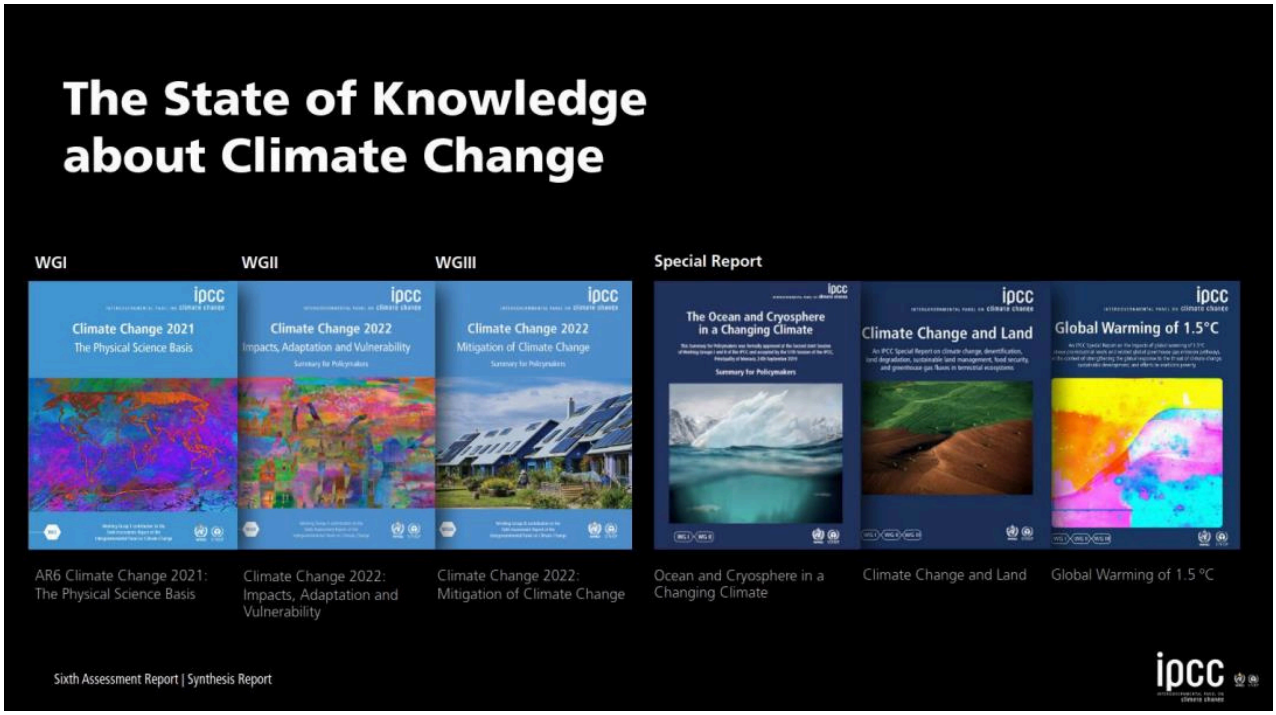
The IPCC report is divided into three main working groups:

1. **Working Group 1:** Focuses on the physical science basis of climate change.
2. **Working Group 2:** Addresses impacts, adaptation, and vulnerability.
3. **Working Group 3:** Concentrates on mitigation, assessing methods for reducinggreenhouse gas emissions and removing gases from the atmosphere.

The following graphic depicts the structure of the IPCC:



Special reports on specific topics, such as the ocean and cryosphere, climate change and land, and global warming, are also released by the IPCC. The latest report, the Sixth Assessment Report published in 2023, includes a Summary for Policymakers, the Full Report, Figures and Graphs, and Annexes.

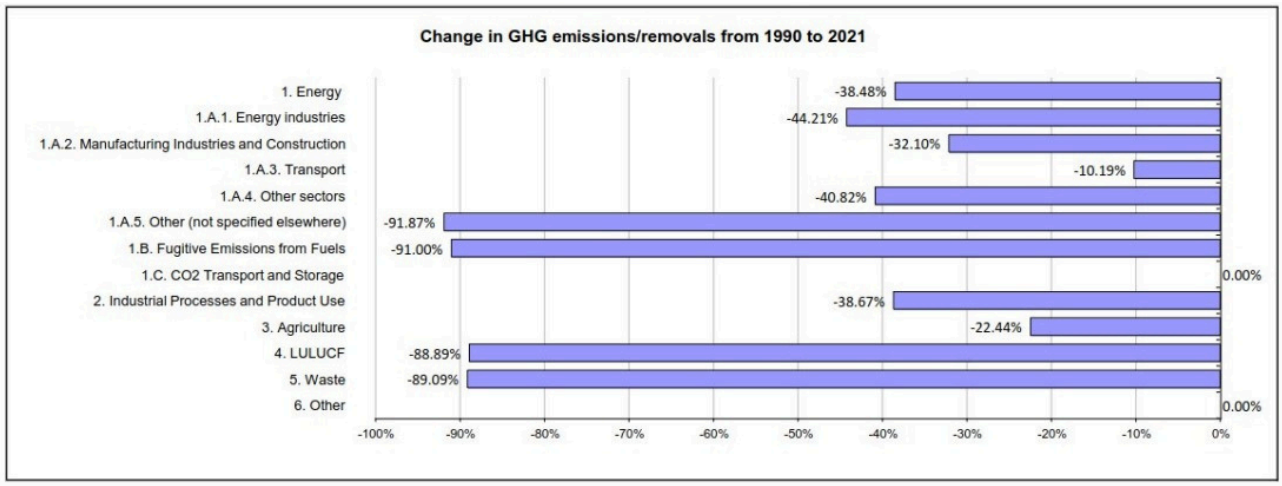


Source: https://www.ipcc.ch/report/ar6/syr/downloads/press/IPCC_AR6_SYR_SlideDeck.pdf

Greenhouse Gas Emissions Data

The UNFCCC greenhouse gas inventory provides detailed emission data, including country-specific information on total greenhouse gas emissions with and without land use, land use change, and forestry (LULUCF). For example, Germany's CO2 equivalent emissions decreased from 1.2 million kilotons in 1990 to 760,000 kilotons in recent years, with the energy sector being the largest emitter.

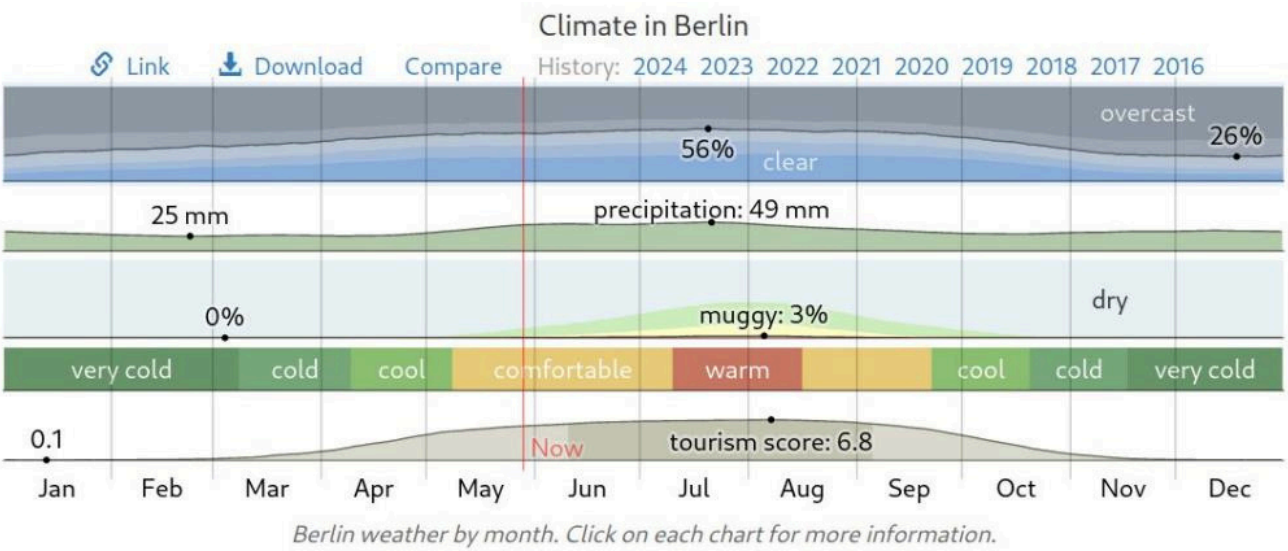
GHG Profile of Germany:



Source: https://di.unfccc.int/ghg_profiles/annexOne/DEU/DEU_ghg_profile.pdf

Local Climate Data and Solar Energy Potential

Local climate data is essential for designing effective climate measures. Weather Spark is a user-friendly website for providing detailed climate information, including average temperatures, rainfall probabilities, solar radiance, and wind conditions.



Source: Klima für Berlin, Wetter nach Monat, durchschnittliche Temperatur (Berlin, Deutschland) - Weather Spark

A comparative analysis of solar energy potential in different cities demonstrates how local climate data can guide the selection of effective climate actions. For example, Bucharest has a higher solar radiation value than Prague, indicating greater potential for solar energy production.

Climate Technologies and Adaptation Measures

The Climate Tech Wiki and the Climate Innovation Window are valuable resources for exploring climate technologies. These platforms provide detailed descriptions of various mitigation technologies and adaptation measures, helping users find relevant solutions for specific climate impacts and sectors.

The "We Adapt" platform and Climate Adapt database offer comprehensive collections of adaptation measures and best practices, supporting the development of effective climate action strategies.

Conclusion

Leveraging online databases and research initiatives for climate action is crucial for addressing climate challenges and implementing sustainable solutions. Utilizing key resources and exploring best practices and technologies aids in developing effective strategies for climate mitigation and adaptation. The focus on data analysis and research skills is vital for crafting informed and impactful climate actions.

Chapter VIII: Risk and Vulnerability Assessments

Introduction

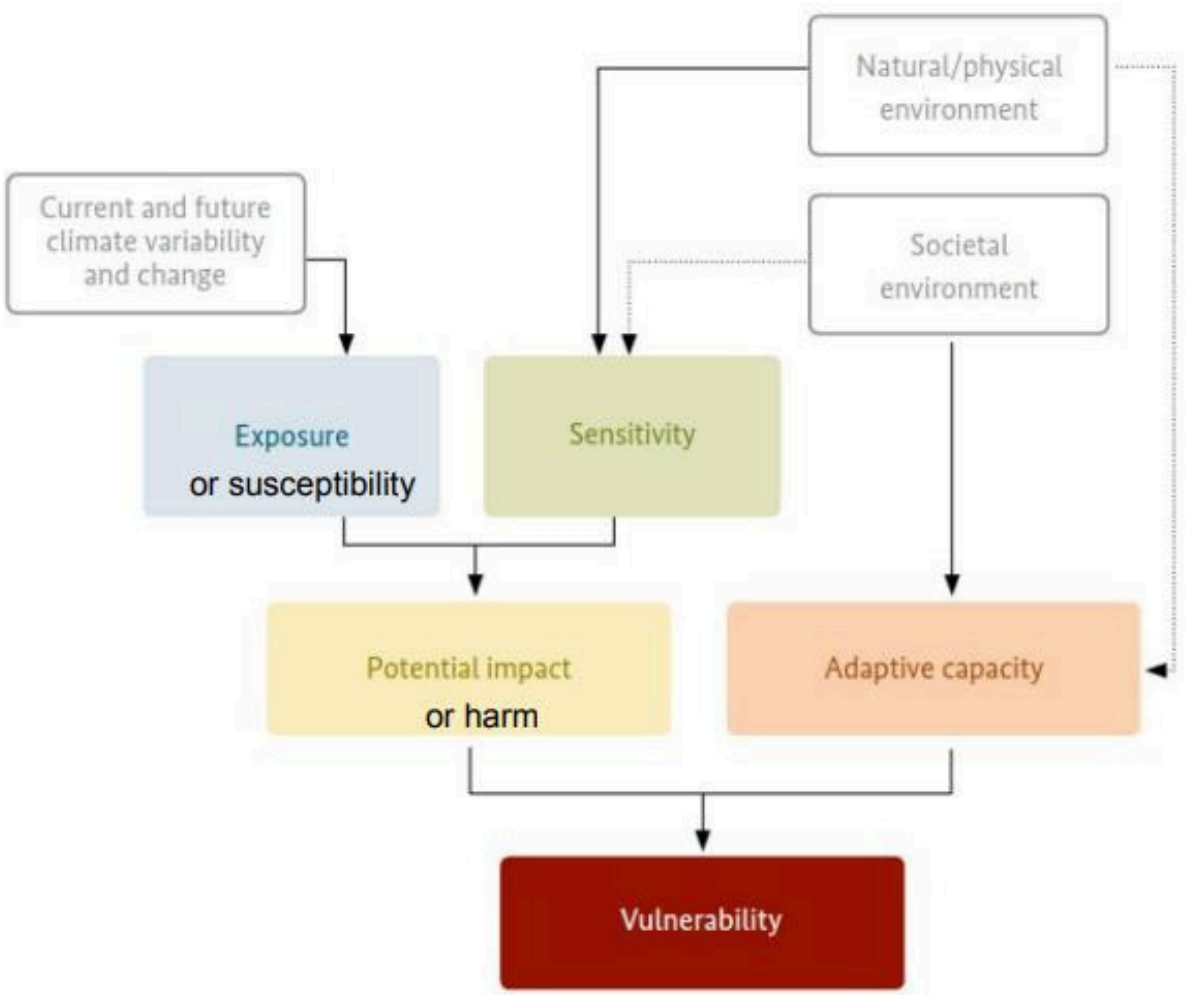
Risk and vulnerability assessments are essential tools for understanding and managing the impacts of climate change. These assessments help identify the potential risks and vulnerabilities associated with climate events and facilitate the development of effective adaptation strategies. The Climate Expert Approach, among other tools, provides a structured method for organizations to analyze climate impacts and generate robust climate actions.

Understanding Vulnerability

Vulnerability Definition

According to the Intergovernmental Panel on Climate Change (IPCC) in its Sixth Assessment Report (AR6), vulnerability is defined as the propensity or predisposition to be adversely affected. It encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt. This definition underscores the complexity of vulnerability, which includes both inherent sensitivities and the inability to manage adverse effects.

Components of vulnerability:

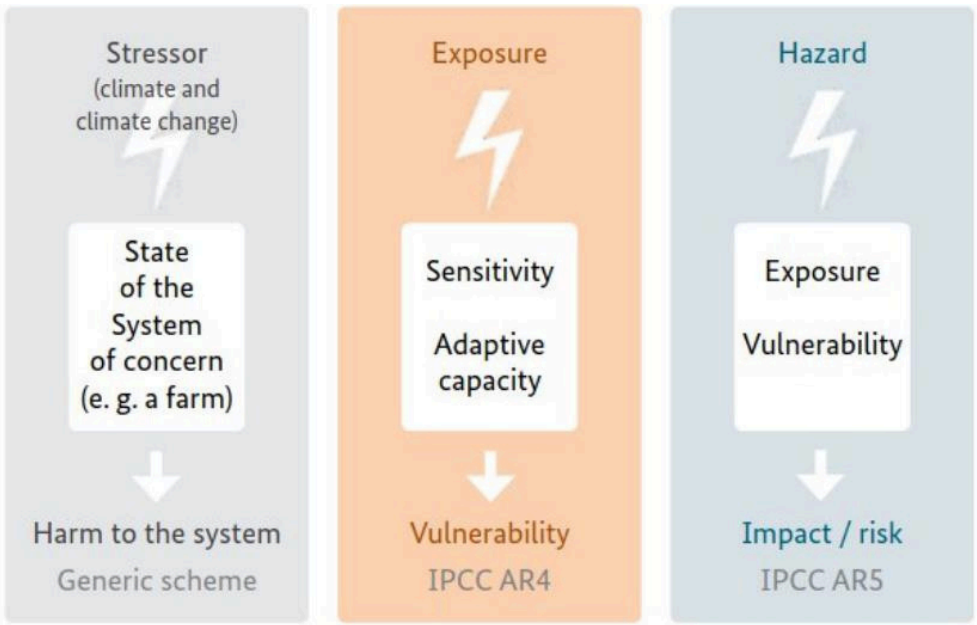


Source https://adelphi.de/system/files/mediathek/bilder/vulnerability_sourcebook_guidelines_for_assessments_adelphi_giz_2014.pdf

Concepts and Approaches in Vulnerability Assessment

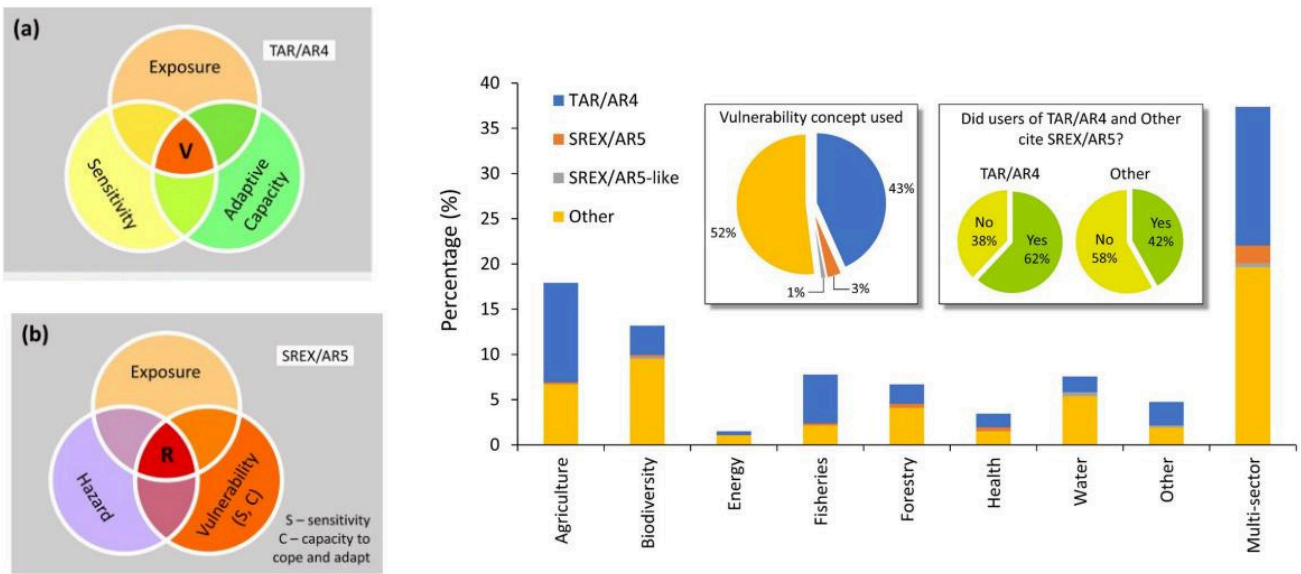
Vulnerability assessments are grounded in various theoretical frameworks and methodologies. These frameworks provide a structured approach to evaluating the susceptibility of systems to climate impacts and the potential for adaptation.

Generic Logic of Different Assessment Approaches:

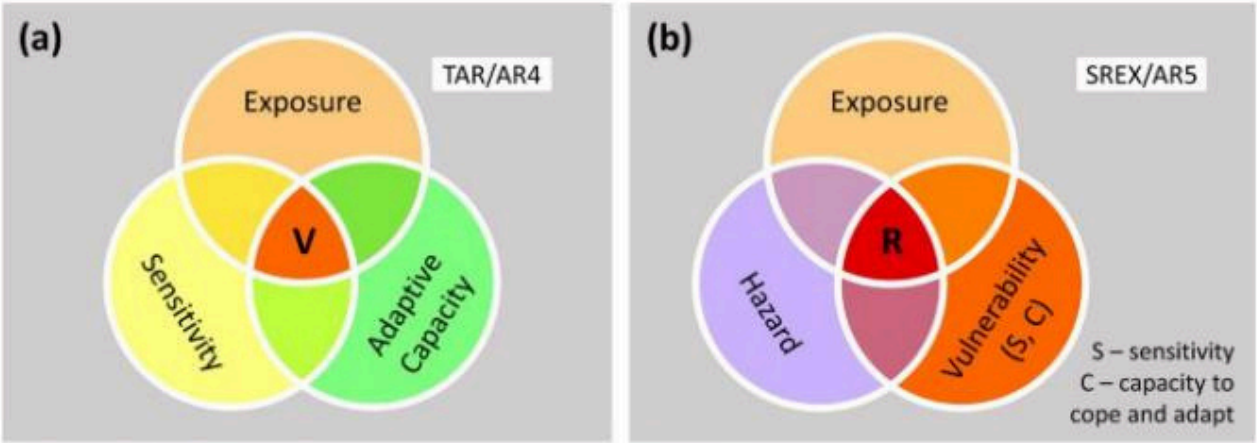


Source: https://adelphi.de/system/files/mediathek/bilder/vulnerability_sourcebook_guidelines_for_assessments_adelphi_giz_2014.pdf

Application of Vulnerability Concepts:



Source: https://link.springer.com/article/10.1007/s13280-022-01806-z



Vulnerability (V) (IPCC 2007, p. 883)
"The degree to which a system is susceptible to, and [**or** in IPCC 2001] unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation [**climate variation** in IPCC 2001] to which a system is **exposed**, its **sensitivity**, and its **adaptive capacity**." (bold emphasis added)

Exposure (IPCC 2001, p. 987)
"The nature and degree to which a system is exposed to significant climatic variations."
(not defined in IPCC 2007)

Sensitivity (IPCC 2007, p. 881)
"The degree to which a system is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea-level rise)."

Adaptive capacity (IPCC 2007, p. 869)
"The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences."

Risk (R) (IPCC 2014, p. 5)
"The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk results from the interaction of **vulnerability**, **exposure**, and **hazard**." (bold emphasis added)

Vulnerability (IPCC 2014, p. 5)
"The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including **sensitivity** or susceptibility to harm and lack of **capacity** to cope and adapt." (bold emphasis added)

Exposure (IPCC 2014, p. 5)
"The presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected."

Hazard (IPCC 2014, p. 5)
"The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources."

Climate Hazards and Impacts

Climate Hazards: Climate hazards refer to the potential occurrence of natural or human-induced physical events or trends that may cause loss of life, injury, health impacts, and damage to property and infrastructure. These hazards also affect livelihoods, service provision, ecosystems, and environmental resources.

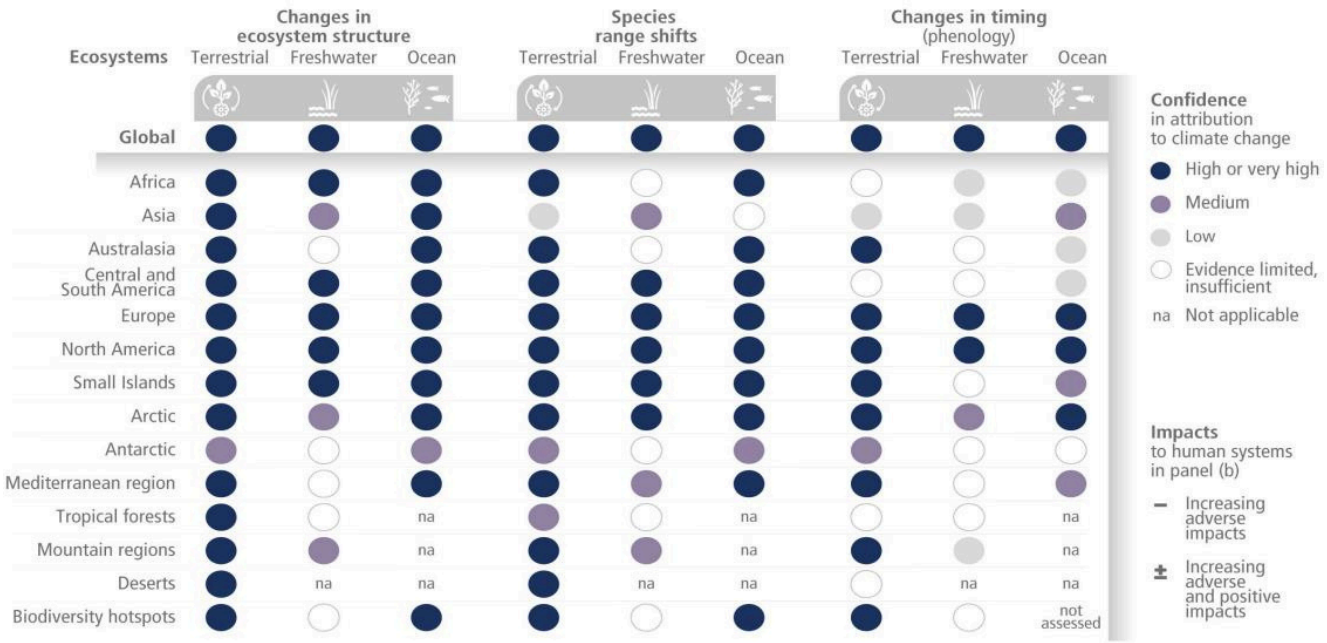
Climate Impact: The consequences of climate-related hazards, including extreme weather events, exposure, and vulnerability, are collectively known as climate impacts. These impacts can affect lives, livelihoods, health, ecosystems, economic assets, and infrastructure. Impacts may be adverse or beneficial.

Key Source: IPCC Glossary

Observed Impacts of Climate Change

The impacts of climate change are observable across various ecosystems and human systems globally. These impacts include changes in weather patterns, sea-level rise, and increased frequency of extreme weather events.

Observed Impacts on Ecosystems:



Source: IPCC AR6 report: https://www.ipcc.ch/report/ar6/wg2/chapter/technical-summary/

Tools for Climate Action and Adaptation

Numerous tools and methodologies exist to assist in climate action and adaptation planning. One prominent tool is the Climate Expert Approach, which helps organizations adapt to climate change through a structured five-step process.

Types of Tools and Their Applications:

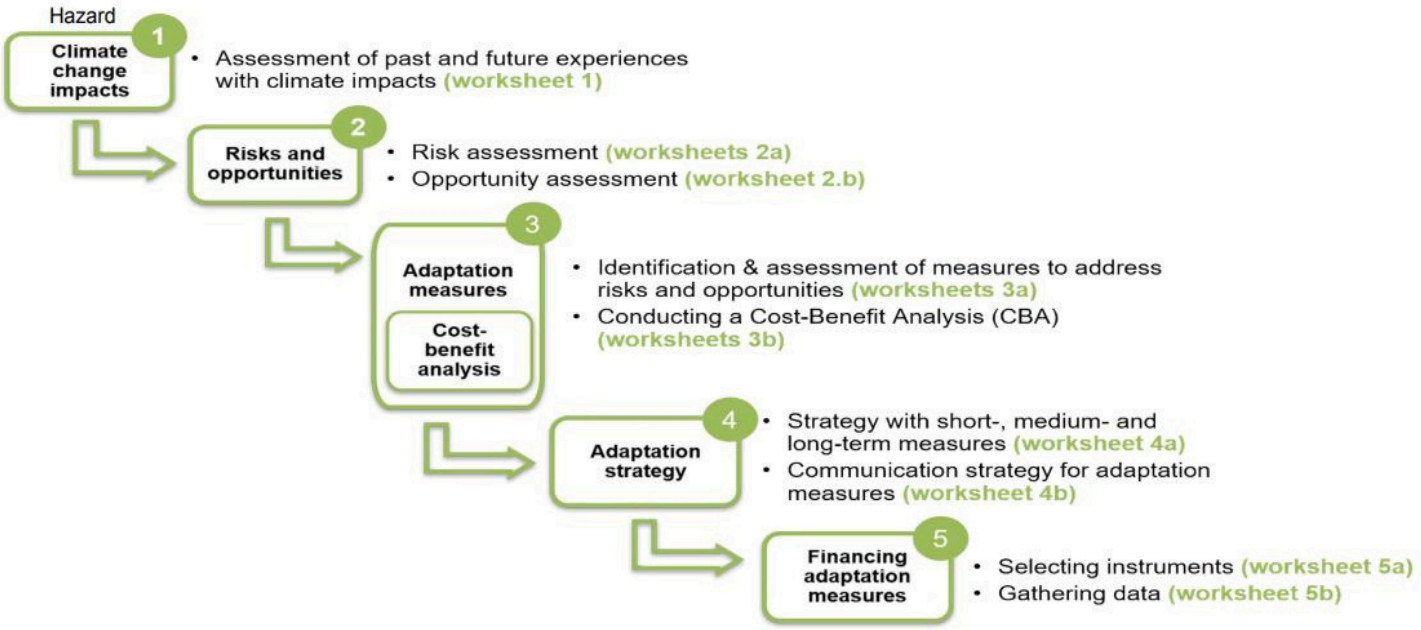
- **Climate Risk Software:** Tools like Aware for Projects (Acclimatize) and Climate and Disaster Risk Screening Tools (World Bank) help understand projected climate trends and provide risk assessments.
- **Vulnerability Assessments:** Tools such as the Climate Risk Management Framework (ADB) and Vulnerability Sourcebook (GIZ) offer detailed assessments of vulnerabilities.
- **Programmatic Approach:** Tools like Climate Proofing for Development (GIZ) identify priority approaches at the planning stage.
- **Community-Based Adaptation:** Tools like CCAIR (ADB) and CRiSTAL (IISD, IUCN & SEI) engage communities in creating awareness and co-creating adaptation measures.
- Economics of Adaptation: Tools such as ECONADAPT measure adaptation costs and benefits, ranking various climate change adaptation measures.

Source: Regain Paradise Analysis

The Climate Expert Approach

The Climate Expert Approach is designed to help companies, cities, or organizations analyze climate change impacts, assess vulnerabilities, and develop robust adaptation strategies. This approach involves five key steps:

1. Analyzing climate change impacts and vulnerabilities.
2. Generating adaptation strategies.
3. Implementing climate actions.

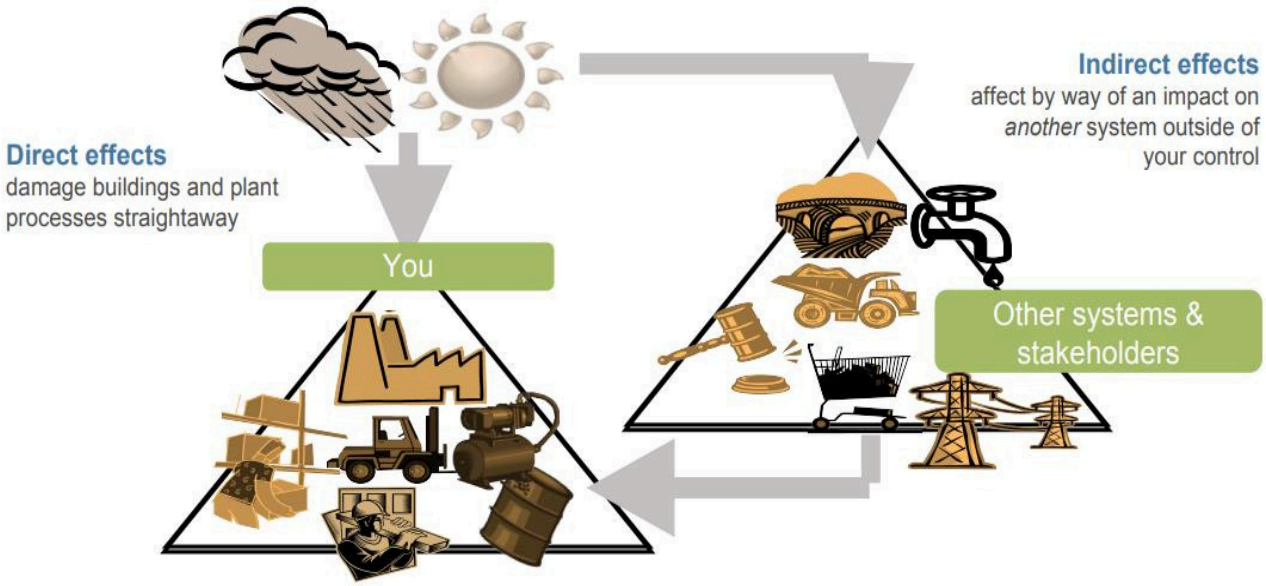


For detailed manuals on the Climate Expert Approach:

- **Consultants Manual:** Consultants Manual
- **Trainers Manual:** Trainers Manual

Direct and Indirect Effects of Climate Change

Climate change affects various impact areas, including infrastructure, processes, logistics, stakeholders, government regulations, markets, and finance. Understanding these impacts is crucial for developing effective adaptation strategies.

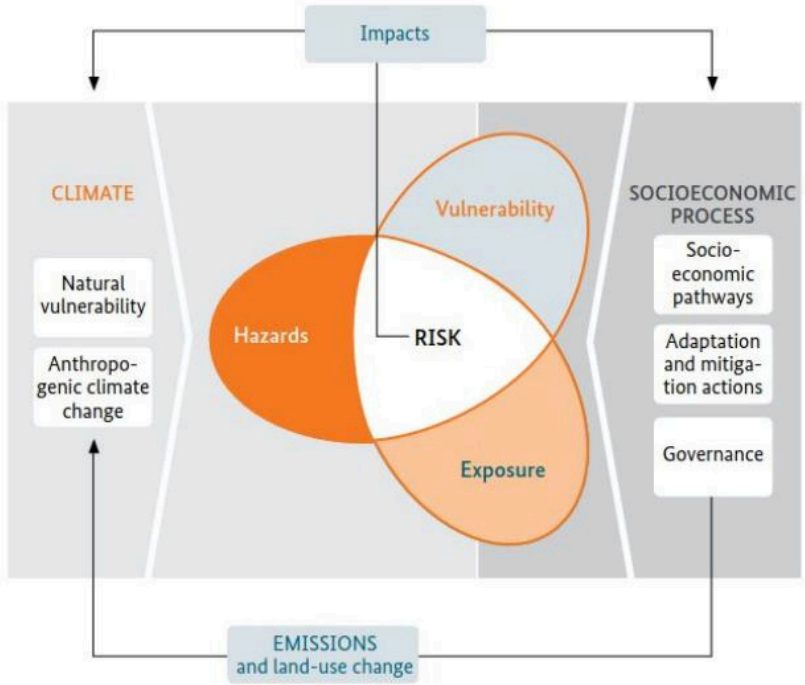


How climate change affects different "impact areas":

Infrastructure and Processes		Building / Location
		Processes
		Logistic and stock
Stake-holders		Employees and community
		Government and regulation
Market and Finance		Market
		Finance

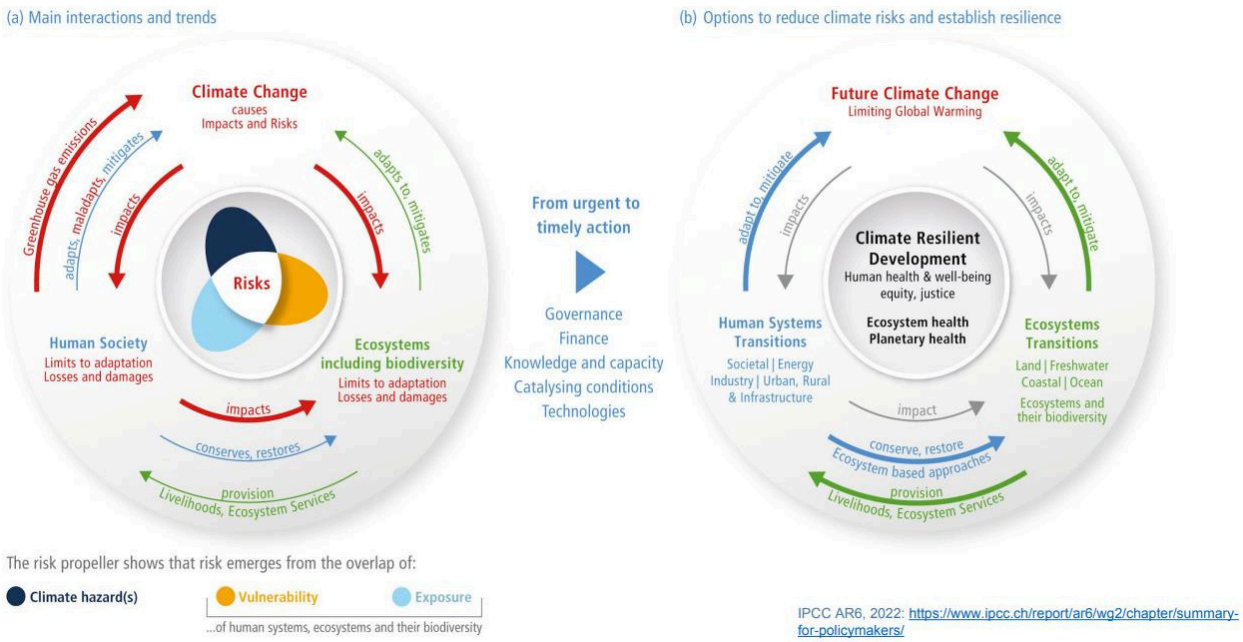
Defining Climate Risk

In the context of climate change, risk is defined as the potential for adverse consequences for human or ecological systems. These risks arise from dynamic interactions between climate- related hazards and the exposure and vulnerability of affected systems. Hazards, exposure, and vulnerability are subject to uncertainty and may change over time due to socio-economic changes and human decision-making.



Source: https://adelphi.de/system/files/mediathek/bilder/vulnerability_sourcebook_guidelines_for_assessments_adelphi_giz_2014.pdf

From Climate Risk to Climate Resilient Development:

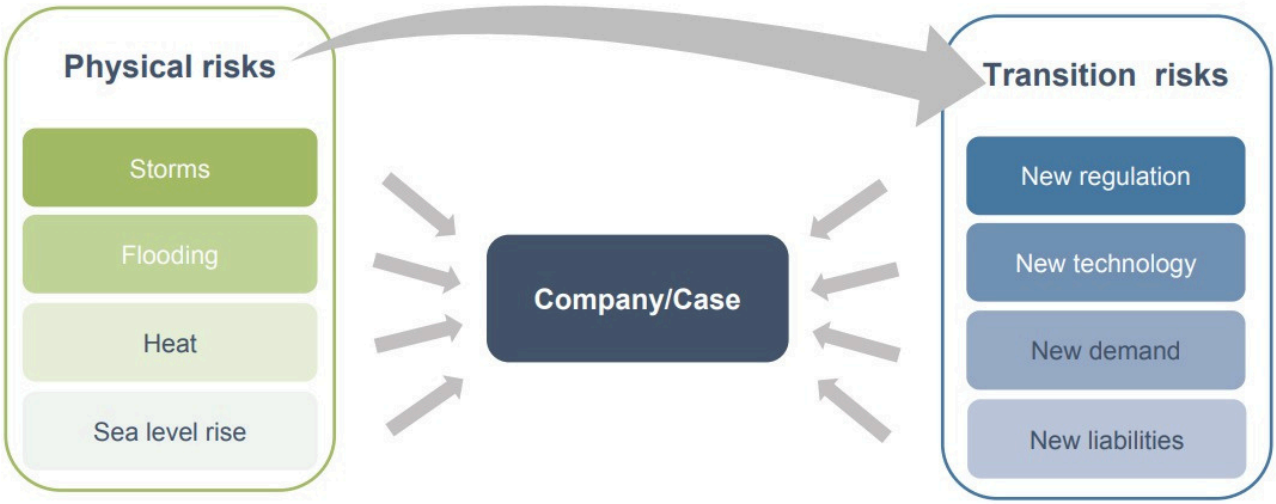


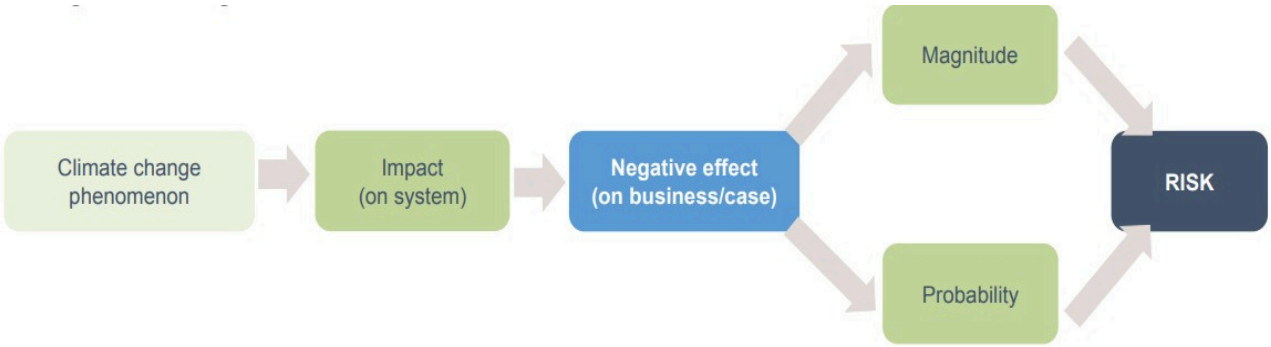
IPCC AR6, 2022: https://www.ipcc.ch/report/ar6/wg2/chapter/summary-for-policymakers/

- For further insights, refer to: IPCC AR6 Summary for Policymakers

Assessing Climate Change Risk

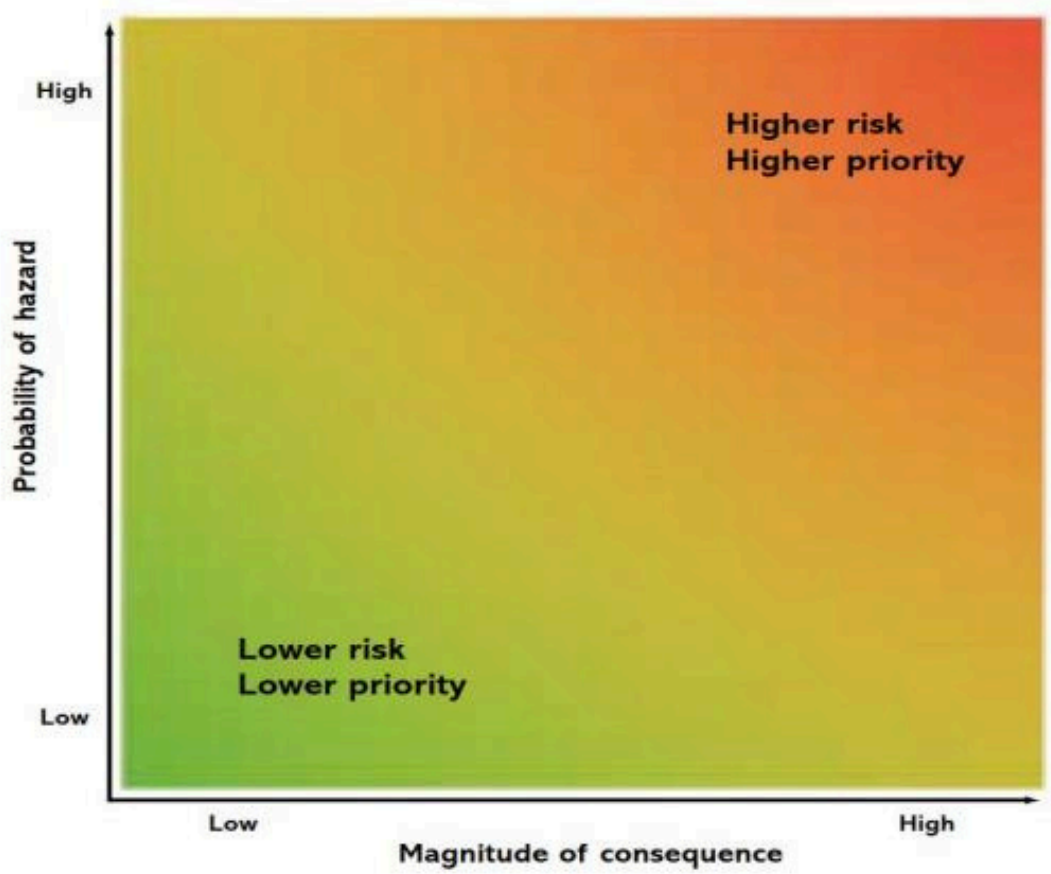
Assessing climate change risk involves managing the risks and opportunities associated with climate change. This includes identifying the likelihood and magnitude of potential impacts and developing strategies to mitigate these risks.





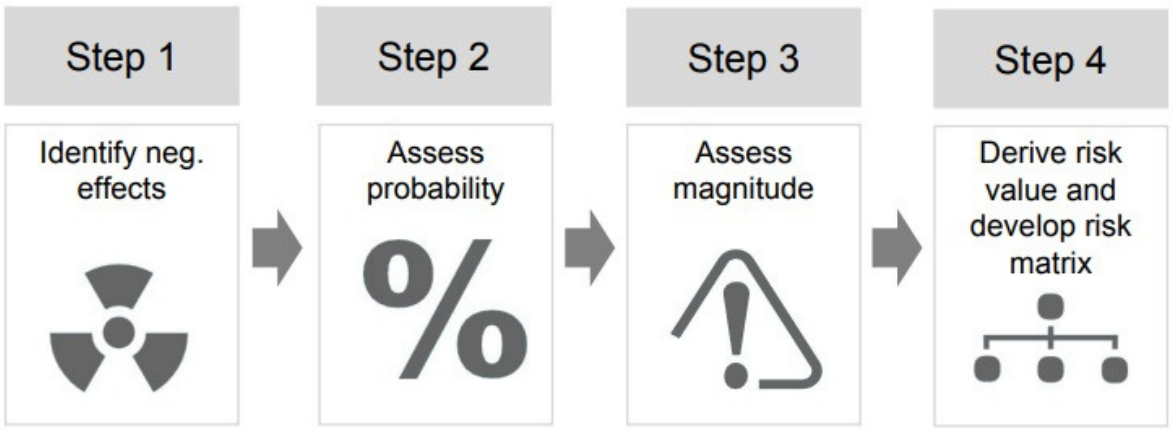
Source: Adapted from IPCC 2014

Climate Risk Matrix Example:



Source: UKCIP 2003

- Storms occurring occasionally with little effect on a city.
- Rare floods causing significant damage.
- Frequent power outages due to heat waves with strong effects.



This structured approach to risk and vulnerability assessments helps organizations prepare for and adapt to the challenges posed by climate change, ensuring resilience and sustainability in the face of evolving climate conditions.

Conclusion

This chapter elaborated in details the methods that are used for assessing climate risks and vulnerabilities, an essential step in planning and implementation

Chapter IX: Citizens' Engagement and Its' Importance

Introduction

Citizens' engagement plays a crucial role in addressing societal issues and fostering a sense of community. This chapter explores the importance of citizens' engagement, the levels of participation, the process of designing for participation, and best practices for facilitating effective engagement.

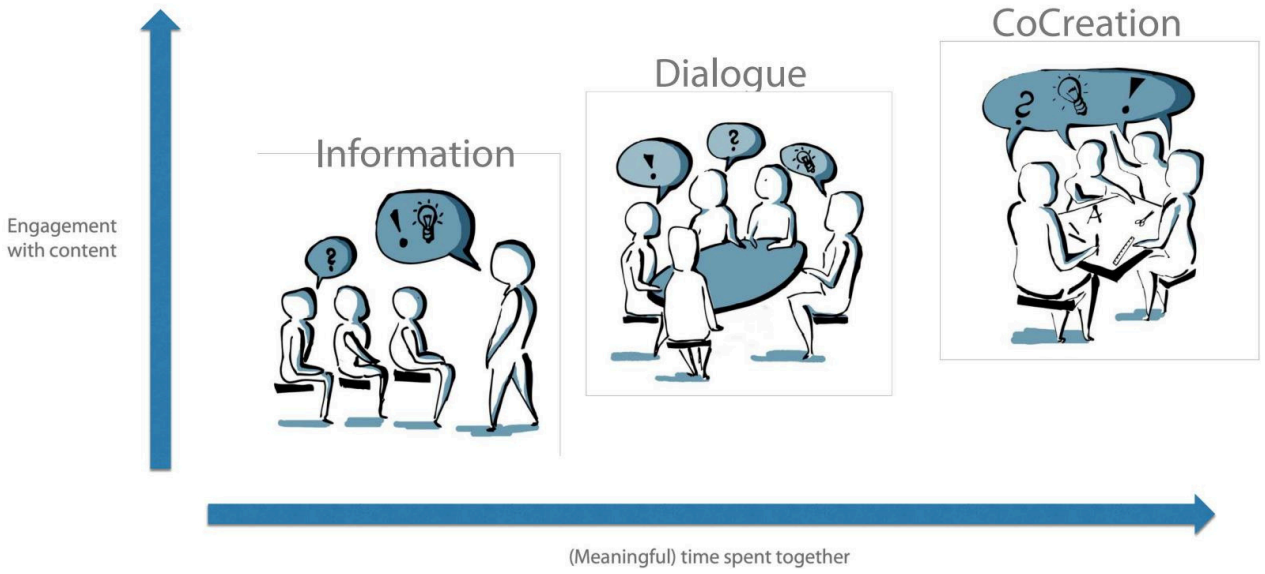
Why Citizens' Engagement Matters

Addressing Disagreements: Many societal problems arise from disagreements among people. engaging citizens in decision-making processes can help resolve conflicts and promote consensus.

Enhancing Support for Measures: People are more likely to support initiatives they have had a say in. When individuals feel a sense of ownership, they value and support measures more highly.

Accelerating Progress: Gaining public support and removing obstacles to creativity and accountability can expedite progress. Although this may initially require a slow approach, it ultimately leads to faster and more sustainable outcomes.

Levels of Participation



Level 1: Information: At this level, the goal is to inform citizens. Common formats include:

- Municipal council meetings
- Information events
- Lectures
- Info letters
- Websites
- Newsletters
- Movies
- Brochures
- Flyers, posters
- Commercials
- Info boards

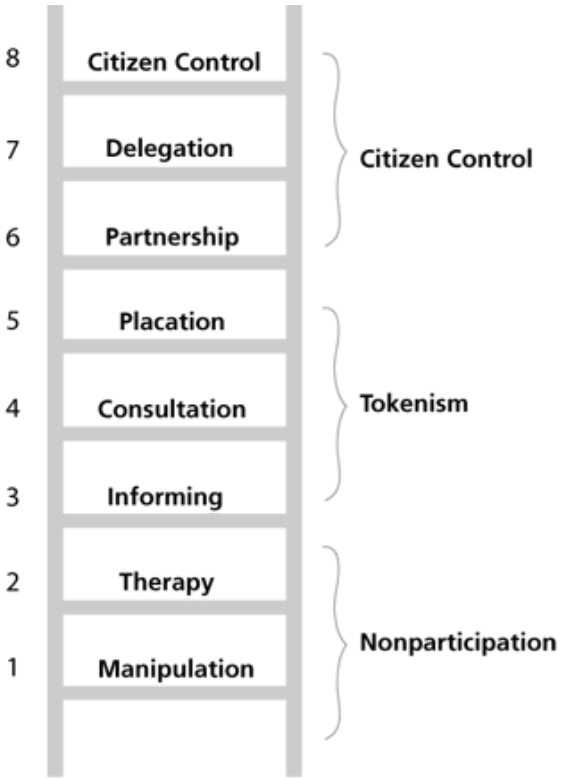

Level 2: Dialogue: Dialogue fosters two-way communication between citizens and decision-makers. Formats include:

- Citizens' assemblies
- Round tables
- World Cafes
- Open Space events
- Discussions
- Focus groups

Level 3: Co-Creation: This level involves collaborative efforts to create solutions. Formats include:

- Climate Workshops
- Design Workshops


Ladder of Participation



Arnstein's Ladder (1969)
Degrees of Citizen Participation

Source: https://www.citizenshandbook.org/arnsteinsladder.html

Sherry Armstein, writing in 1969 about citizen involvement in planning processes in the United States, described a "ladder of citizen participation" that showed participation ranging from high to low.

The ladder is a guide that highlights who has power when important decisions are being made. It has survived for so long because people continue to confront processes that refuse to consider anything beyond the bottom rungs.

Manipulation and Therapy: Both are non-participative. The aim is to cure or educate the participants. The proposed plan is best and the job of participation is to achieve public support through public relations.

Informing: A most important first step to legitimate participation. But too frequently the emphasis is on a one-way flow of information. No channel for feedback.

Consultation: Again a legitimate step attitude surveys, neighbourhood meetings and public enquiries. But Arnstein still feels this is just a window dressing ritual.

Placation: For example, co-option of hand-picked 'worthies' onto committees. It allows citizens to advise or plan ad infinitum but retains for power holders the right to judge the legitimacy or feasibility of the advice.

Partnership: Power is in fact redistributed through negotiation between citizens and power holders. Planning and decision-making responsibilities are shared e.g. through joint committees.

Delegation: Citizens holding a clear majority of seats on committees with delegated powers to make decisions. Public now has the power to assure accountability of the programme to them.

Citizen Control: Have-nots handle the entire job of planning, policy making and managing a programme e.g. neighbourhood corporation with no intermediaries between it and the source of funds.

Benefits of Participation

Collaborative Shaping: Participation allows for collective shaping of communities, moving beyond mere demands.

Conflict Resolution: Engagement fosters the development of communities, reducing the need for protests and conflicts

Practical Ideas: Participation helps in understanding and resolving conflicts collectively.

Community Cohesion: Working together creates a sense of cohesion and belonging.

Municipal Shaping: Citizens can use their individual will to influence and shape their municipalities.

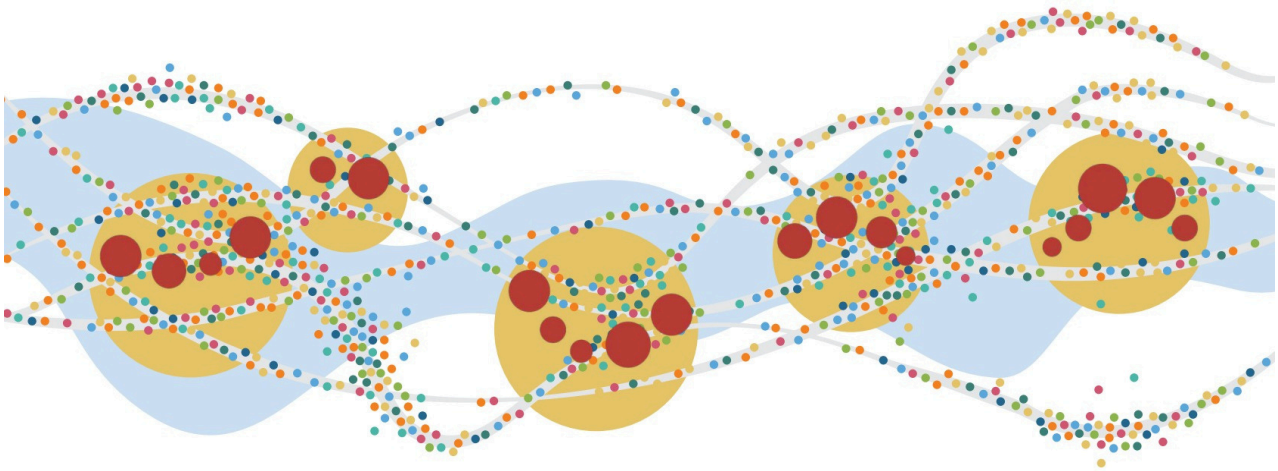
Designing for Participation

Process: The process of participation is dynamic and unfolds over time. It has its own specific characteristics and continuously evolves.

Procedures: Procedures encompass various formats and include all steps before, during, and after the engagement process, providing structure.

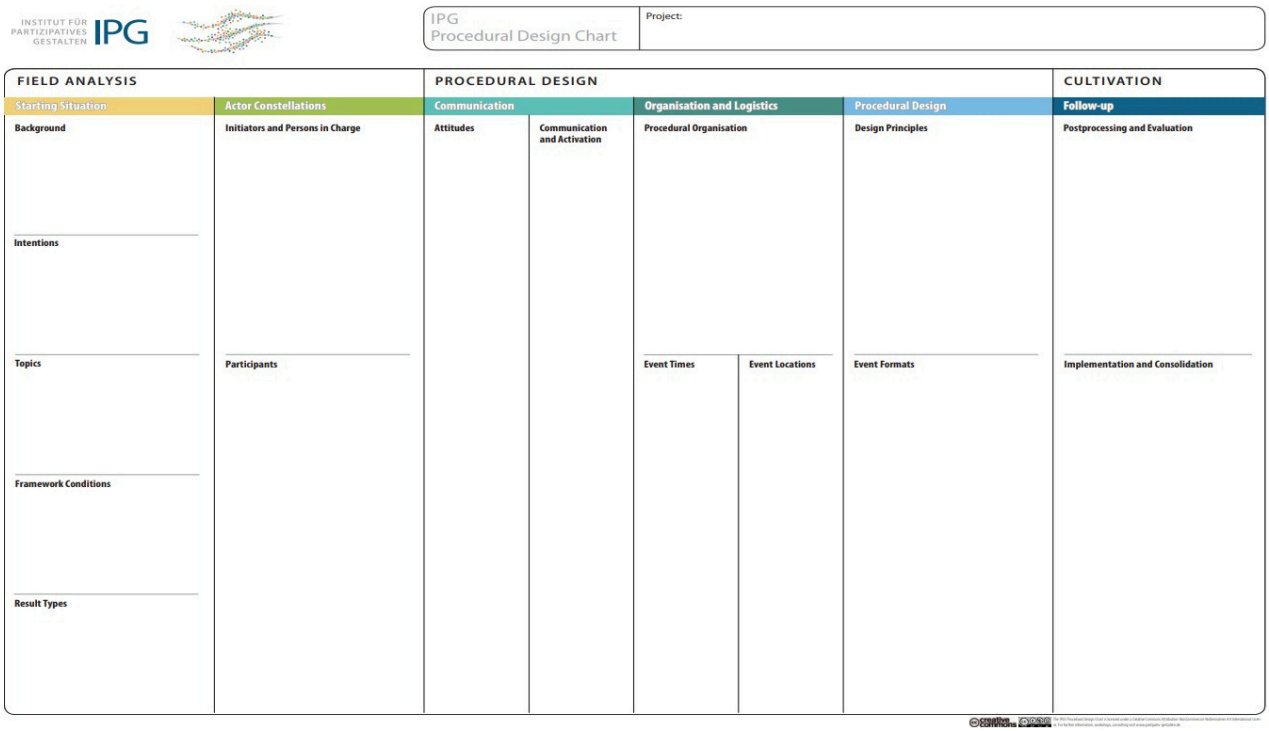
Formats: Formats are structured events consisting of a sequence of methods to facilitate participation.

Methods: Methods describe the approaches used to achieve specific outcomes (from the Greek word meaning "the way towards something").



Participation Canvas

The Participation Canvas is a tool that helps in planning and visualizing the participation process. It ensures that all aspects of the process, procedures, formats, and methods are considered. (Annex 1)



Facilitation

Creating Conditions for Change: Effective facilitation aims to create conditions where people feel safe enough to change their minds, challenge opinions, and make bold decisions.

Embracing Vulnerability": Changing one's mind involves vulnerability. Facilitators must create a space where participants can safely express insecurities and explore new ideas.

Small Groups and Good Questions: Small groups foster intimacy and personal connection, which are crucial for transformation. Good questions guide the process and help uncover deeper insights.

Key Quote: *"If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question, I could solve the problem in less than five minutes."* – attributed to **Albert Einstein**

The role of Civic Engagement in Climate Action

Climate change is one of the most pressing challenges of our time. It affects every aspect of our lives, from the environment and economy to health and security. While governments, international organizations play crucial roles in addressing climate change, civic engagement is an equally vital component, highlighting how individuals and communities can contribute to sustainable solutions.

Photo by Li-An Lim on Unsplash

Civic Engagement for Climate Action refers to individual and collective actions designed to identify and address climate related issues of public concern. It encompasses a wide range of activities, including volunteering, participating in local government, joining advocacy groups, and engaging in community organizing. In the context of climate action, civic engagement is essential because it empowers citizens to contribute to environmental sustainability, influence policy, and drive grassroots initiatives.

Advocacy and awareness are fundamental aspects of civic engagement in climate action. Educational campaigns can inform the public about climate change, its impacts, and ways to mitigate it. This can involve workshops, seminars, social media campaigns, and public speaking events. Media engagement, utilizing both traditional and social media platforms, is crucial for spreading awareness, sharing success stories, and mobilizing support for climate initiatives.

Community organizing plays a pivotal role in fostering local action. Grassroots movements often form to address specific climate issues, such as establishing community gardens, organizing clean-up drives or launching renewable energy projects. Climate strikes and protests are organized demonstrations that demand action from policymakers and raise public consciousness about climate issues. These activities not only create immediate impacts but also build long-term resilience and awareness within communities.

Participation in governance is another critical element of civic engagement. This can include attending public consultations, participating in public hearings, and engaging in town hall meetings. By involving themselves in the decision-making processes, citizens can influence policies and initiatives that directly impact climate action. Civic engagement in governance ensures that the voices of the community are heard and considered in the development and implementation of climate policies.

Collaborative projects between citizens and local governments or organizations also highlight the power of civic engagement. Joint initiatives can lead to the development of sustainable practices, such as creating bike-sharing programs, improving public transportation, or enhancing urban green spaces. These collaborations often result in innovative solutions that are tailored to the specific needs and capabilities of the community.

Conclusion

In conclusion, civic engagement is a cornerstone of effective climate action. Through advocacy, community organizing, participation in governance, and collaborative projects, individuals and communities can make significant contributions to combating climate change. By empowering citizens to take an active role, we can build a more sustainable and resilient future for all.

Resources

- **The Art of Powerful Questions**: A guide to asking meaningful questions.
- **Summary of Peter Block's "Community"**: Insights into building community.
- **Art of Hosting Field Guide by Chris Corrigan**: Techniques for hosting engaging events.
- **Overview of Art of Hosting Methods**: A summary of various methods for effective participation.

Chapter X: Multi-Stakeholder Partnerships (MSPs) for Sustainable Development

Introduction to MSPs

Multi-Stakeholder Partnerships (MSPs) are collaborative arrangements that bring together various stakeholders to work towards common goals, particularly in the context of sustainable development. These partnerships are crucial for implementing the 2030 Agenda for Sustainable Development, which underscores the need for collective efforts to achieve the Sustainable Development Goals (SDGs).

MSP Basics: What, Why, and How?

What Are MSPs?

MSPs involve multiple actors, including governments, businesses, civil society, and international organizations, working together to address complex global challenges. These partnerships are essential for pooling resources, expertise, and efforts towards achieving sustainable development.

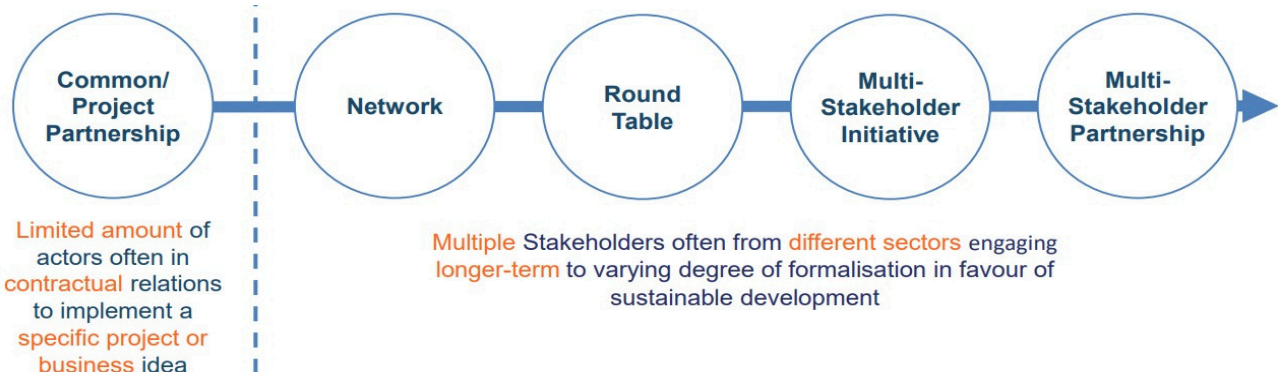
Why Are MSPs Important?

The 2030 Agenda for Sustainable Development highlights the importance of partnerships in achieving the SDGs. SDG 17 specifically calls for revitalizing global partnerships, emphasizing that no single group of actors can achieve these goals alone. MSPs facilitate shared responsibility and collective action, ensuring that diverse perspectives and resources contribute to sustainable development efforts.

How Do MSPs Work?

MSPs operate at various levels, from global to national and subnational, adapting to the specific needs and contexts of the stakeholders involved. They are integral to the means of implementation for the 2030 Agenda, providing a framework for collaboration and coordinated action.

The concept of a partnership continuum illustrates the progression of MSPs through different stages of development and collaboration. This continuum highlights the evolving nature of partnerships as they mature and deepen over time.



Types of MSPs

MSPs can take various forms, each tailored to specific objectives, stakeholder compositions, and operational contexts. Common types include:

1. **Public-Private Partnerships (PPPs):** These partnerships involve collaboration between government entities and private sector companies. They often focus on infrastructure projects, service delivery, and innovation to address public needs.

2. **Civil Society Partnerships:** In these partnerships, non-governmental organizations (NGOs), community groups, and advocacy organizations work together with other stakeholders to address social, environmental, and economic issues. They emphasize community engagement and grassroots initiatives.

3. **Global Partnerships:** These are large-scale collaborations that operate across countries and regions. They often involve international organizations, governments, and multinational corporations, focusing on global challenges such as climate change, health pandemics, and sustainable development.

4. **Knowledge and Research Partnerships:** research organizations, and think tanks form these partnerships to share knowledge, conduct research, and develop evidence-based solutions to complex problems. They bridge the gap between science and policy-making.

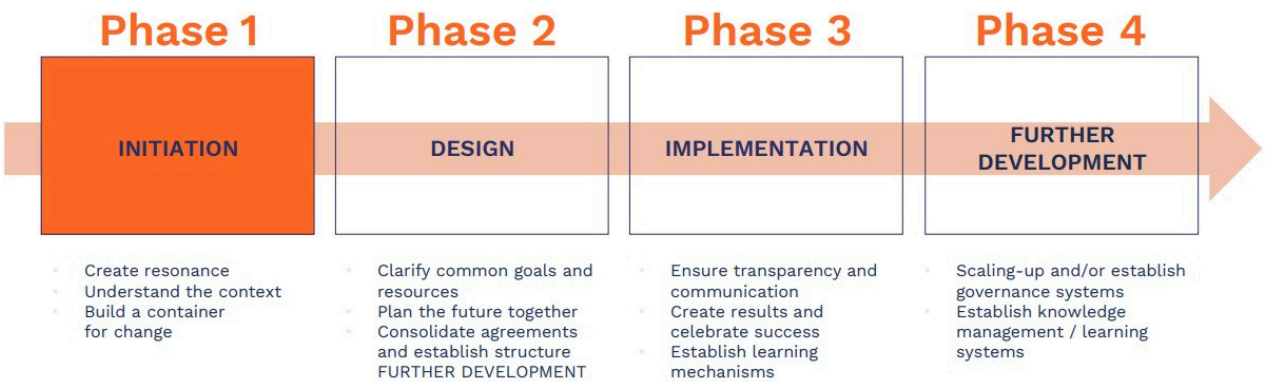
5. **Multi-Sectoral Partnerships:** These partnerships include a mix of public, private, and civil society actors working together on cross-cutting issues. They leverage the unique strengths of each sector to address multifaceted challenges, such as poverty reduction, education, and health care.

The Four Phases of an MSP

According to Petra Künkel of the Collective Leadership Institute (CLI), the development of an MSP can be divided into four distinct phases:

1. **Initiation:** Identifying common goals and establishing trust among stakeholders.
2. **Planning:** Developing a shared vision and detailed action plans.
3. **Implementation:** Executing the agreed-upon actions and monitoring progress.
4. **Sustaining:** Ensuring the longevity and adaptability of the partnership to achieve long-term goals.

These phases provide a structured approach to building and maintaining effective MSPs, ensuring that all stakeholders remain engaged and committed throughout the process.



Source: Petra Künkel, Collective Leadership Institute (CLI), MSP Guide & GIZ

Success Factors, Advantages, and Challenges

Success Factors

The success of an MSP depends on several key factors:

- **Shared Vision:** Establishing a common understanding of goals and objectives.
- **Trust and Transparency:** Building and maintaining trust through open communication.
- **Inclusive Participation:** Ensuring all relevant stakeholders are involved and have a voice.
- **Effective Coordination:** Managing resources and activities efficiently.

Advantages

MSPs offer numerous advantages, including:

- **Pooling Competencies:** Combining the strengths and expertise of various stakeholders.
- **Increased Legitimacy:** Enhancing the credibility of decision-making processes.
- **Resource Mobilization:** Leveraging financial, human, and technical resources.
- **Enhanced Commitment:** Increasing the willingness of stakeholders to make public commitments.

Challenges

Despite their benefits, MSPs also face several challenges:

- **Complexity:** Managing the diverse interests and expectations of multiple stakeholders.
- **High Investment:** Requiring significant financial and time resources.
- **Process Support:** Needing dedicated support to facilitate and sustain the partnership.

When is an MSP appropriate?	When is an MSP not appropriate?
The objective is to tackle a complex problem that one stakeholder alone cannot solve	The objective can be achieved by an individual stakeholder or an individual organization.
Additional stakeholders can contribute valuable additional resources or have complimentary skills	The problem requires a rapid solution. There are better quicker ways of achieving the objective.
Results are likely to be more sustainable because they are based on a broader consensus.	There are existing initiatives or partnerships in the same thematic area. >> Seek access to these initiatives / partnerships rather than initiate a new MSP.
Cooperation may bring advantages that could also be helpful for other activities.	Lack of trust between stakeholders is an obstacle to constructive cooperation. >> More groundwork is required to create awareness of the initiative, to win round partners and to develop trust.
It can be assumed that cooperation will produce benefits.	The organizations involved risk being co-opted or suffering damage to their reputation through their involvement in the MSP.
	It is unlikely that cooperation within an MSP will achieve change.

Source: "Multi-stakeholder partnerships in the context of Agenda 2030" (2017), page 36, based on Brouwer et al. 2015

MSP Deep Dive: How to Partner with Different Stakeholders

Successful MSPs require strategic approaches to partnering with different stakeholders. This involves understanding their unique perspectives, motivations, and contributions. Effective partnerships are built on mutual respect, clear communication, and a shared commitment to achieving sustainable development goals.

PRIVATE SECTOR	Rationale	Decision-making and organizational culture	Motivation to engage in multi-stakeholder collaborations	Potential risks for engagement in multi-takeholder collaborations
"Grow and seek business opportunities"	**Profit orientation**, loyal to the business case	**Fast, short-term, impatient decision-making**	**Advocacy** for enabling business environment	Danger of not being able to argue the business case
	Guided by **company strategy**	**Participatory or hiearchical,** depending on the organizational culture	**Reputation management**	Danger of being accused of lip service if nothing follows from the multi-stakeholder collaborations
	Depend on **performance**	Lpyal to the **business model**	**Customer** relationship management	

	indicators, stock-exchange analysts			
	Efficiency and strategic purpose at the forcefront	**Innovative**	**Long-term or short-term market development**	
		Differences between business associations and individual companies; between businesses in developed and developing countries, between privately owned and public owned companies	**Risk** management	

PUBLIC SECTOR	Rationale	Decision-making and organizational culture	Motivation to engage in multi stakeholder collaborations	Potential risks for engaging in multi- stakeholder collaborations
"Guard the rule of law, ensure access to resources, deliver services"	**Rights-orientation** of law and order	**Slow, bureaucratic, hierarchical, political**	Opportunity to establish broader platforms to **promote and implement regulations** or voluntary behavior for the common **good** (i.e. standards, code of conduct)	**Danger of loss of reputation** when talking to more radical groups, or by supporting certain private-sector companies too much
	Access, Information, Stability, Legitimacy	**Internal consultation** processes are key	Greater **efficiency in the implementation** of government **regulations**, public services, the management of public resources, or large infrastructure projects	**Withdrawal** of mandate for engagement in multi- stakeholder collaborations from **hierarchy**
	Designing and enforcing **rules and regulations**	Loyal to **law and order**		
	Service delivery	Keeping to **traditions, procedures, structures**		
	Acting on behalf of the **common good**	**Not necessarily innovative; Protocol** important		

CIVIL SECTOR	Rationale	Decision-making and organizational culture	Motivation to engage in multi stakeholder collaborations	Potential risks for engaging in multi- stakeholder collaborations
"Ensure social and environmental rights, development"	Reacts to **injustice** and **concerns** of overall society, provokes attention.	**Slow, participatory** (due to heterogeneity, participatory approach, few resources)	**Influence the private sector and government** – beyond campaigning and charity	**Danger of losing reputation** among constituencies for talking with the enemy
	Ethical orientation, **value** orientation	Analytical: **research** as core element of decision-making	Additional opportunities for **advocacy**	**Loss of face**, being perceived as sell-outs by members
	Advocacy on behalf of **voiceless (vulnerable) groups**, the environment etc.	Loyal towards the **values and principles** of the organization	Higher **efficiency and effectiveness** in implementing organizational goals (social, development, environmental, human rights, etc.)	Internal **conflicts**
	Exposing perceived misbehavior of the other sectors (private, public) watchdog, whistle blower	Loyal towards **constituencies**		Loss of **rationale:** campaigning, advocacy
	Campaigning			Loss of **financial support**

Private sector	Public sector	Civil society
Know the private sector always has a **busy schedule.**	Understand the **power dynamics** and hierarchical structures.	Consider **logistical or financial support** for participation.
Involve private sector in the**planning process.**	Recognize the importance of **sociocultural factors.**	Ensure **transparent and inclusive** communication.
Build a *result-oriented process* and create a **flexible and practical** environment.	Be aware of **formal,** but also **traditional structures.**	Be aware **of their requirement** to consult with their constituencies.
Plan **short meetings** in a convivial setting.	Ensure knowledge of **existing rules and regulations.**	Respect the **different mandates** of different organizations.
Show the **business case for change** (help them to argue the business case for engagement).	Always **respect protocol.**	**Strengthen weaker representation** (e.g. translation for community groups.)
Provide **the opportunity to showcase** their work and promote their image.	Show the **reputational case for change.**	Respect and appeal to **value-orientation.**
Take **advantage of competitiveness to stimulate involvement** and commitment.	Consider **supra-national and regional structures** and their interests.	Show the societal case for **change**
	Highlight **sustainability aspects.**	Be prepared to address questions on **impact-monitoring.**
	Make **reference** and **ensure conformity** to international conventions.	

Conclusion

In conclusion, MSPs are essential for advancing the 2030 Agenda for Sustainable Development. By fostering collaboration among diverse stakeholders, these partnerships can address complex global challenges more effectively and create lasting, sustainable solutions.

The link for the above website

Chapter XI: Financial Planning and Resource Allocation in Non-Profit Organizations

Introduction

Financial management is crucial for the sustainability and effectiveness of non-profit organizations (NPOs). It involves strategic budgeting and accurate financial reporting to ensure resources are utilized efficiently in achieving the organization's mission. This chapter explores the importance of financial management in NPOs, highlighting key concepts such as budgeting, financial reporting, and the unique challenges faced by these organizations.

Importance of Financial Management for Non-Profit Organizations

Non-profit organizations play a vital role in society by delivering essential services and addressing societal needs in areas like healthcare, social welfare, and environmental protection.

Effective financial management is essential for these organizations to:

- Ensure sufficient financial resources to support their missions.
- Enhance credibility and attract donors and partners.
- Track and analyze financial performance to make informed decisions.
- Maintain transparency and accountability to stakeholders.
- Plan for long-term sustainability and manage financial risks.

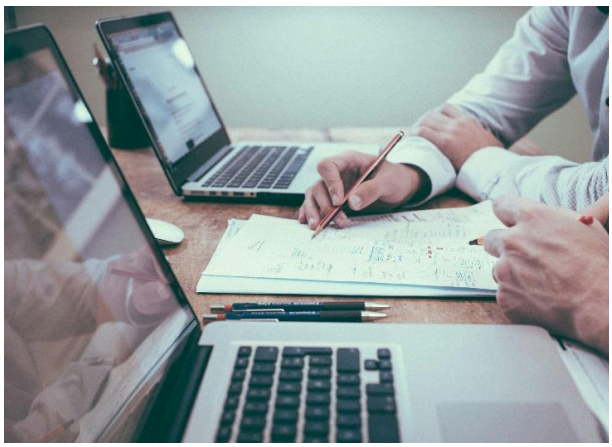


Photo by Scott Graham on Unsplash

Despite their critical role, NPOs often struggle with financial management due to limited financial expertise among volunteers and board members, as well as the unique challenges posed by their funding sources.

Financial Challenges in Non-Profit Organizations

NPOs face distinct financial challenges compared to for-profit entities, such as higher fundraising costs and limited access to financial markets. These challenges necessitate careful financial planning and management to ensure operational stability and mission fulfillment.

Financial Management and Civil Society Organizations

Civil Society Organizations (CSOs), including NGOs, community groups, and foundations, contribute significantly to public life and advocacy across various sectors. Financial management in CSOs ensures efficient resource allocation and supports their role in advocating for social change and community welfare.

Theoretical Aspects of Financial Management

Financial management in NPOs draws from various theoretical frameworks, including resource-oriented approaches like Portfolio Theory and performance-oriented approaches like Competition Theory. These theories provide insights into optimizing financial strategies and enhancing organizational effectiveness.

Calculation & Budgeting vs. Financial Reporting

Calculation & Budgeting

Calculation & Budgeting involves forecasting expenses and revenues to plan resource allocation, while Financial Reporting provides retrospective insights into an organization's financial health and performance. Both processes are integral to financial management in NPOs, ensuring strategic planning and accountability.

Steps in the Budgeting Process: Effective budgeting in NPOs includes planning, forecasting, allocating resources based on strategic priorities, monitoring financial performance, and reporting to stakeholders. This systematic approach helps organizations achieve financial goals while adapting to changing circumstances.

Challenges and Best Practices in Budgeting: Budgeting for NPOs is challenging due to limited resources, uncertain funding sources, and complex regulatory requirements. Best practices include stakeholder involvement, data-driven decision-making, prioritizing impact, regular monitoring, contingency planning, transparency, and flexibility to adapt to evolving needs.

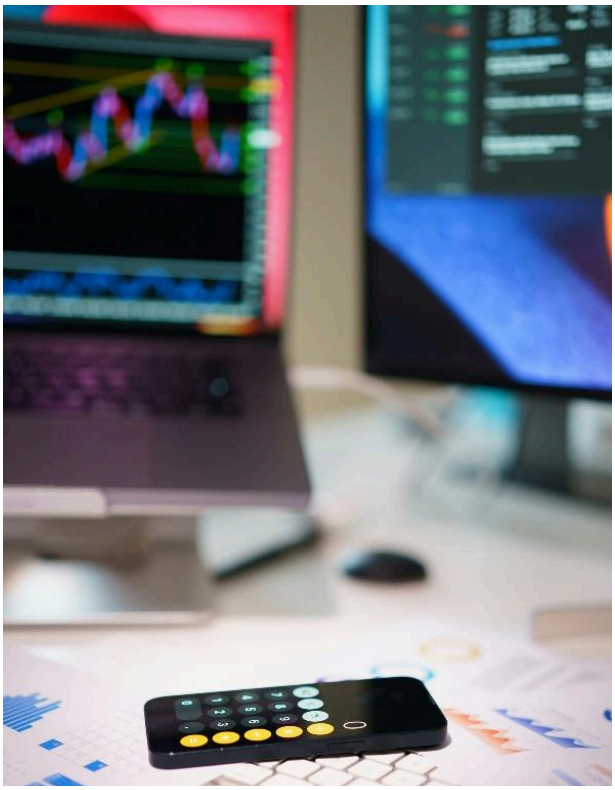


Photo by Jakup Zerdzicki

Principle of Annuality and Budget Management: The principle of annuality restricts NPOs from carrying over funds to subsequent years, emphasizing accountability and effective financial planning. Budget management involves planning, organizing, directing, and controlling financial resources to achieve organizational goals, ensuring financial stability and compliance.

Budget Management - Not Flexible Enough?

Budget management is crucial for non-profit organizations (NPOs) to effectively allocate financial resources and achieve their missions. However, the rigidity of budget allocations can pose challenges:

If more funds are needed than allocated to a specific program, institutions may have to either find additional sources of funding or adjust their plans and priorities accordingly. They may also have to request additional funding from the relevant funding agency or authority.

On the other hand, if fewer funds are needed than allocated to a specific program, the remaining funds may be carried over to the next year or reallocated to other programs or projects, subject to the relevant rules and regulations. The funding agency or authority may also review and adjust its funding policies and priorities based on the actual needs and results of the programs.

Financial Reporting

Definition of Financial Reporting

Financial Reporting involves the disclosure of financial information to the various internal and external stakeholders about the financial performance and financial position of the organization over a specified period. These stakeholders include – funders, regulators, donors, creditors, public, debt providers, governments and government agencies.

Photo by Annie Spratt on Unsplash

Financial Transparency: Financial transparency is important for building trust with stakeholders and demonstrating accountability. It involves providing clear and accurate information about an organization's financial activities, including revenues, expenses and assets. Financial information should be presented in a way that is easy to understand and accessible to the public. Transparency can be achieved through various means, such as publishing annual reports, financial statements and audit reports. Organizations should also provide information on how they use their funds, including the impact of their programs and services. Transparency can help organizations to identify areas for improvement and to demonstrate their effectiveness in achieving their mission and goals. Legal and regulatory requirements may also mandate certain levels of transparency, such as filing tax returns or disclosing executive compensation. Transparency can also help organizations to attract donors and investors who are looking for responsible and accountable organizations to support. Organizations should regularly review and update their financial reporting practices to ensure that they are meeting best practices and keeping up with changing regulations and standards.

Financial Accountability: Financial accountability is the responsibility of NGOs to ensure that their financial activities are conducted in a transparent and responsible manner. It involves adhering to principles such as fair presentation, accounting policies, going concern, accrual basis of accounting, consistency of presentation, materiality and aggregation and offsetting. NGOs must maintain accurate and complete financial records, including documentation of all transactions and expenses. They must also comply with legal and regulatory requirements related to financial reporting and disclosure. Financial transparency involves providing clear and accessible information on an organization's financial activities to stakeholders, including donors, beneficiaries and the public. NGOs should strive to maximize the efficient use of resources and demonstrate accountability for the funds they receive. Regular audits and reviews of financial activities can help ensure accountability and transparency.

Objectives of Financial Reporting: According to International Accounting Standard Board (IASB), the objective of financial reporting is "to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions."

Elements of Financial Reporting

Financial reports should include a summary of expenditures for the reporting period, broken down by budget title. This will provide stakeholders with an overview of how funds have been allocated and spent. Any significant variances from the budget should also be reported, along with the reasons for them. This will help stakeholders to understand why there may have been deviations from the original plan. An overview of any additional funding received or expected should also be included. In addition, financial reports should include a forecast of expenditures for the next reporting period, broken down by budget title.

Financial reports include the following:

- **Balance Sheet or Statement of Financial Position** reports on an organization's assets and liabilities at a given point in time, usually the end of a quarter or year. A snapshot of the organization's financial position at a specific point in time, including its assets, liabilities and equity.
- **Income Statement or Profit and Loss Report** reports on an organization's income, expenses and profits over a period of time, such as a quarter or year. This includes sales and the various expenses incurred during the stated period. A summary of the organization's revenues, expenses and net income or loss over a specific period.
- **The Statement of Changes in Equity (SOCE) or Statement of Retained Earnings (SRE)** reports on the changes in equity of the organization during the stated period. The SOCE or SRE is a financial statement that shows the changes in equity or earnings over a specified period of time, such as a quarter or year. Equity represents the residual interest in the assets of an organization after deducting liabilities and it includes items such as the organization's share capital, reserves and retained earnings. The SOCE or SRE report

shows how the organization's equity has changed over the reporting period due to factors such as net income or loss and changes in the value of assets or liabilities. Specifically, it shows the beginning balance of equity, any changes to equity during the reporting period and the ending balance of equity.
Cash Flow Statement – A summary of the organization's cash inflows and outflows over a specific period of time, broken down into operating, investing and financing activities.
These are typically referred to as sources and uses of cash.

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- **Cash Flow Statement** – A summary of the organization's cash inflows and outflows over a specific period of time, broken down into operating, investing and financing activities. These are typically referred to as sources and uses of cash.

Importance of Financial Reporting: The role of a donor or funder in financial reporting is to provide financial resources to an organization or project and to track the use of those funds to ensure that they are being used for their intended purpose. Donors or funders often require regular financial reporting from the recipient organization, which many include financial statements, project budgets, expenditure reports and other forms of documentation. This reporting helps to ensure transparency and accountability, as well as to demonstrate the impact and effectiveness of the project or organization to the donor or funder. Additionally, financial reporting helps to build trust and maintain positive relationships between the recipient organization and its donors or funders, which can be crucial for the success and sustainability of our programs.

Internal Stakeholder Management: Communication is key: Regular and clear communication with all internal stakeholders is important to ensure everyone understands the financial situation and requirements. This can prevent misunderstandings and delays in decision-making. Establish clear processes and protocols: Having clear processes and protocols for financial reporting can help ensure consistency and accuracy in reporting and help avoid errors or discrepancies. Involve stakeholders in budget planning: Involving stakeholders in the budget planning process can help ensure that budget priorities are aligned with organizational goals and objectives and help prevent any surprises or disagreements later on. Ensure accuracy and completeness of financial data: Accurate and complete financial data is crucial for effective financial reporting. Investing in good financial management software and processes can help ensure that data is accurate, up-to-date and easily accessible. Provide training and support: Providing training and support to internal stakeholders who may not have a financial background can help them understand financial reports and make informed decisions. This can improve financial accountability and decision-making across the organization.

External Stakeholders Management: Clearly communicate financial information to external stakeholders in a way that is understandable and transparent. This can help build trust and credibility with donors, partners and other stakeholders. Ensure that financial reports are accurate, consistent and timely to meet external stakeholder reporting requirements. Be prepared to respond to inquiries and questions from external stakeholders regarding financial information and provide additional context as needed. Engage with external stakeholders in a collaborative manner to identify and address financial challenges and risks in a timely and effective manner. Consider the needs and expectations of external stakeholders when developing financial reporting processes and systems. Stay up-to-date on external stakeholder requirements and regulations related to financial reporting, such as reporting deadlines or restrictions on the use of funds. Be proactive in communicating any changes or updates related to financial information to external stakeholders.

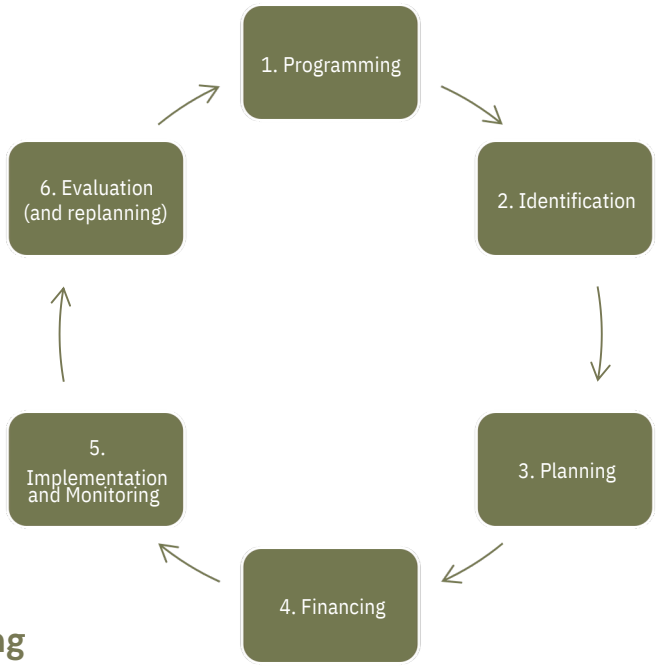
Conclusion

Effective financial reporting and budget management are critical for non-profit organizations to achieve their missions and sustain their operations. Despite challenges such as budget rigidity and varying stakeholder expectations, strategic financial management ensures transparency, accountability, and sustainable funding. By adhering to best practices in financial reporting and actively engaging stakeholders, NGOs can enhance their credibility, attract support, and achieve long-term success in advancing their causes.

Chapter XII: Project Management for Climate Initiatives

Project Cycle Overview

Managing climate initiatives effectively requires a structured approach through various phases of the project cycle. Each phase is essential for ensuring the project's success, sustainability, and alignment with the goals of mitigating climate change.



1. Programming

Programming involves setting the foundation of the project. Key decisions include:

- **Country, Partner, Topic, Period:** Identify the geographical focus, key partners, the specific climate issue to address, and the project timeline.
- **Financing:** Determine the funding sources, whether private donations or co-financed contributions. Assess the maximum budget and own contribution capacity. Decide on the application venue for funding.

2. Identification

Identification is a critical phase where the project concept is developed and validated through analytical steps:

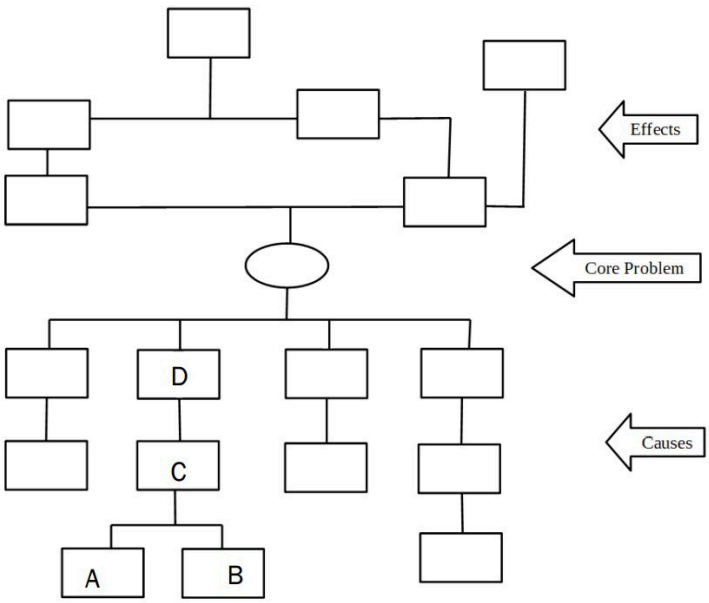
- **Stakeholder Analysis Tool:** Assess the social environment and identify key stakeholders.

Stakeholder	Description	Expectations	of SH from project	of project from SH	Power and Influence	Factor (1-5)	comment	Expected conflicts	factor (1-5)	comment	proximity of project	factor (1-5)	comment	status TOTAL	Means
Children	all children, age 0-18 years, who do not attend school		enough food to eat and water to drink is available, to attend and finalize school, no forced marriage	behavioural change; acceptance of alternative playground; participation in project education activities		1	do not directly influence the project, but need to be involved for future behavioral change		1	most likely highly appreaciative of the project and its outcomes; awareness of the positive effects, so no conflict expected		3	direct beneficiaries of project	3	- Build new playground to attract smaller children, host an opening event - invite children to Open Days at the local school to show them farming projects - Motivate goat keeper children to keep goats away from seedlings

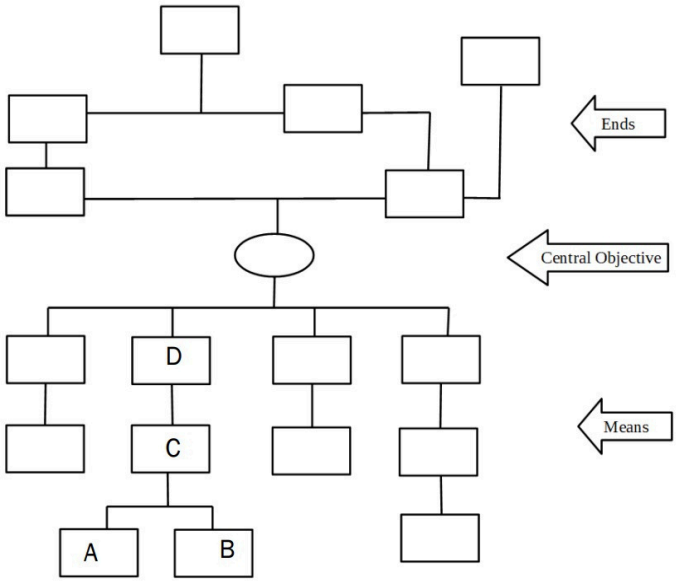
Adapt columns as needed to suit project requirements, ex.:

Stakeholder	Description	Expectations	of SH from project	of project from SH	Power and Influence	Factor (1-5)	comment	Expected conflicts	factor (1-5)	comment	proximity of project	factor (1-5)	comment	status TOTAL	Means
Children	all children, age 0-18 years, who do not attend school		enough food to eat and water to drink is available, to attend and finalize school, no forced marriage	behaviroural change; acceptance of alternative playground; participation in project education activities		1	do not directly influence the project, but need to be involved for future behavioral change		1	most likely highly appreaciative of the project and its outcomes; awareness of the positive effects, so no conflict expected		3	direct beneficiaries of project	3	- Build new playground to attract smaller children, host an opening event - Invite children to Open Days at the local school to show them farming projects - Motivate goat keeper children to keep goats away from seedlings
School children "students"	children, age 5-18 years, who do attend school = "students"		have enough to eat - to be able to concentrate in school; be able to wash school uniform, access to water near school for production units	participation in production school club; take on responsibility and ownership; school attendance and graduation;		5	execute a direct effect via school projects and capacity building; influence as peers and family members		1	no opposition expected, because project serves their interests		5	direct beneficiaries of project	15	- establish and develop school farming club to teach conservation farming and grow food supply for school meals - motivate students to apply new sustainable methodologies in the future
Women/caretaker	all female inhabitants of the village / persons taking care of the children		active participation in project activities; enable their children to attend school; vocational skill building to help generate addtonal income;	Children are well nourished, sufficiently satisfied and attend school regularly; girls are not forced into marriage; children are supported to finish school; sufficient and safe playground is provided; active participation in project workshops about bee keeping and finance management		3	influence the family as caretakers; actively contribute to the family income in the future		1	new income opportunities will be provided; access to clean water and food; see the benefit for their children - so no opposition expected		5	direct beneficiaries of project	15	- Workshops to teach vocational skills such as bee keeping, produce natural fertilizer etc. - Train the trainer programs to enable women to teach other women - establish bee keeping committee - Teach financial skills
Farmers	all village inhabitants involved in agriculture		safe water supply; sufficient yields and income; Open Pollinated Varieties (OPV) seedbank; skills regarding agricultural techniques to fight climate change effects & droughts and build competencies	accept and apply new agricultural methodologies as taught by the project; learn about conservation farming and implications of deforestation; open to strong female participation in establishing future income streams; learn about finance management		5	target group of the project, their dedication directly influences the project success		3	more workload might create opposition; trust in new concepts is needed		5	direct beneficiaries of project	75	- Teach sustainable concept of farming with OPVs in a series of workshops; capacity building in repairing and maintaining boreholes/wells - Get ministry's support for a train the trainer program
Farmers involved in charcoal production, most vulnerable farmers	Farmers who use coal production as a second source of income (marginalised group)		safe water supply; able to harvest enough yields to be self-sufficient again (no forced marriage needed); children are able to attend school; Open Pollinated Varieties (OPV) seedbank; learn new skills in substistence farming to fight climate change effects & droughts	accept and apply new agricultural methodologies as taught by the project; learn about conservation farming and complication of deforestation; plant trees instead of cutting them; use new skills as tought in finance management		5	main target group and especially vulnerable, their dedication directly influences the project success		2	effort and challenge to change old approaches and habits; no trust in new concepts & adaptation necessary: fear of loss of income might create opposition		5	direct beneficiaries of project	50	- Teach sustainable concept of farming with OPVs in a series of workshops - Educate on how to create an alternative source of income (e.g. growing Muringa trees for oil and soap production) - Get ministry's support for a train the trainer program

- **Problem Analysis:** Conduct participatory problem analysis with stakeholders to understand the issues at hand.



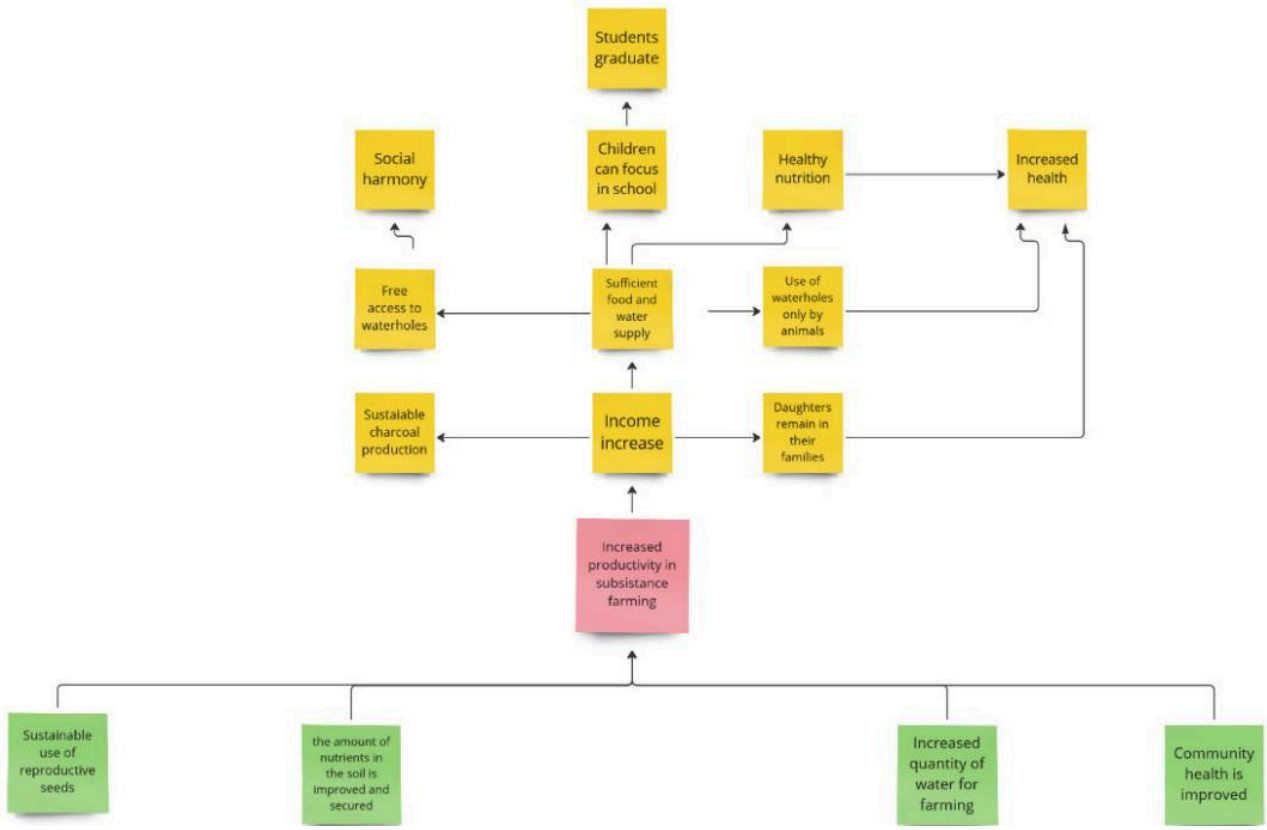
- The tree has 3 levels: Causes (roots), Core Problem (trunk) and Effects (branches).
- However, it is a cause and effect chain all over, i.e.The combination of A and B is the Cause for the effect C and C is the cause for D.
- One problem one card; important to formulate the problem on point.
- Goal is to identify the Core Problem assuming that if we solve it, all problems above will be mitigated automatically.
- The process of aligning the cause and effects leads your discussion.
- If a causal line goes around your core problem it is not your core problem



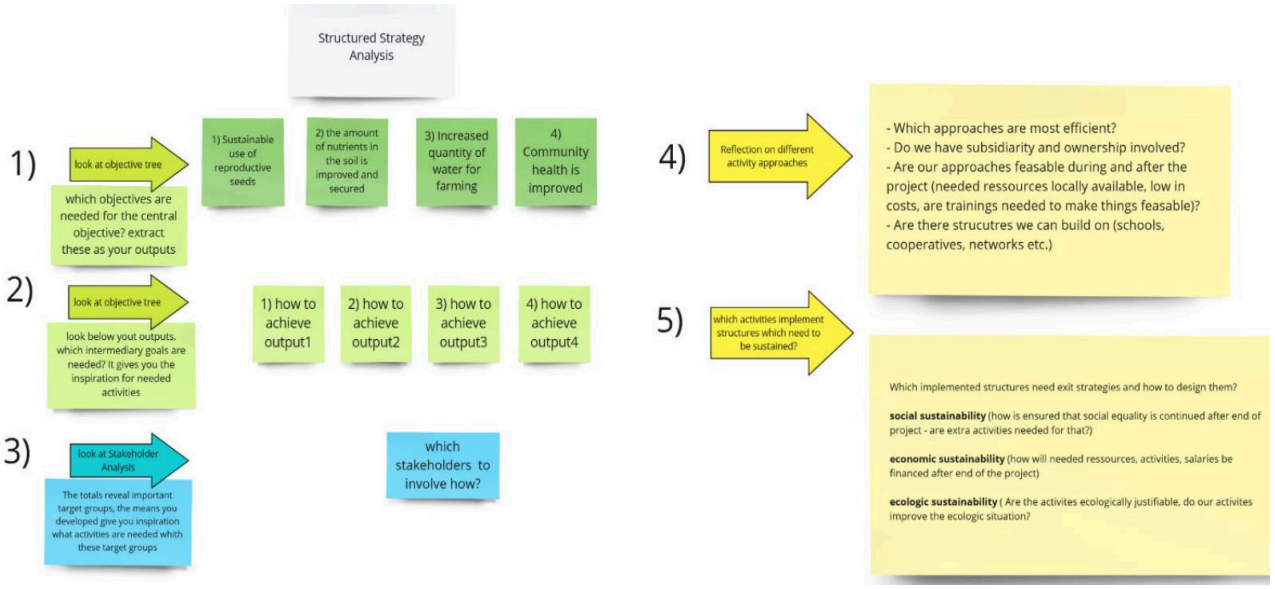
- Let the whole structure of the Problem Tree as it is, but transform the negative formulations into positive formulations and you get your Objective Tree. The roots now are the means to reach the trunk as Central Objective, which leads to the ends of the Central Objective.
- The Central Objective will become your Outcome (project goal to be reached untill end of project)
- Below you will identify your Outputs (Results of activities that in combination build the Outcome) and further below you will find inspiration for needed activities.
- Above you see your impact level; objectives to be supported on the long rund after end of project.

Use participatory methods, such as pinboard sessions with stakeholders.

- **Objective Analysis – Tool Objective Tree:** Define objectives collaboratively to ensure alignment with stakeholders' needs.



- **Strategy Analysis:** Brainstorm potential activities, evaluating their relevance, coherence, efficiency, and sustainability within the given budget and time constraints.



3. Planning

Planning involves detailed project preparation and documentation:

- **Logical Framework Matrix:** Develop a comprehensive project plan, including clear objectives, assumptions, work plans, responsibilities, and a financing agreement.
- Smart Indicators: Define indicators that are Specific, Measurable, Acceptable, Realistic, and Time-bound (SMART). Indicators should include elements such as time, quantity, target group, location, and quality.
- Important Assumptions: Identify conditions outside the project's control that are essential for achieving higher-level outcomes. Formulate assumptions positively to mitigate risks.

Results Chain/Intervention Logic

Result Chain/ Intervention Logic	**Narrative Summary**	**Indicators** **(SMART)**	**Sources of Verification (SoV)**	**Important Assumptions** (positive conditions that must exist in the environment, outside the scope of a project)
Impact	Sustainable agriculture is implemented in Matumaini			
Outcome	Increased productivity in subsistence farming	At the end of the project 100 Households in Mutamani have increased their farming income by 50% At the end of the project 90% of former charcoal producers report a higher income from bee keeping	Farmers monitoring reports	
Outputs	R1) Sustainable use of reproductive seeds R2) Amount of nutrients in the soil is improved and secured R3) Increased quantity of water for farming R4) Community health is improved	. . **R1. OV3.1** By 05/2025 at least 50% of the farmers and by 10/2025 at least 80% of farmers were able to build their own seedbank in their farms . . .	- - **SV.R1.OVI3** MoA Monitoring of role model farms - - -	A.R3 Rainy season brings sufficient rain for rain water harvest techniques
Activities	1.1 - 1.x 2.1 - 2.x 3.1 - 3.x	Inputs	Costs	

Smart Indicators

SMART elements:

- Specific
- Measurable
- Acceptable costs
- Realistic/ relevant
- Timebound

A full indicator contains five

- Time (when?)
- Quantity (how much?)
- Target Group (who?)
- Location (where?)
- Quality (what?)

Important Assumptions (the horizontal result chain): Assumptions are conditions outside the scope of a project that must exist to achieve the higher level:
- If activities are done and assumptions are in place, then the output will be reached.
- If output is reached and assumptions are at place, then the outcome will be achieved etc. Assumptions are formulated positively; the negative formulation automatically gives you an external risk. So, the less assumptions the less risks.

Important assumptions help to mitigate risks

Results Chain/ Intervention Logic	Narrative Summary	Important Assumptions (positive conditions that must exist in the environment, outside the scope of a project)
Impact	Sustainable agriculture is implemented in Matumaini	
Outcome	Increased productivity in subsistence farming	
Outputs	R1) Sustainable use of reproductive seeds R2) Amount of nutrients in the soil is improved and secured R3) Increased quantity of water for farming R4) Community health is improved	A.R3) Rainy season brings sufficient rainwater harvest techniques
Activities	1.1 – 1.x 2.1 – 2.x 3.1 – 3.x	

- If assumptions are very likely to occur, they are not important and to be deleted.

- If it is very unlikely, then you have to redesign your project to get the needed condition under your control:
- Current design: water harvesting techniques of rainy season to be used for dry season.

-If it is very unlikely that rainy seasons come with sufficient rain, then you cannot achieve the Outcome of increased productivity farming.

-If you redesign by implementing irrigation by underground water and tree paintings for enriching underground water you mitigate the risk of not achieving the Outcome.

4. Financing

Compile all necessary documents for application and ensure that the project is financially viable. This phase ensures that the project has the required funds and financial structure to proceed.

5. Implementation and Monitoring

Implementation involves executing the project plan and continuous monitoring:

- **Steering and Reporting:** Track progress and report on project performance.
- **Monitoring Indicators:** Use the log frame indicators to measure progress. Additionally, monitor activities, participants, and financial flows.
- **Indicator Performance Tracking Tool (IPTT):** Utilize IPTT to manage all project indicators, their measurement frequency, targets, and baseline/endline values.

Indicator Level	Indicator and Definition	Overall Target	Baseline Value	Target Q1	Actual Q1	Target Q2	Actual Q2	Endline Value
Outcome: **Improved access to quality latrines for the Delta River Community**	% increase in the use of latrines by the end of the project in comparison with before the project. (disaggregated by gender)	60%	18% (6% female, 12% male)	30%	23%	50%	48%	
Output: **Quality latrines constructed**	# of latrines constructed within 50 meters of households by the end of phase 2 of the project.	100	0	50	35	50	58	

6. Evaluation and Replanning

Evaluation is a systematic assessment of the project's performance, conducted as an in-depth Analysis with a focus on outcome-level, often requiring external evaluators.

- **Evaluation Criteria:** Assess relevance, effectiveness, efficiency, impact, and sustainability at specific points in time.

Courtesy of OECD: DAC Criteria

Besides assesing the achievement of results and indicators....
a good evaluation provides answers to all these (evaluation) questions

- **Project Monitoring and Evaluation Plan:** Identify systems for tracking progress, based on the logical framework. Define what indicators to monitor, information needed, sources of data, methods of collection, and users of the results.

The Project Monitoring and Evaluation Plan

	Indicator	Definition of Key terms	Info needed	Sources of data	Methods of data collection	Who collects	Frequency of collection	Users
Impact								
Out-come(s)								
Outputs								
Activities								
Inputs*								

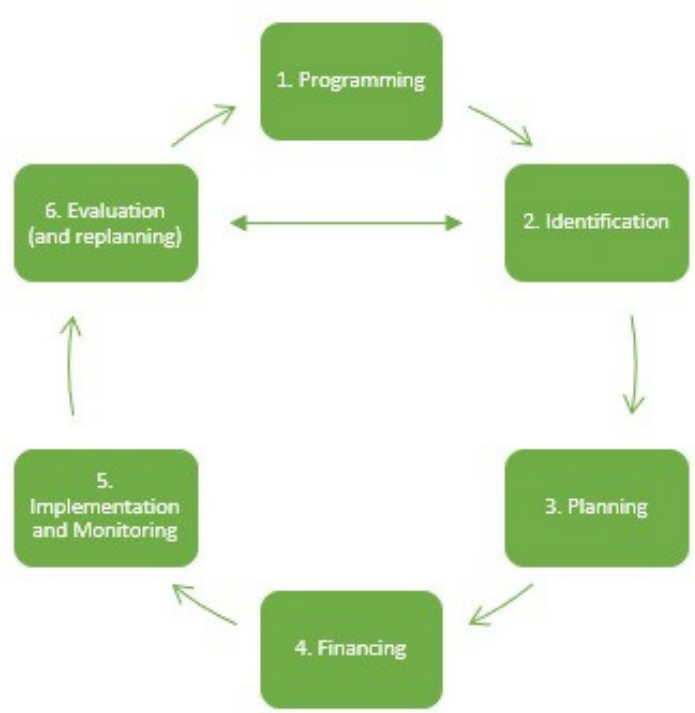
Types of Data and the cost relation

- **Quantitative methods:**
  -objective and reliable info
  -often standardized questionnaire
- **Qualitative methods**
  - focus on direct and in-depth interaction with participants
  - rich and detailed data
  - participatory techniques, focus groups, interviews and observation

Keep cost – complexity balanced in mind

Consider user-friendly and easily accessible tools like KoBoToolbox

Project Cycle Phases theory vs. practice



- After the Evaluation one often does not directly do replanning
- If the programming phase comes to a similar project decision, the evaluation becomes relevant.
- Hence, taking a relevant final evaluation into account is mostly done as an analysis in the identification phase.

The role of Sustainability in Project Management

Sustainability is crucial for long-term project success. Incorporate the following principles in the planning stage:

- **Participation:** Ensure relevance and engagement by involving beneficiaries.
- **Ownership:** Encourage beneficiary investment to sustain efforts.
- **Feasibility:** Assess material accessibility and affordability.
- **Subsidiarity:** Delegate decisions to the smallest competent authority.

Exit Strategies for Sustainability

Plan for the project's end to ensure ongoing benefits:

- **Function Transition:** Define who will take over project functions after the NGO's departure.
- **Financing Post-Project:** Determine how activities will be financed after project completion.
- **Environmental Considerations:** Ensure the ecological environment is protected and improved through the project.

Conclusion: By following these structured phases and principles, climate initiatives can achieve their goals effectively and sustainably, contributing to global efforts against climate change.

Chapter XIII: Introduction into MEAL

Introduction to MEAL

MEAL stands for Monitoring, Evaluation, Accountability, and Learning. It encompasses the processes and systems used to ensure that project activities are effective, efficient, and aligned with their intended outcomes.

Components of MEAL:

Monitoring: Continuous and systematic data collection to provide information on the progress of a project.

Evaluation: Periodic or one-time systematic assessment of the design, implementation, and results of an ongoing or completed project.

Accountability: Commitment to respond to the needs of all stakeholders, including participants, donors, partners, and the organization itself.

L**earning:** Processes that enable reflection and critical thinking to make smarter decisions and avoid repeating mistakes.

Relationships between MEAL and Project Management: A strong MEAL system is integral to effective project management. It provides the data needed for informed decision-making, helps identify areas for improvement, and ensures accountability to stakeholders.

Advantages of a Strong MEAL System:

Informed Decision-Making: Provides timely data for short-term corrective actions.

Long-Term Learning: Identifies potential course corrections and contributes to organizational learning.

Accountability: Ensures transparency and responsiveness to stakeholders.

Monitoring & Evaluation: "Monitoring and Evaluation create the basis for joint learning, rational decision-making, and social transparency." - R.Stockmann

Basically, monitoring and evaluation represent two sides of the same coin. When monitoring and evaluation are conducted internally by the same organization implementing the project, there are notable pros and cons. The advantages include minimal effort, high project expertise, and the ability to implement changes immediately. However, this approach often suffers from low methodological competence, lack of independence, and operational blindness. Conversely, when external personnel who are not affiliated with either the donor or the implementing organization perform these tasks, the benefits include independence, strong methodological expertise, support for reform efforts, and high credibility. The downsides of this approach are the low level of project-specific knowledge and the higher costs involved.

	Monitoring	Evaluation
Goal	Monitoring of **inputs, activities, outputs** (**progress** in achieving the agreed results and impacts)	A **systematic** and **objective assessment** of the **merit**, **value** or **benefit** of an ongoing or completed project
Frequency	**Regularly** and **continuously** during project implementation	**One-off events after** and, if funding permits, periodically during project implementation
Responsibilities	The activities are carried out by **members of the project team**	The activities are often led by **external experts**
Use of Data	Informs **timely decision making** and **short-term corrective actions** to support **adaptive environment**	Identifies **potential course corrections**. Contributes to **long-term organizational learning.**

Planning an M&E System

Effective planning of a Monitoring and Evaluation (M&E) system involves:

- Developing frameworks to guide data collection and analysis
- Ensuring alignment with project goals and objectives
- Integrating M&E into the project cycle

Markiewicz, A.; Patrick, I. *(2015): Developing Monitoring and Evaluation Frameworks.
Mackay, K. (2010): Country-led monitoring and evaluation systems. Better evidence, better policies, better development results.

ACCOUNTABILITY

Accountability in MEAL *represents the* ***commitment*** to consider and respond to the ***needs of all stakeholders!*** (including ***project participants, donors, partners*** and the ***organization*** itself) in project activities

Accountability in MEAL ensures that the needs of all stakeholders are considered and addressed. Key aspects include:

- Adhering to standards (e.g., DeGEval Standards)
- Transparent communication
- Responsiveness to feedback
- Inclusive participation

Avoiding common pitfalls, such as wasting resources, compromising security, and reducing project impact, is crucial.

Crucial Ethical Standards in MEAL

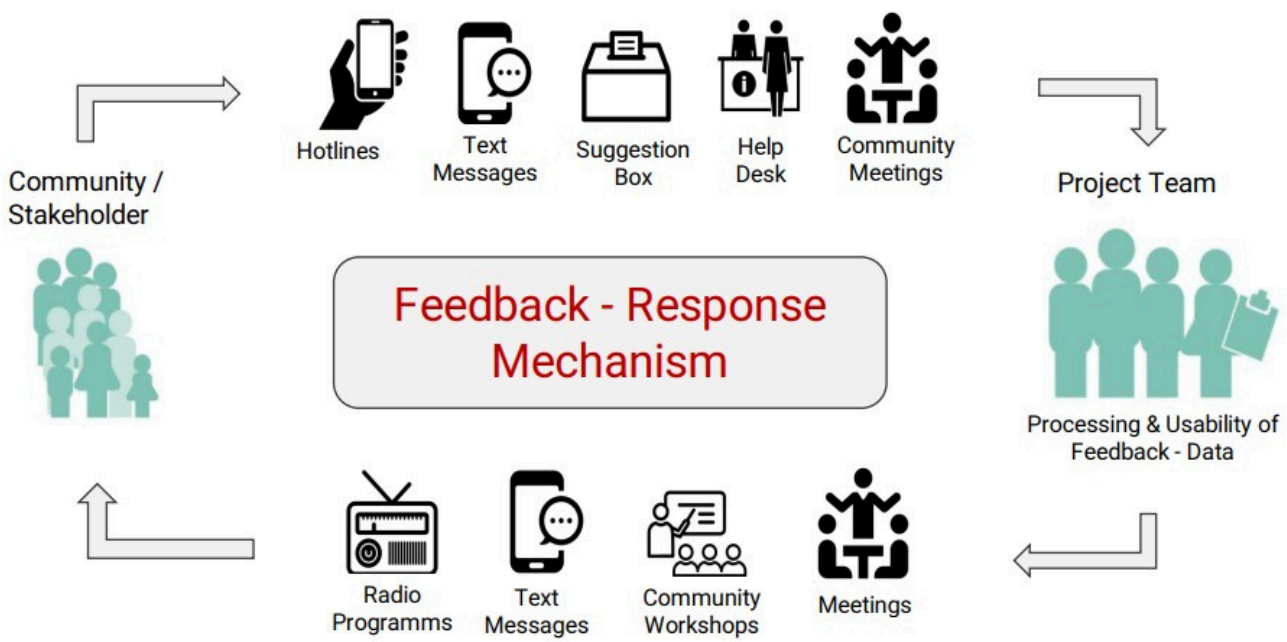
- **Representation:** Ensuring all populations, especially the marginalized, are represented.
- **Informed Consent:** Participants must be fully informed and voluntarily participate.
- **Participant Safety:** Ensuring no security risks from participation.
- **Privacy and Confidentiality:** Protecting participants' data.
- **Responsible Data Usage:** Ensuring data is used, stored, and destroyed appropriately.
- **Data Minimization:** Collecting only the data necessary for MEAL purposes.

Source: **https://pm4ngos.org/** (PM4NGOs – MEAL DPro Guide)

LEARNING in MEAL

Learning in MEAL represents a culture and set of processes that enable conscious reflection and critical thinking, where the main goal of it is to make smarter decisions and avoid repetition of mistakes. In this way, the culture of learning in MEAL promotes continuous improvement and adaptation through:

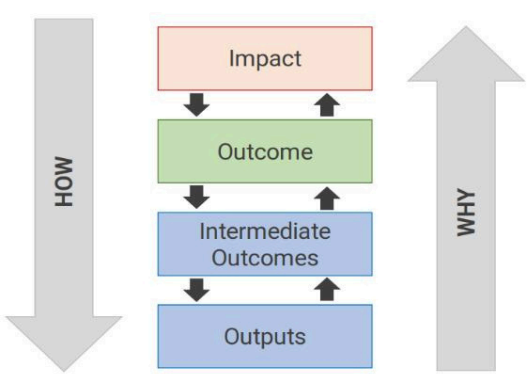
- Incentives for learning
- Encouraging curiosity
- Embedding learning processes
- Promoting adaptive management and organizational learning
- Disclosing information to foster transparency

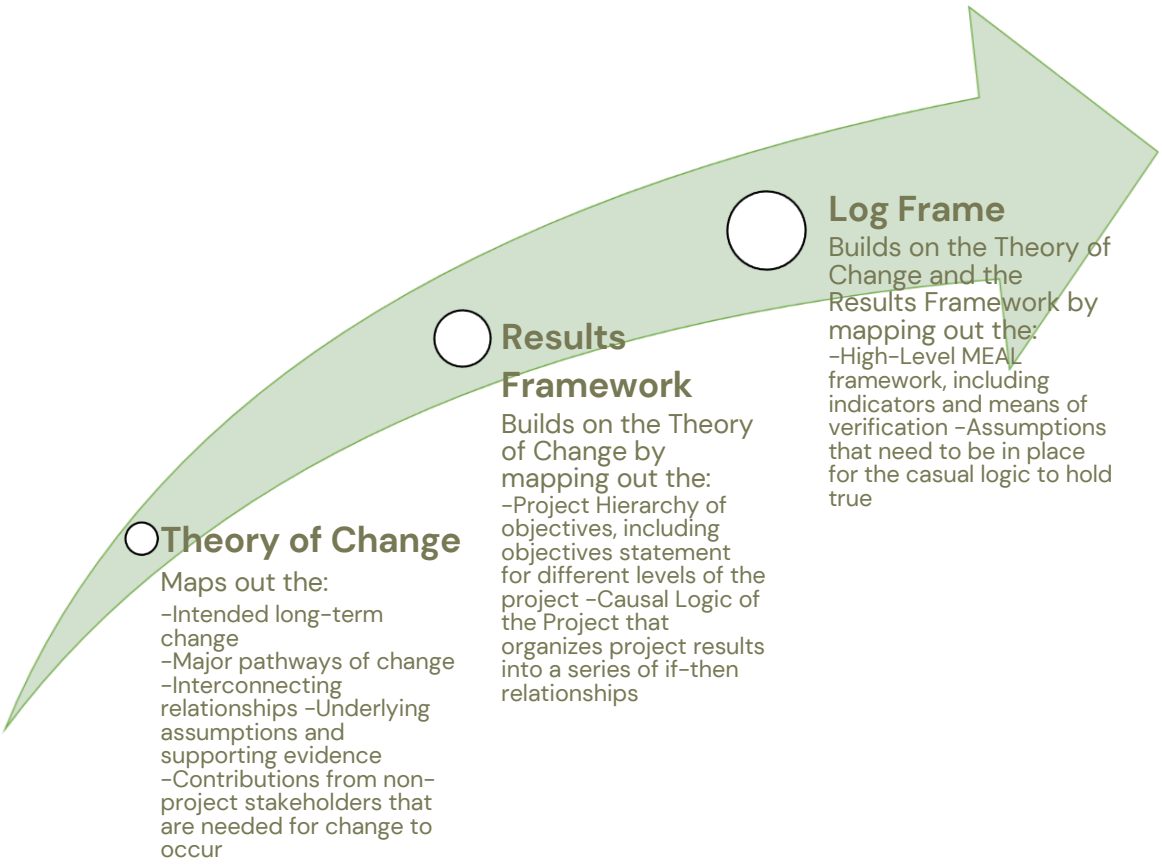


MEAL -Logical Models (Theory of Change)

What is a Logical Model?

A logical model is a visual representation of how a project is expected to achieve its desired outcomes. outlines the sequence of activities, outputs, and outcomes, and identifies assumptions and risks.



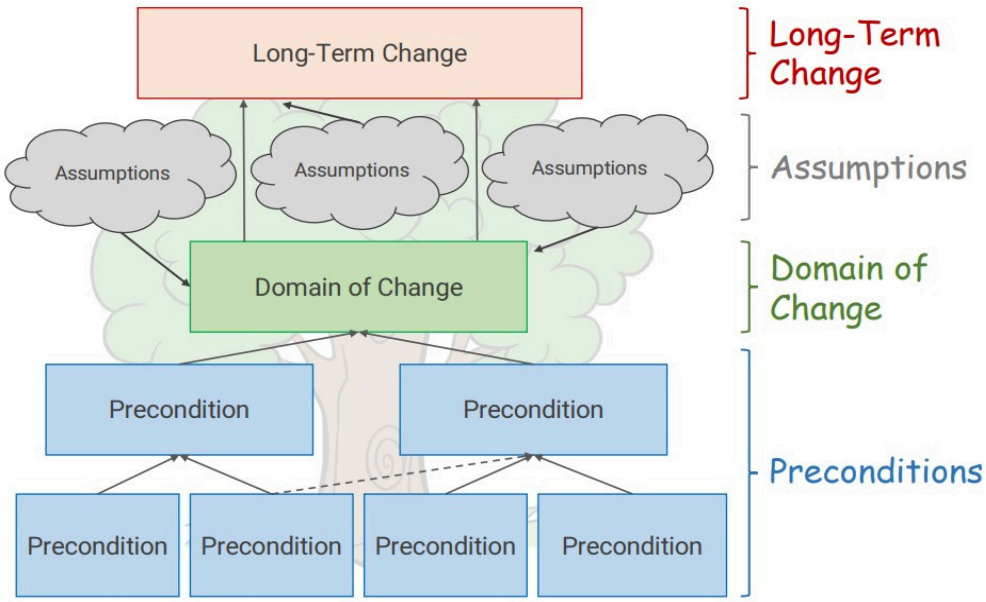


Logic Models as the Main Input for the Design of the M&E Systems

Theory of Change

The Theory of Change is a comprehensive description of how and why a desired change is expected to occur, which helps to:

- Visualize **complex data** and **ideas** in an image that is **easier to understand**
- Identify the **full range of changes** needed to achieve the intended impact. These include changes that are implemented **by other stakeholders**.
- Recognize **non-linear** change.
- Make **explicit assumptions**, i.e. the potential risks that could disrupt the logic of the project.
- Prompt **discussion** and **participation** by opening up space to **ask questions**, **challenge assumptions** and **suggest alternatives**.



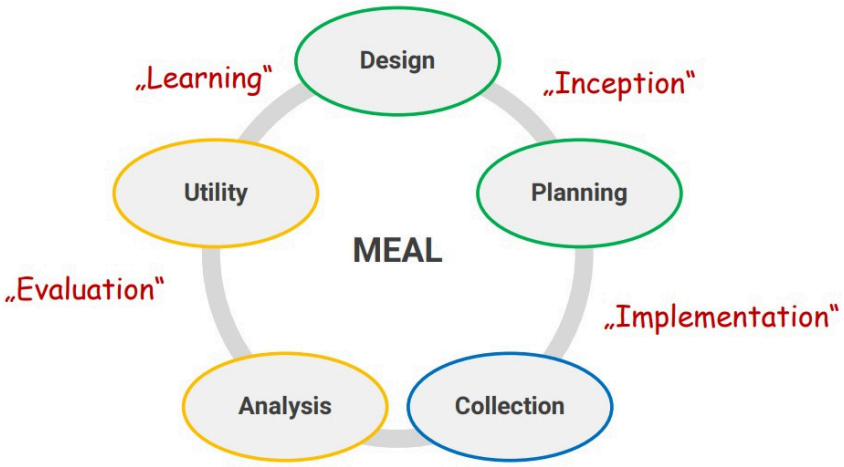
The Results Staircase

SOCIAL IMPACT NAVIGATOR – The free guide book, Kursbuch Wirkung english edition - Praxishandbuch (phineo.org)

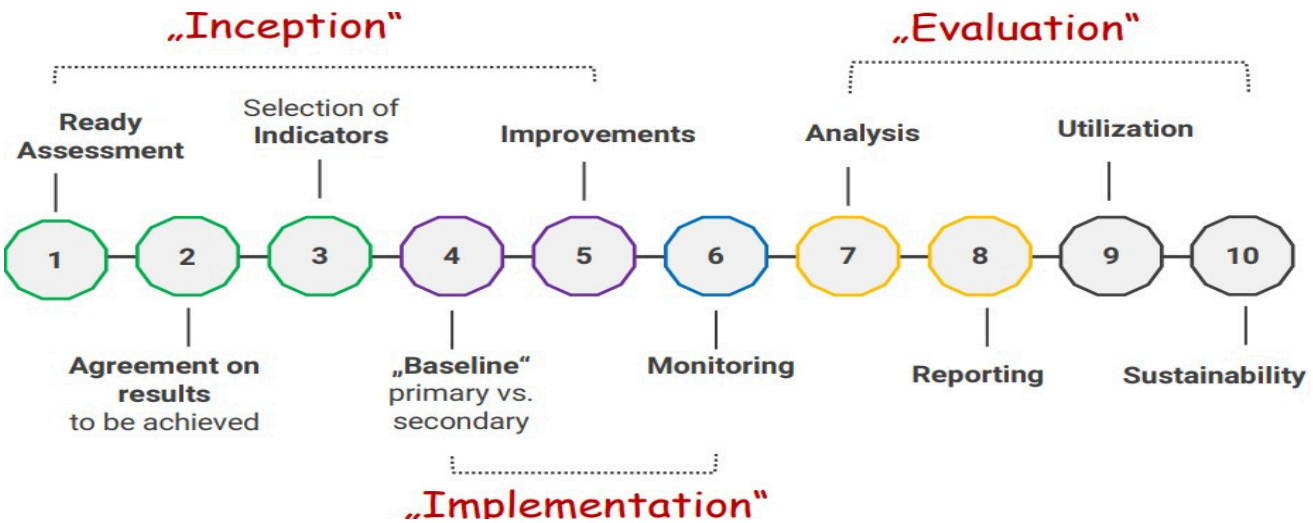
Youtube: YT AD UGC 2506 Lead3 (youtube.com) (PHINEO – Die Wirkungstreppe – Schritt fur Schritt zu mehr Wirkung)

MEAL in the Project Cycle

MEAL should be integrated into every phase of the project cycle, from planning and implementation to evaluation and learning. This ensures continuous improvement and accountability.



MEAL Phases

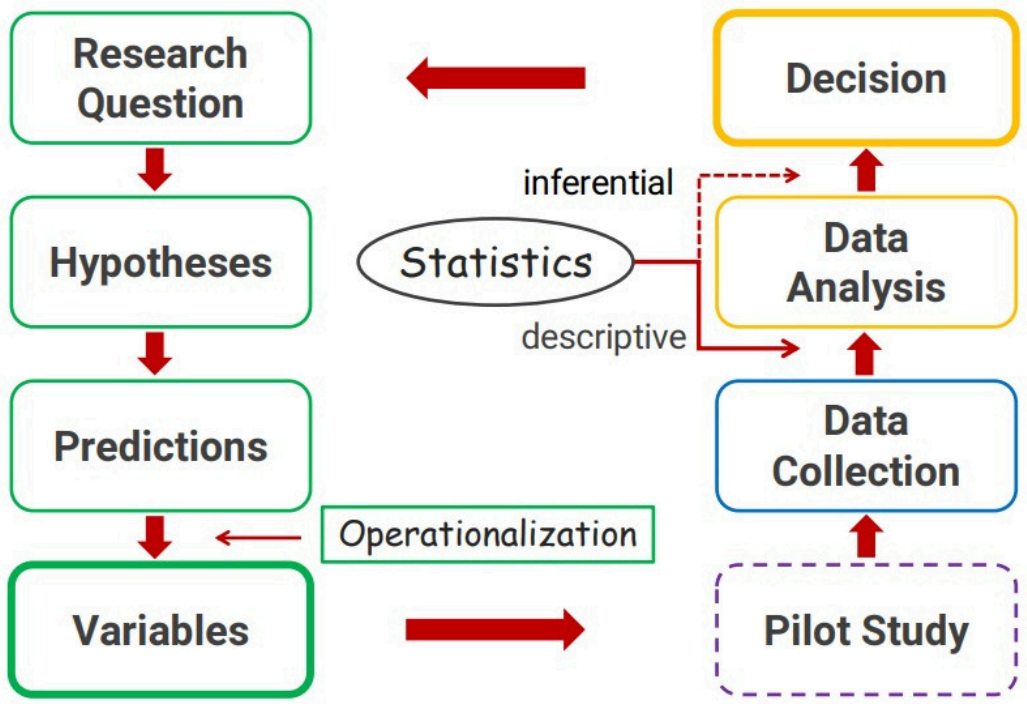


The World Bank – Ten Steps to a Results-based Monitoring and Evaluation System / Page Archived - Page Archivée - OECD

MEAL and the Scientific Method

Applying the scientific method to MEAL involves systematic data collection, hypothesis testing, and analysis to ensure objective and reliable results.

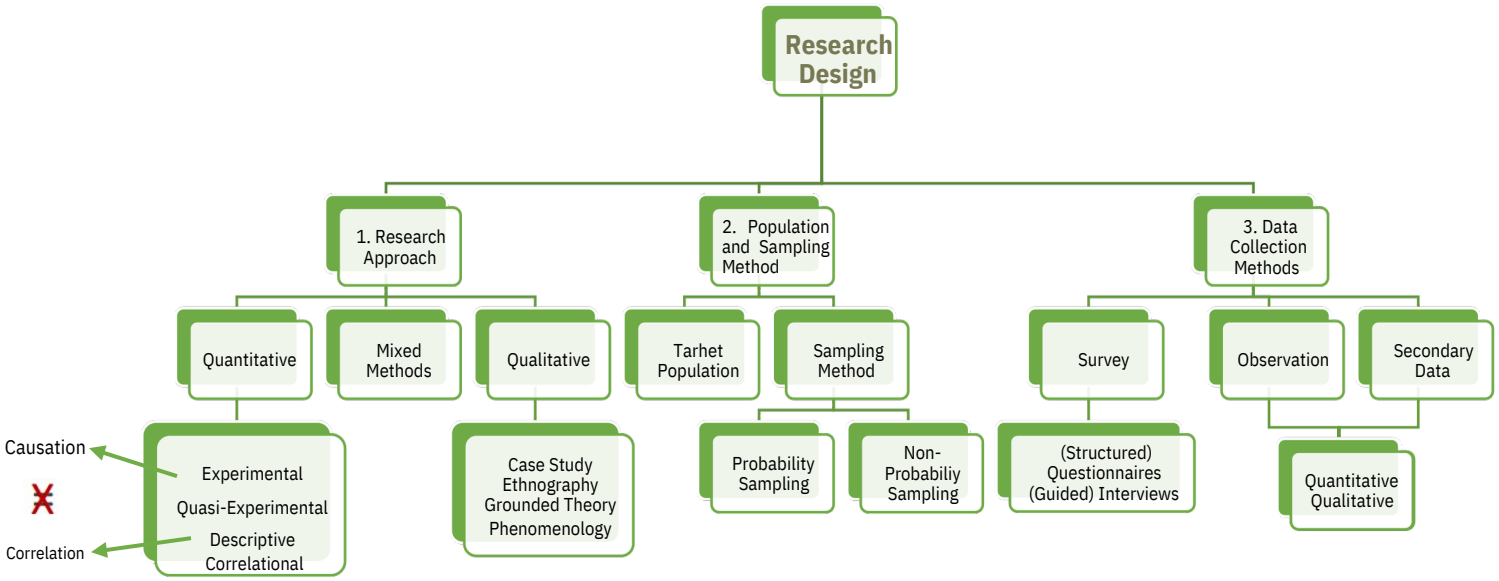
The Scientific Method:



The Scientific Method, e.g., Chalmers (2006) Introduction into Scientific Theory

Evaluation Design

Evaluation design involves planning how to assess a project's effectiveness and impact. This includes choosing the right methodologies and sampling techniques.



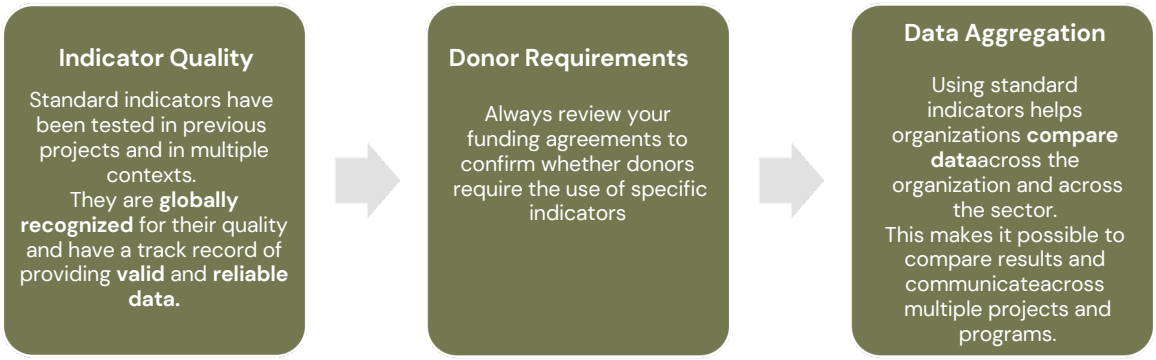
You cannot fix by analysis what you "bungled up" by design!

Concepts of Measurement

Indicators

Indicators are specific, measurable elements that track progress, reflect change, or assess performance. They should be: Specific, Measurable, Attainable, Relevant and Time-bound.

Custom or Standard?



Direct or Indirect?

Direct Indicators: Track change by directly measuring what you are trying to examine

Indirect (Proxy) Indicators: May be used when constructs, or the main concepts, being investigated are hard to measure. Proxy indicators must be correlated with the indicator (and the higher the correlation, the better the proxy).

Quantitative or Qualitative?

Quantitative Indicators: Measures of quantities or amounts. They measure project progress in the form of numerical information:

- Counts
- Percentages
- Rates (e.g., birth rate: births per 1,000 population)
- Ratios (e.g., sex ration: number of men to number of women)

Qualitative Indicators: Measures of judgments, opinions, perceptions and attitudes toward a given situation or subject

What are Constructs and how do they differ from Indicators?

Understanding constructs and indicators is crucial for reliable data collection. **Constructs** are abstract concepts that represent behaviors or conditions, necessitating clear definitions and measurements to ensure accuracy. They differ from indicators, which are specific, observable, and measurable manifestations of these constructs. While constructs provide the theoretical framework, indicators offer
concrete data points that can be measured and analyzed to assess the presence or extent of the constructs. Together, constructs and indicators enable a comprehensive and accurate evaluation of complex phenomena.

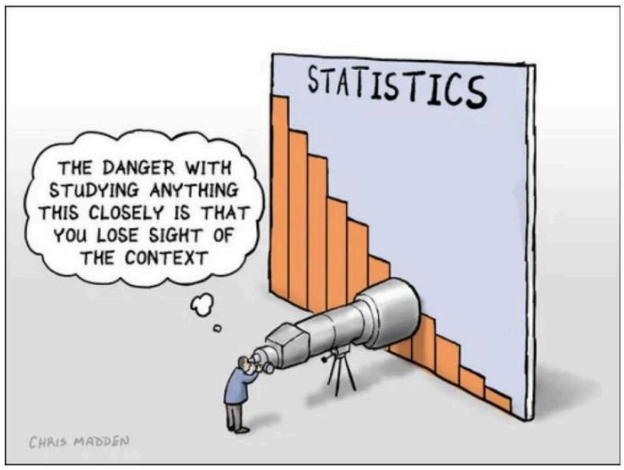
Data Quality

High-quality data is essential for an effective MEAL. This means data should be accurate, reliable, and collected consistently.

Data Sources

Data can be collected from primary sources (directly from participants) or secondary sources (existing data). Both types have their own advantages and limitations.

- **Primary Data:** Collected through surveys, interviews, experiments, and observations.
- **Secondary Data:** Includes data from online repositories, administrative records, and other pre-existing sources.



Don't Lose the Big Picture!

Conclusion:

A robust MEAL system is essential for effective project management. It ensures that projects are monitored and evaluated systematically, stakeholders are held accountable, and continuous learning is fostered. By understanding and applying the principles of MEAL, organizations can enhance their impact and achieve their goals more effectively.

Chapter XIV: Crisis Management and Emergency Response

Introduction to Disaster Risk Management and Disaster Risk Reduction

Overview of Climate Change and Its Impacts

Climate change is significantly increasing the frequency and severity of disaster events worldwide. The impacts of climate change are widespread, affecting various systems as outlined by the Intergovernmental Panel on Climate Change (IPCC):

1. **Physical Systems**:
   - Glaciers, permafrost, snow
   - Rivers, lakes
   - Coastal regions
2. **Biological Systems**:
   - Terrestrial ecosystems
   - Marine ecosystems
3. **Human and Managed Systems**:
   - Food production
   - Livelihoods, health, and economics

The consequences for agriculture, food security, health, ecosystems, and infrastructure are severe. Future disaster impacts due to climate change include:

- **Sea Level Rise**: Leading to gradual loss of land and increased flooding during tropical storms.
- **Heatwaves and Extreme Temperatures**: Becoming more frequent and prolonged.
- **Droughts**: Increasing in length and severity in many regions.
- **Extreme Rainfall**: Shifts in monsoon seasons causing more flooding andlandslides.
- **Intensifying Storms**: Becoming more severe and causing more damage.

Factors Influencing the Impact of Climate Change

The extent to which countries are affected by climate change depends on several factors:

1. **Exposure**: The degree to which people and assets are in harm's way.
2. **Vulnerability**: The susceptibility of people and assets to damage.
3. **Capacity to Cope with Hazards**: This refers to resilience, the ability to withstand and recover from disasters.

Understanding the distinction between a hazard and a disaster is critical. A hazard becomes a disaster only when it intersects with vulnerable people or assets lacking the capacity to cope with its impacts.

Introduction to Disaster Risk Reduction (DRR)

The Disaster Challenge: Disasters, whether sudden events like earthquakes or prolonged stresses like droughts, pose significant challenges globally. Addressing these requires linking climate change with disaster reduction and understanding the nature of disasters.

What is Disaster Risk Reduction (DRR)?

"DRR represents the concept and practice that involves reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters. This includes reducing exposure to hazards, lessening the vulnerability of people and property, managing land and the environment wisely, and improving preparedness for adverse events."

In short: DRR is a conceptual framework to minimize vulnerabilities and limit the impacts of hazards.

Disasters Explained: Disasters occur when hazards impact vulnerable populations, resulting in significant damage and loss. They can be:

- **Short-term:** Sudden events like disease outbreaks, storms, earthquakes, and conflicts.
- **Long-term:** Accumulated stresses like prolonged drought, degradation of natural resources, unplanned urbanization, climate change, political instability, and economic decline.

Factors Contributing to Disasters:

1. Nature of the hazard
2. Extent of exposure to the hazard
3. Vulnerability of people and assets
4. Capacity to reduce or cope with potential harm

Misleading Terminology: The term 'natural disaster' is misleading. There are only natural hazards; disasters result from the interaction of these hazards with vulnerable conditions.

Key Terminology:

Hazard: A potentially damaging physical event, phenomenon, or human activity that may cause loss of life, injury, property damage, social and economic disruption, or environmental degradation.

Disaster: A serious disruption of a community or society due to hazardous events interacting with conditions of vulnerability and exposure, leading to widespread losses and impacts.

Vulnerability: The conditions determined by physical, social, economic, and environmental factors or processes that increase the susceptibility of a community/individual to the impacts of hazards.

Exposure: The presence of people, property, systems, or other elements in hazard zones, making them subject to potential losses.

Capacity: The combination of all strengths, attributes, and resources available within a community, society, or organization to manage and reduce risk and strengthen resilience.

Systematic Classification of Hazards (CRED)

1. **Geophysical hazards:** Earthquakes, volcanic eruptions, mass movements
2. **Hydrological hazards:** Floods
3. **Meteorological hazards:** Storms, cyclones, tornadoes, extreme temperatures
4. **Climatological hazards:** Droughts
5. **Biological hazards:** Epidemics, pest infestations
6. **Technological hazards:** Accidents, structural collapses, fires, explosions
7. **Chemical/Radiological hazards:** Chemical spills, radiological contamination,

Examples of Disasters

- **Geophysical:** Earthquake in Türkiye and Syria (2023)
- **Hydrological:** Floods in Germany, Poland, Czech Republic (2002)
- **Meteorological:** Tornadoes in the USA
- **Climatological:** Droughts and extreme heat in Central Europe
- **Biological:** COVID-19 pandemic (2020/2021)

Disaster Risk Equation

Disaster Risk Reduction (DRR) Frameworks and Institutions Disasters can be avoided or mitigated through coordinated, systematic, and structured actions. Disaster Risk Reduction (DRR) is a global task requiring cross-border, cross-sectoral, and holistic approaches. Key frameworks and institutions supporting DRR include:

- **UN Framework on Climate Change (UNFCCC)**: Established in 1992 to combat dangerous climate change by limiting greenhouse gas emissions.
- **UN Sustainable Development Goals (UN SDGs)**: Adopted in 2015, these 17 goals aim for peace and prosperity while addressing climate change and preserving ecosystems.
- **United Nations Office for Disaster Risk Reduction (UNDRR):** Leading global coordination on DRR, including the Sendai Framework for Disaster Risk Reduction.

Crisis Management and Emergency Response

Historical Context and Evolution Historically, disasters were seen as singular natural events,

with efforts focused on post-
disaster relief. Significant milestones in DRR include:

- **International Framework for Action (1989)**: Aimed to reduce loss and damage through international action.
- **Yokohama Strategy (1994)**: Emphasized principles and actions for disaster risk reduction.
- **Hyogo Framework for Action (2005-2015)**: Focused on building resilience to disasters.

The third World Conference on Disaster Risk Reduction in 2015 resulted in the Sendai Framework, which emphasized a comprehensive approach to disaster risk management.

The Sendai Framework for Disaster Risk Reduction

The **Sendai Framework for Disaster Risk Reduction 2015-2030** is a global initiative designed to reduce disaster risks and enhance resilience. It outlines four priorities for action and seven measurable targets to guide international efforts. The Sendai Framework, adopted in 2015, marked a significant shift from previous frameworks by emphasizing disaster risk management over disaster management. It aims to prevent and reduce new risks while strengthening resilience. Key priorities for action include:

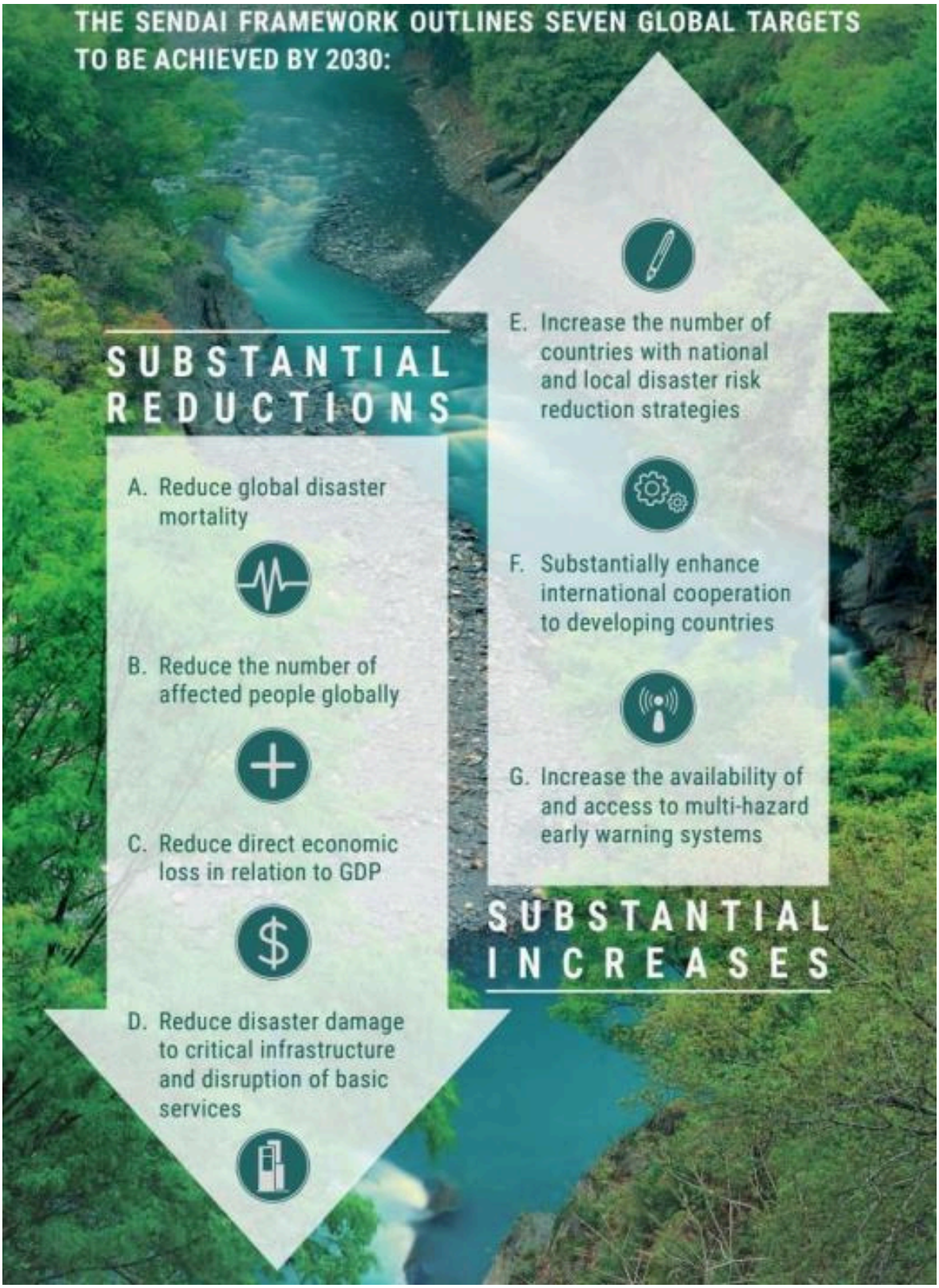
1. **Understanding Disaster Risk**: Using knowledge for pre-disaster risk assessment and mitigation.
2. **Strengthening Disaster Risk Governance**: Ensuring clear vision, plans, competence, and coordination.
3. **Investing in Disaster Risk Reduction for Resilience:** Encouraging public and private investments in prevention and reduction.
4. **Enhancing Disaster Preparedness for Effective Response:** Utilizing recovery phases as opportunities to build back better.

The Sendai Framework sets seven clear and measurable targets to reduce disaster risks and enhance resilience by 2030 that include the following:

1. **Reduce Global Disaster Mortality:** Substantially decrease the number of deaths caused by disasters by 2030.
2. **Reduce the Number of Affected People:** Significantly lower the number of people affected by disasters globally by 2030
3. **Reduce Economic Loss:** Cut down direct disaster-related economic losses in relation to global GDP by 2030.
4. **Reduce Damage to Critical Infrastructure and Services:** Substantially diminish disaster-induced damage to infrastructure and the disruption of basic services by 2030, enhancing their resilience.
5. **Increase National and Local DRR Strategies:** Significantly increase the number of countries with established national and local disaster risk reduction (DRR) strategies by 2020.
6. **Enhance International Cooperation:** Substantially boost international support and cooperation to developing countries by 2030 through sustainable and adequate assistance.
7. **Increase Availability of Multi-Hazard Early Warning Systems:** Substantially enhance the availability and accessibility of multi-hazard early warning systems and disaster risk information to the global population by 2030.

These priorities and targets emphasize a proactive approach to disaster risk reduction, promoting resilient development and sustainable recovery efforts.

Summary of the seven targets



Climate Change and Increased Disaster Risk

To manage climate change and its impact on disaster risk, it is crucial to understand its root causes and determining factors.

Managing Disaster Risks in Practical Terms

1. Identify the nature of the physical hazard (probability, location, intensity).
2. Determine human vulnerability by identifying exposure and weaknesses.
3. Identify capacities and available resources for managing and reducing vulnerability.
4. Determine acceptable levels of risk.

Objectives of Disaster Management

1. Increase capacities and resilience.
2. Reduce vulnerabilities and exposure.
3. Reduce or avoid human, physical, and economic losses.
4. Speed up recovery.
5. Provide protection to refugees or displaced persons threatened by armed conflicts.

Phases of Disaster Management

Disaster management encompasses a range of activities before, during, and after a disaster:

1. **Preparation for Intervention**: Early warning systems and readiness activities.
2. **Emergency Response**: Immediate measures to ensure community response and coping mechanisms, such as activation of emergency plans, search and rescue, and provision of essential services.
3. **Rehabilitation**: Providing necessary resources for recovery, such as seeds and farm implements.
4. **Event Analysis**: Understanding root causes and factors leading to disasters, documenting events, and learning lessons for future preparedness.
5. **Reconstruction**: Replacing and rebuilding damaged structures, aiming to build back better.
6. **Prevention**: Legal, organizational, and technical measures to completely avoid adverse impacts of hazards.
7. **Preparedness**: Ensuring vulnerable communities can take precautionary actions in advance of potential threats.

General Remarks on Disaster Risk Management

- Risks and vulnerabilities to natural disasters are shaped by social and physical environments.
- Social networks, power relationships, knowledge and skills, gender roles, health, wealth, and location all affect disaster risk and resilience.
- Building resilience is crucial for effective risk management and disaster reduction.

Resilience Framework

A disaster resilience perspective should be holistic, considering all relevant aspects and issues to produce a comprehensive analysis of disaster-related problems.

Definition of Resilience: The ability of a system and its components to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner.

Challenges: There is no unified approach to defining, measuring, or promoting resilience, making it a complex task for practitioners.

Conclusion:

The above mentioned strategies represent the main measures for managing climate-related crises and emergencies, rounding out the practical implementation of climate resilience.

Sources:

- Dr. John Twigg's Good Practice Review (GPR) for Disaster Risk Reduction
- UNISDR definitions
- DFID, Defining Disaster Resilience: A DFID Approach Paper
- Aktion Deutschland Hilft (ADH) reports and studies

For further details, refer to:

- Good Practice Review (GPR) for Disaster Risk Reduction
- ADH Study on Disaster Prevention

INSTITUT FÜR PARTIZIPATIVES GESTALTEN IPG

IPG
Procedural Design Chart

Project:

FIELD ANALYSIS

Starting Situation

Background

Intentions

Topics

Framework Conditions

Result Types

Actor Constellations

Initiators and Persons in Charge

Participants

PROCEDURAL DESIGN

Communication

Attitudes

Communication and Activation

Organisation and Logistics

Procedural Organisation

Event Times

Event Locations

Procedural Design

Design Principles

Event Formats

CULTIVATION

Follow-up

Postprocessing and Evaluation

Implementation and Consolidation

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