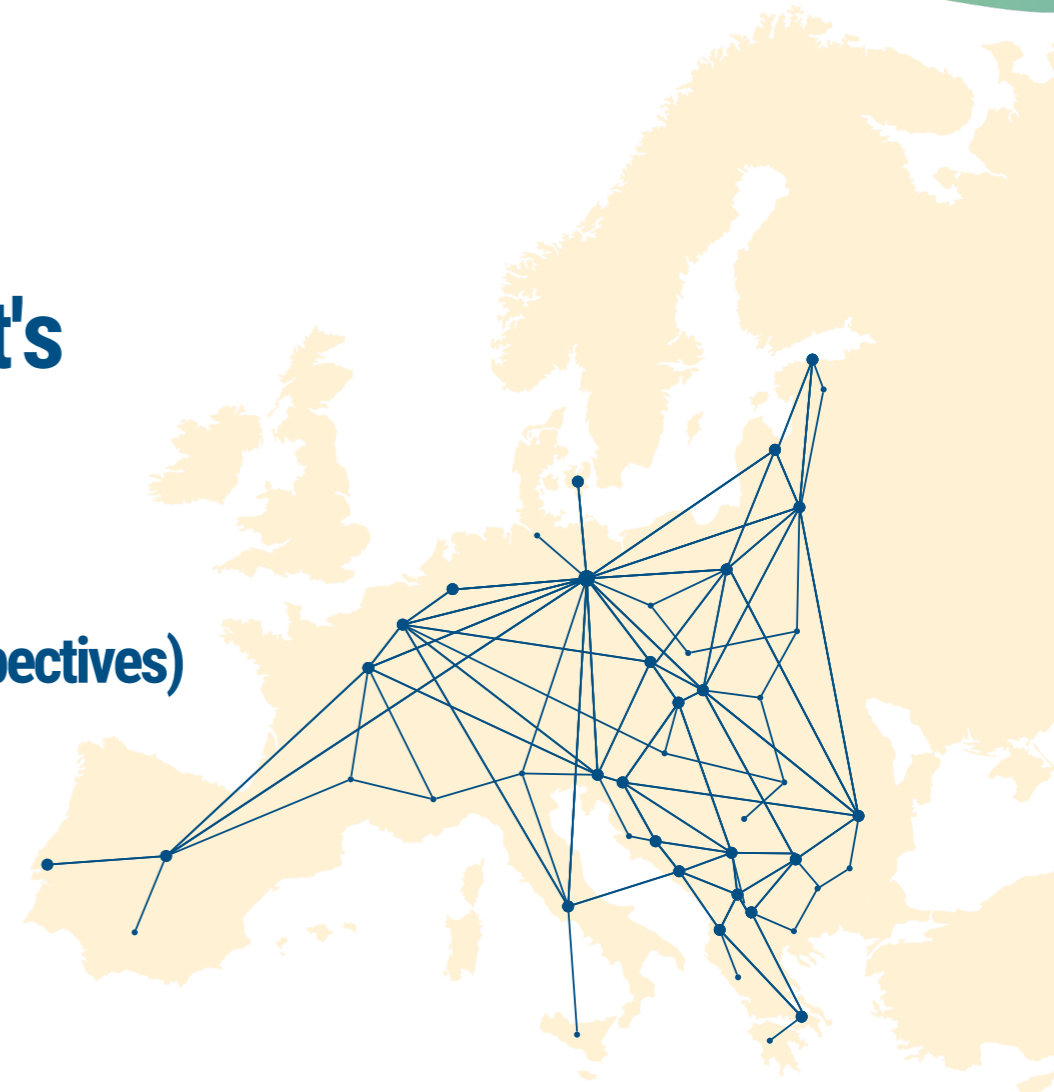


Enhancing Impact – Learning to Estimate Your Project's Emission Reductions

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Intro speaker

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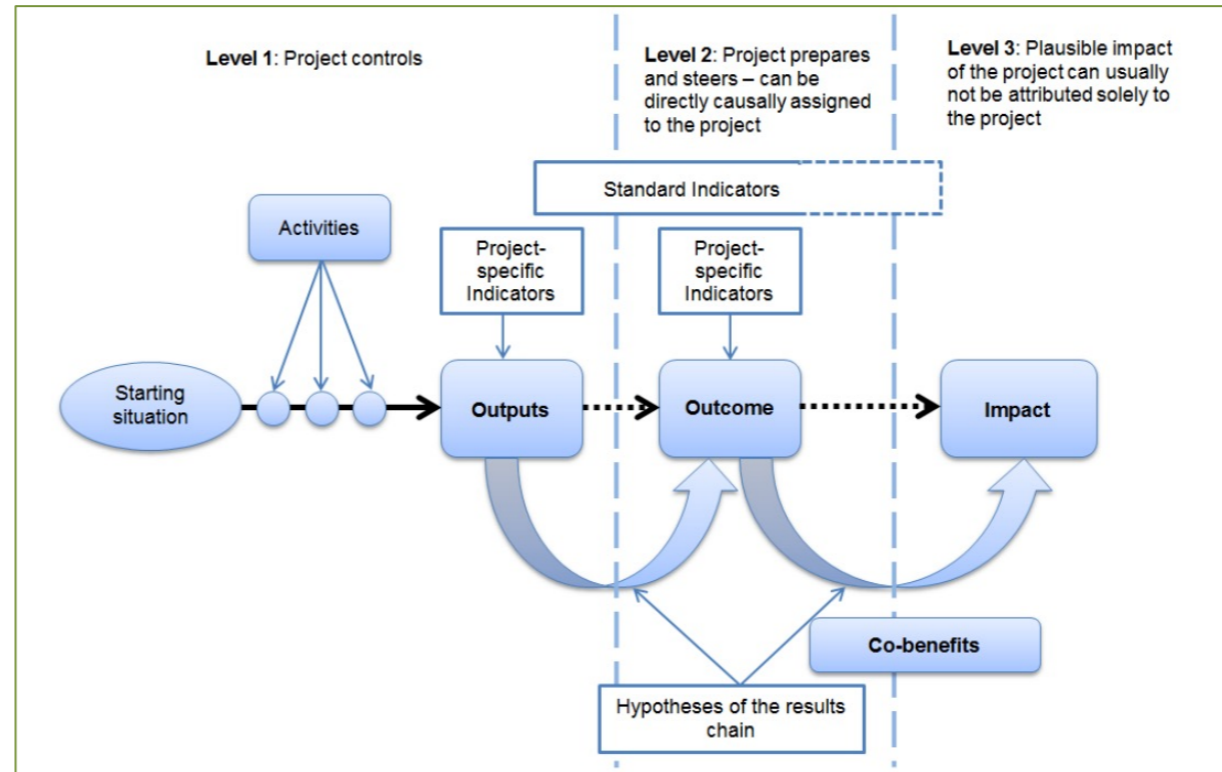
Agenda

1	Introduction	}	35 min
2	Understanding Climate Impacts and Mitigation in Development Cooperation		
3	Methodological Approaches to Mitigation Quantification		
4	Data Availability		
5	Case Clinics of typical EUKI projects	}	50 min
6	Wrap up	}	5 min

Introduction

What are EUKI Standard Indicators (SIs)?

- Predefined quantitative indicators
- Used to measure the overall objectives of EUKI
- For the project proposal, projects must provide an estimated number for the respective standard indicator
- The actual numbers will be reported during the project by means of biannual narrative reports



Source: [EUKI-guidelines-on-project-planning-and-monitoring.pdf](#)



EUKI SI GHG emissions is optional

- SI “V: GHG emissions reduced, or carbon stocks enhanced through project” is **optional** (as of [EUKI Guidelines 2022](#))
- Extract from EUKI Project Proposal Template 2022:
 - Projects that are **suitable for measuring reduced GHG emissions** and/ or expanding carbon storage **can calculate** and report them.
 - Please only calculate target values that are **directly attributable to the action** (e.g., result from outcome and output level and **within the timeframe** of the project).
 - **Do not add** any saved **emissions that are due to project management** (e.g., train vs. air travel) or that are expected in **the long-term**.

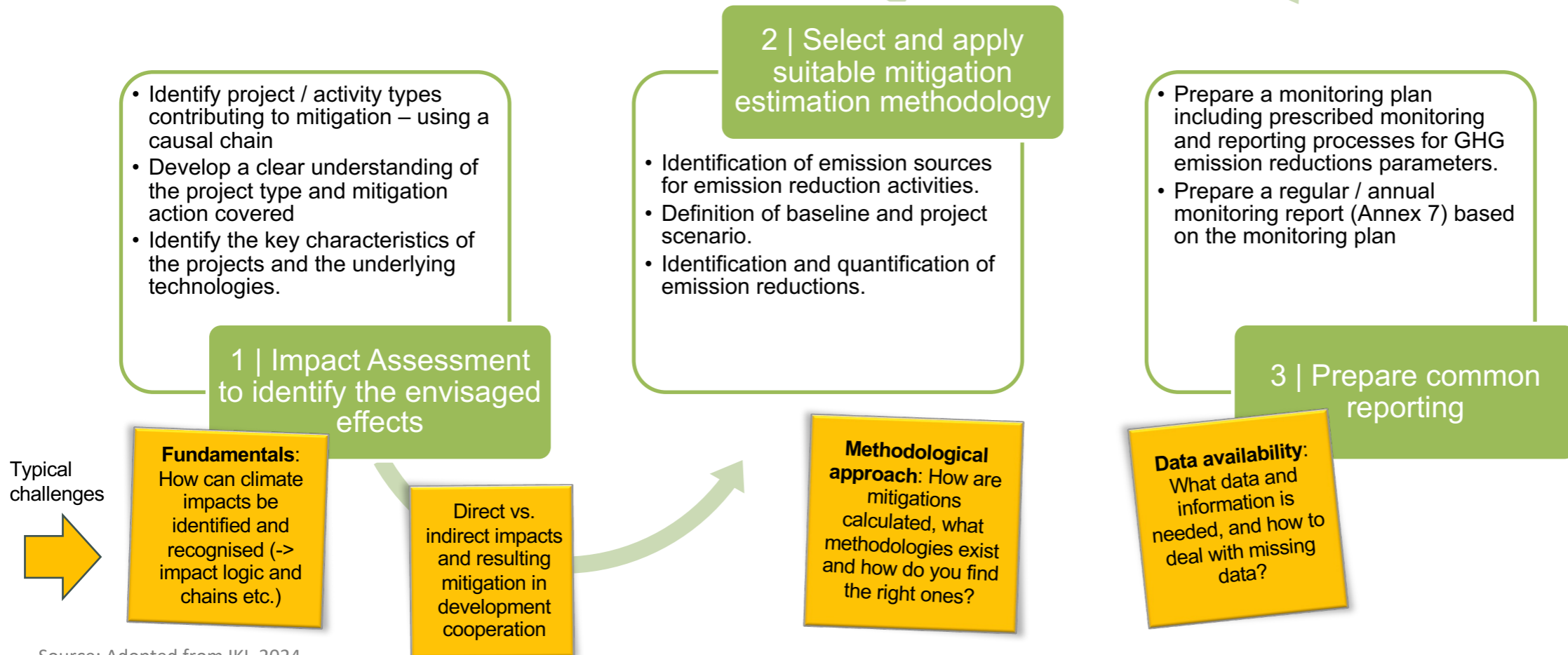


Why should you report on climate impact?

- **Accountability and Transparency**
 - Reporting ensures that the project's goals align with broader environmental objectives
- **Performance Measurement**
 - Reporting providing data to assess whether environmental targets are being met and helps identify areas which need improvement
- **Stakeholder Engagement**
 - Impact reports showing the concrete climate benefits of a project's involvement can engage stakeholders
- **Regulatory Compliance**
 - Staying ahead of regulatory requirements ensures compliance and minimizes legal risks

Typical steps for estimation the mitigation potentials...

... and related challenges and pitfalls





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1 | Understanding Climate Impacts and Mitigation in Development Cooperation

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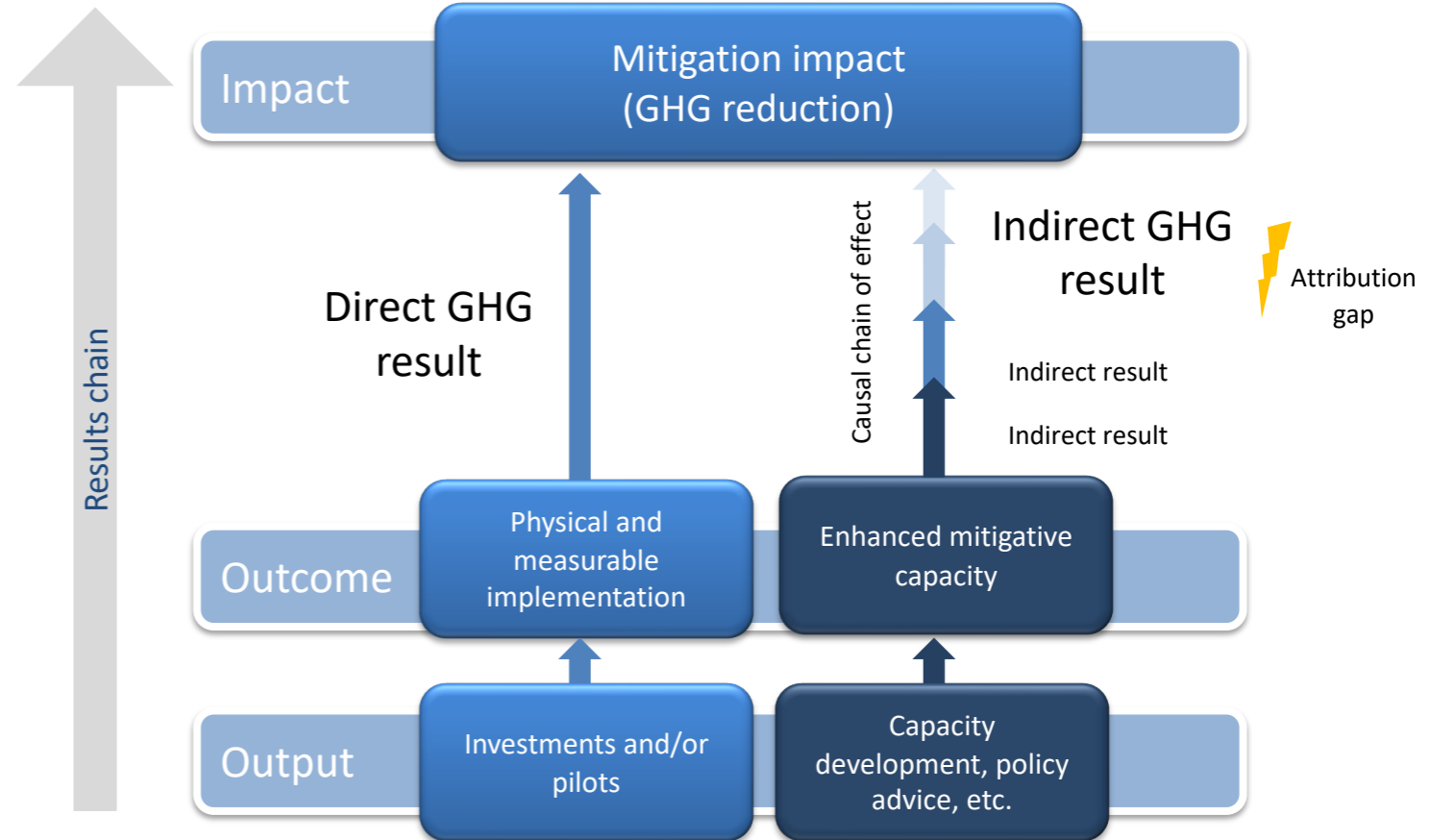
What is the difference between direct and indirect GHG impact?

Direct: The radius of action within which the project activities are steered and implemented and lead to direct results.

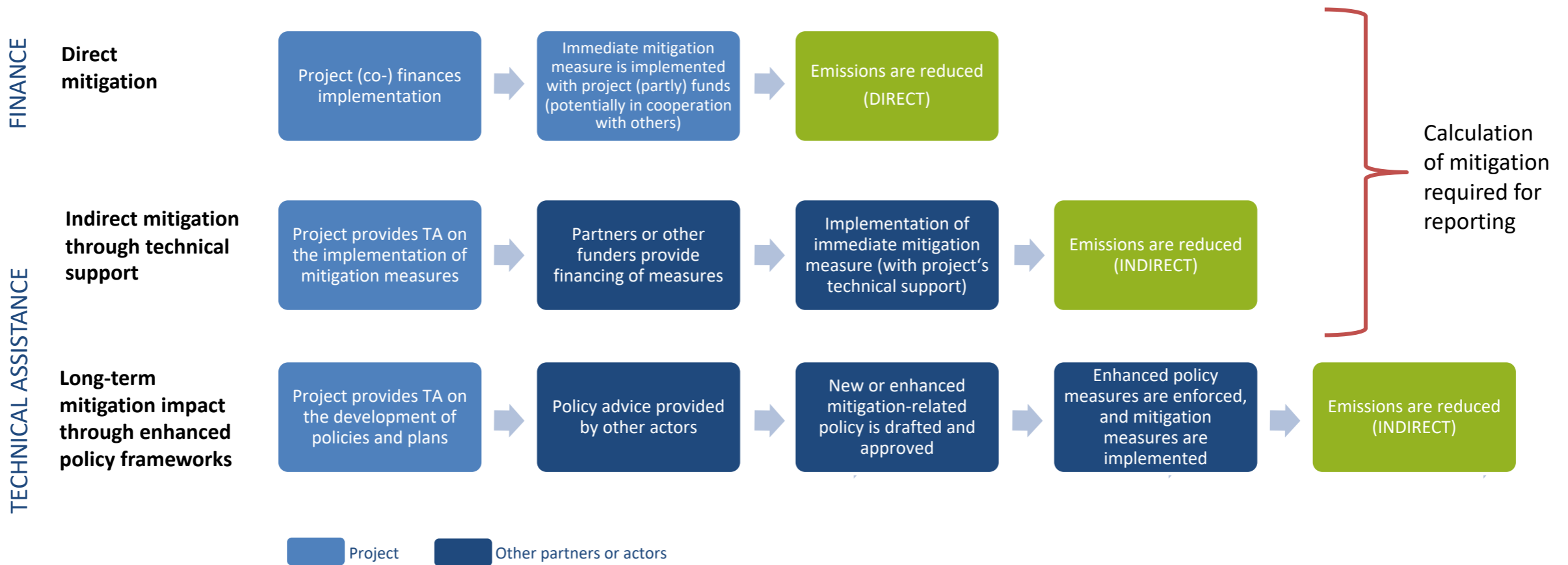
→ Emissions or emission reductions directly under the control of a project or facility.

Indirect: Steps of change located outside the radius of action less susceptible to influence, leading to indirect results.

→ Emissions or emission reductions outside of the influence/control of the project or activities but indirectly related.



How does IKI differentiate between GHG impacts?





GHG reducing activities in the energy sector

Energy generation

Use of **renewable energies for power generation**

- Solar energy for centralized grids
- Solar energy for isolated grids and autonomous systems
- Wind energy
- Ocean energy
- Geothermal energy
- Biofuel fired power plants
- Hydroelectric power plants

Use of **renewable energies for heating and cooling**

- Solar energy - thermal applications
- Biomass
- Biogas
- Heat pumps
- Geothermal energy

Energy efficiency

Increasing **energy efficiency in electricity generation**, such as

- Combined heat and power plants
- District heating and cooling systems

Improving **energy distribution**, e.g., through the use of

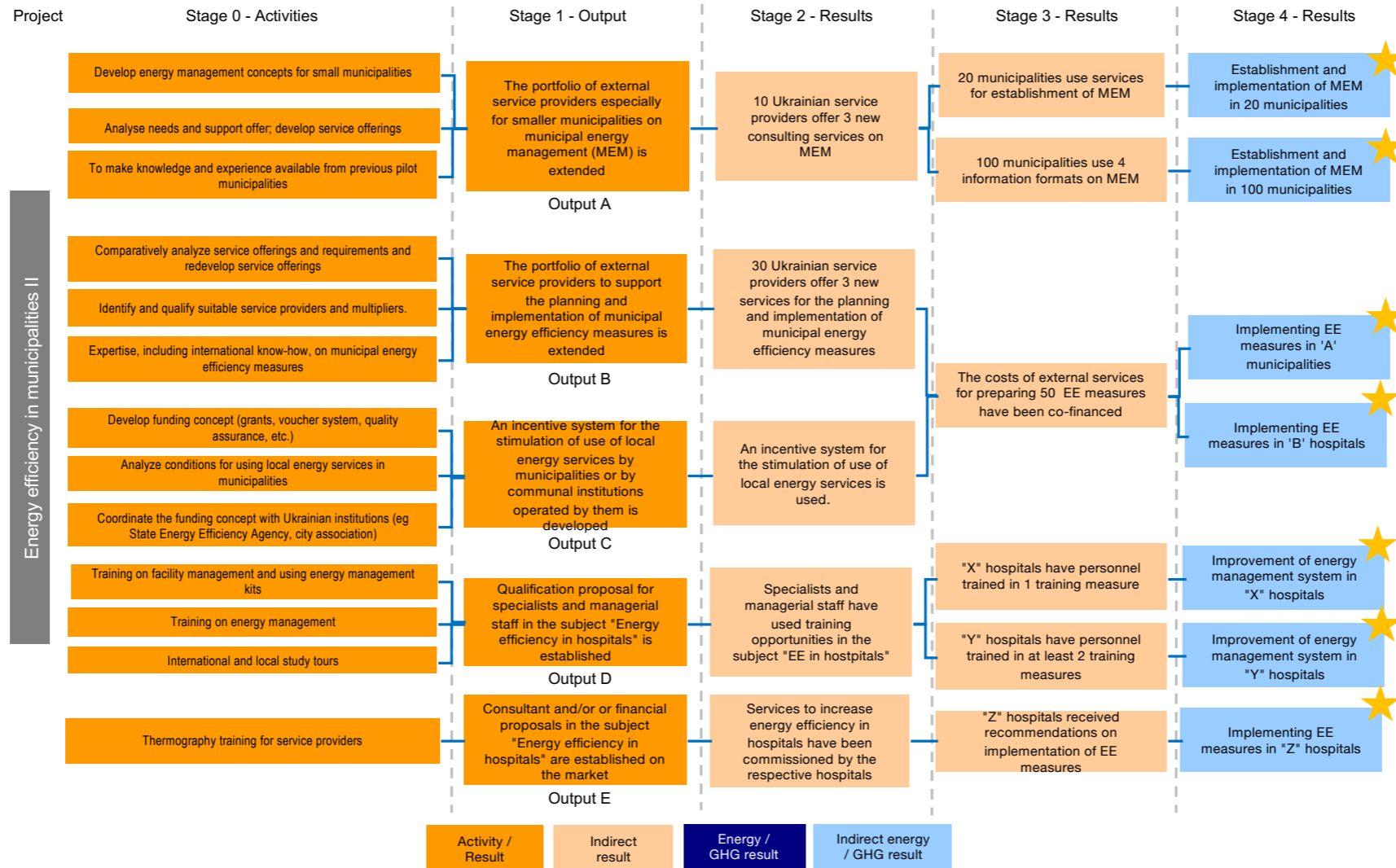
- Modern electricity transmission and distribution (centralized grids)
- Modern electricity transmission and distribution (isolated mini-grids)
- Infrastructures for electric mobility

Energy efficiency measures to reduce the consumption of consumed electricity and energy

- Use of energy-efficient equipment
- Energy efficiency in the manufacturing / industry sector

Example
energy sector

Causal Chain Map shall help to visualize project impact





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2 | Methodological Approaches to Mitigation Quantification

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How to calculate mitigation effects?

The achieved emission reductions are typically calculated as the difference between baseline emissions and emissions after project implementation, considering any potential leakage.

$$ER_y = BE_y - PE_y - LE_y$$

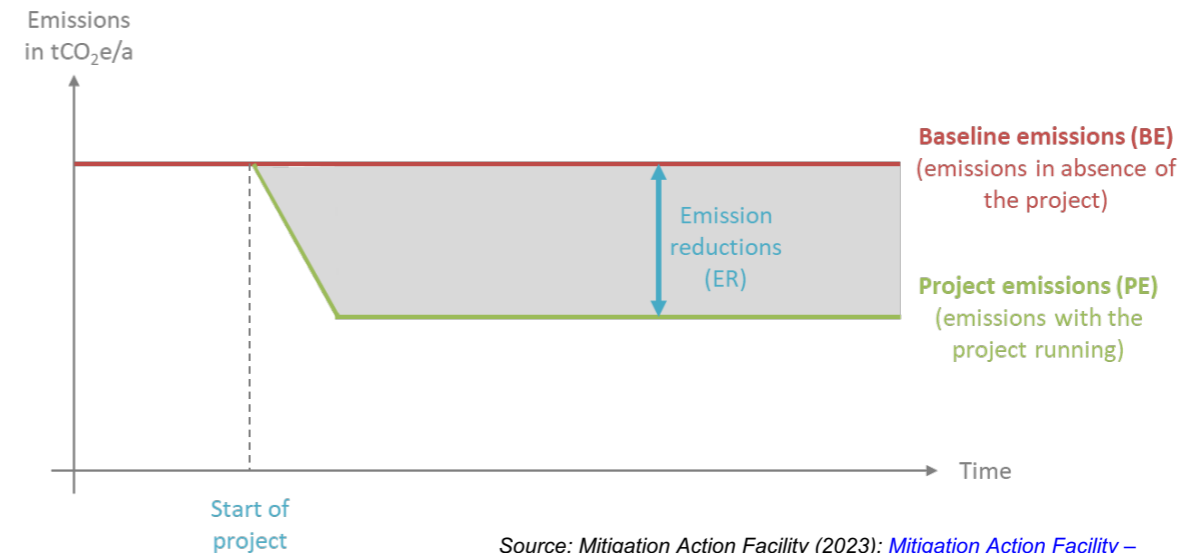
Where:

ER_y = Emission reductions in year y (tCO₂)

BE_y = Baseline emissions in year y (tCO₂)

PE_y = Project emissions in year y (tCO₂)

LE_y = Leakage emissions in year y (tCO₂)



Source: Mitigation Action Facility (2023): [Mitigation Action Facility – Mitigation Guideline for the Project Concept Phase](#), p. 10

Typical baseline and project scenario

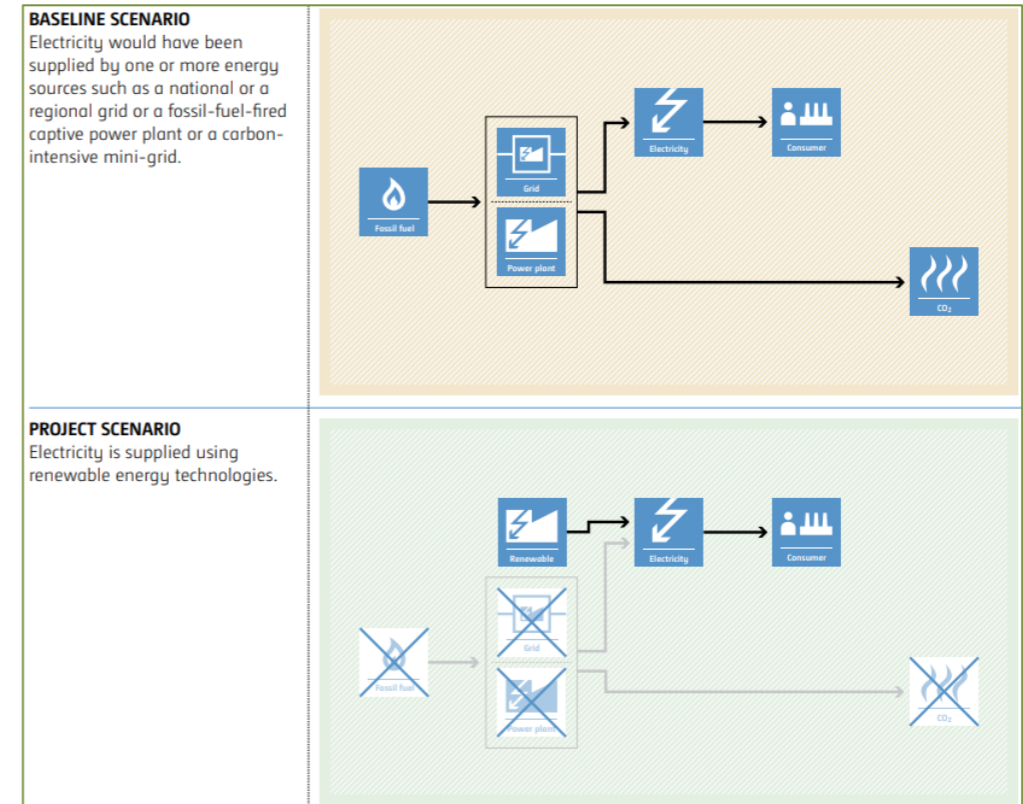
Example
energy sector

Baseline scenario

- reflects the emissions that would occur without the project
- represents the reference situation, e.g.,
 - the continuation of current activities (e.g., Business-as-Usual)
 - emissions from a technology that represents an economically attractive course of action
 - a benchmark approach (considering emissions from similar project activities undertaken in the previous five years in similar circumstances)

Project scenario

- represents the emissions associated with the (proposed) project's implementation
- reflects the expected outcomes of the project



Source: UNFCCC (2022a): [CDM Methodology Booklet](#), p. 176.



How to identify a suitable methodology which gives guidance on quantification of emissions?

To identify suitable methodological approaches,

- check other projects that estimated emission reductions from same / similar activities, e.g.,
 - [CDM Project Search](#), [VERRA / VCS Project Registry](#), Mitigation Action Facility / NAMA Support Projects, IKI Projects etc.
 - consult existing methodologies: CDM Methodologies, VCS, GS etc., e.g., in the [CDM Methodologies Booklet \(2022\)](#)
- consult and use simplified tools for the estimation, if existing, e.g., check
 - [GHG Protocol Calculation Tools](#)

3 | Common Reporting and Data Availability

Key parameters required to estimate emission reductions

Energy generation

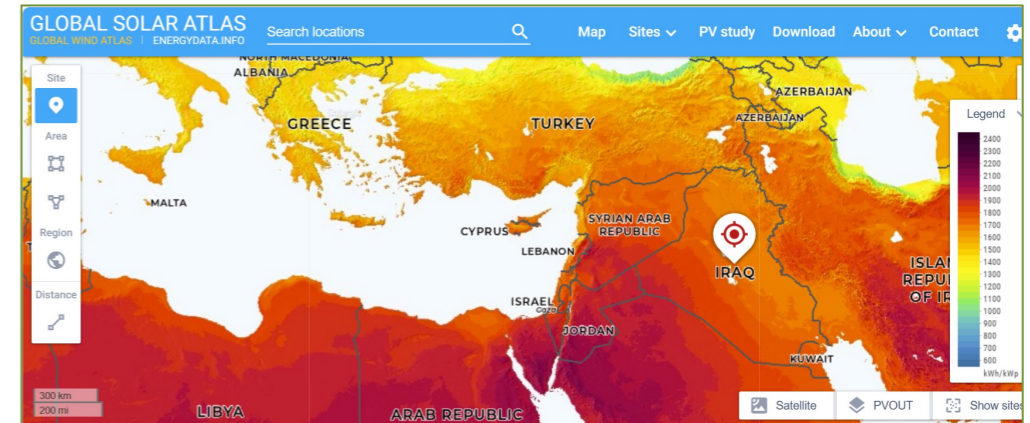
- Type of energy source (solar, wind, hydro, biomass, geothermal)
- Capacity (in MW) and output (in MWh)
- Capacity factor (in %)
- Emission factor of displaced energy (e.g., national grid emission factor or for diesel generating system in tCO₂/MWh)
- Technology lifetime (in years)

Energy efficiency

- Baseline energy consumption (in MWh)
- Energy savings (in % or MWh)
- Emission factor of energy saved (in tCO₂/MWh)
- Technology lifetime (in years)

Where to find relevant default values and reference sources?

- IPCC for GWP
- [IFI](#) for default grid factors
- [Global Solar Atlas/ Global Wind Atlas](#) for energy yields
- CDM methodological tool [Default values for common parameters](#) (including CO2 EF for diesel generating system used for off-grid power generation purposes, CO2 EF for kerosene used for lightening applications, wood-to-charcoal conversion factor, Efficiency of pre-project cooking device)



Source: [Global Solar Atlas](#)

Case Clinic



Objective: Benefitting from collective experience and expertise

The purpose of a case clinic is to leverage the collective expertise and creativity of all participants to address real-world challenges related to estimating emission reductions in project management.



Process Steps

1. Distributing roles

- Case giver (already defined)
- Facilitator/ Timekeeper
- Rapporteur

2. Intention statement by case giver (5 minutes)

- Description of project and activities

3. Group discussion (30 minutes)

- What is the project's mitigation potential? What are direct and indirect effects, and resulting emission reductions?
- What would be suitable approaches (methodologies) to quantify the project's mitigation potential?
- Which are the data challenges and how can they be addressed?

4. Final discussion and closing (5 minutes)



Case givers

1. RENewLand (Csaba Csontos)
2. SOFI – Smart Organic Food Initiative (Peter Fabjan)
3. COMMENCE – Community Energy in Central Europe (Laura Otypkova)
4. Reducing Emissions in Carpathian Mountain Huts (Nicolae Daniel Tulban)

Presentation of Case Clinic Results



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Wrap Up

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How to report your project's climate impact?

1. Develop a clear understanding of the project type and mitigation action(s) covered
 - Identify **the key characteristics of the projects and the underlying technologies**
 - Conduct an **impact assessment**, e.g., using a causal chain analysis to identify the envisaged effects and possible co-benefits
2. Identify and quantify emission reductions
 - Identify the **emission sources** for emission reduction activities
 - Select a **suitable methodology** or define an **applicable estimation approach**
 - Define clear **baseline and project scenario**
3. Prepare a **monitoring plan** incl. monitoring and reporting processes

Sources for further guidance

For more information (guidance, fictional examples and webinars) on estimating mitigation effects in the Energy, AFOLU, Mobility and Buildings sector see, e.g., [Information on “IKI Standard Indicator 1 – Mitigation”](#)

<p>Energy</p>  <p>Standard Indicator 1 - Mitigation Estimating emission reductions from IKI project activities Online Seminar 1 - Energy Speaker: Martin (IKI) / Moderator: L. K. B. 13. April 2023, 15:00 Video: 27.03.2023</p> <p>Online seminars on “IKI Standard Indicator 1 – Mitigation” (seminar 1)</p>	<p>AFOLU</p>  <p>Standard Indicator 1 - Mitigation Estimating emission reductions from IKI project activities Online Seminar 2 - AFOLU Speakers: (IKI), W. B. 13. April 2023, 15:00 Moderator: L. K. B. 13. April 2023, 15:00 Video: 12.04.2023</p> <p>Online seminars on “IKI Standard Indicator 1 – Mitigation” (seminar 2)</p>
<p>Transport</p>  <p>Standard Indicator 1 - Mitigation Estimating emission reductions from IKI project activities Online Seminar 3 - Transport Speakers: (IKI), W. B. 13. April 2023, 15:00 Moderator: L. K. B. 13. April 2023, 15:00 Video: 12.04.2023</p> <p>Online seminars on “IKI Standard Indicator 1 – Mitigation” (seminar 3)</p>	<p>Buildings</p>  <p>Standard Indicator 1 - Mitigation Estimating emission reductions from IKI project activities Online Seminar 4 - Buildings Speakers: (IKI), W. B. 13. April 2023, 15:00 Moderator: L. K. B. 13. April 2023, 15:00 Video: 12.04.2023</p> <p>Online seminars on “IKI Standard Indicator 1 – Mitigation” (seminar 4)</p>

Source: [Information on “IKI Standard Indicator 1 – Mitigation”](#)



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Thank you for your attention!

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