



WORLD
RESOURCES
INSTITUTE

STANDARDS TO ACHIEVE CITY SUSTAINABILITY

Agenda

1. Background
2. Overview of Assessment Standards
3. Using the Policy & Action Standard to track the impacts of BEA actions
4. Q&A session



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Purpose of this webinar

- Tools for Sustainability Webinar Series
- Objective: Learn process of conducting an impact analysis of BEA policies and project
- Today's webinar, "Standard to Achieve City Sustainability" is 1 of 4
- Objective: Review tools for policy/program analysis to be used in future webinars

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2. **Overview of Assessment Standards**
3. Using the Policy & Action Standard to track the impacts of BEA actions
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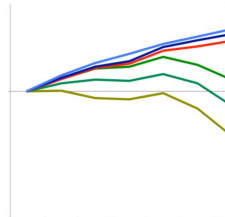
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Why do cities assess and track impacts?

- Understand effects of policies/programs
- Prioritize activities
- Communicate progress towards goals
- Accountability and transparency
- Improving efforts and scaling up actions

Need for standardization

Investment & finance



Consistent methodologies and data to monitor investment performance

Resources & knowledge



Sharing methodologies, tools, data, training

International communication



Benchmarking, experience sharing, collaboration

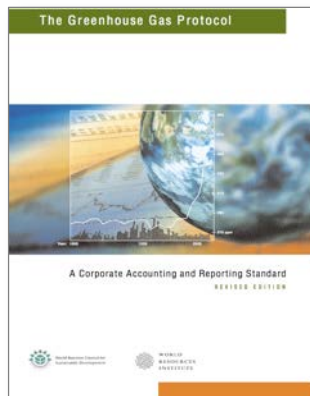
The Greenhouse Gas Protocol

- The GHG Protocol sets the global standard for how to measure, manage, and report greenhouse gas emissions
- Convened in 1998 by WRI and WBCSD
- Provides:
 - Greenhouse gas accounting and reporting standards
 - Sector guidance
 - Calculation tools
 - Trainings (webinar, e-learning and in-person training)
- Standards and tools available free of charge at www.ghgprotocol.org

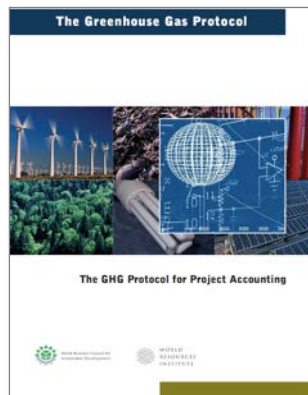


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Greenhouse Gas Protocol standards



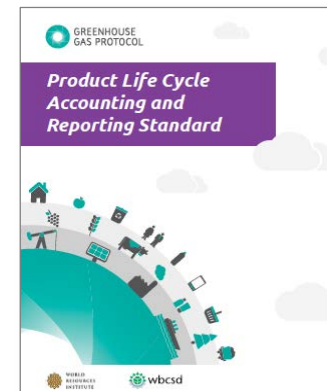
Corporate Standard



Project Protocol



Corporate Value Chain
(Scope 3) Standard



Product Standard



Policy and Action
Standard

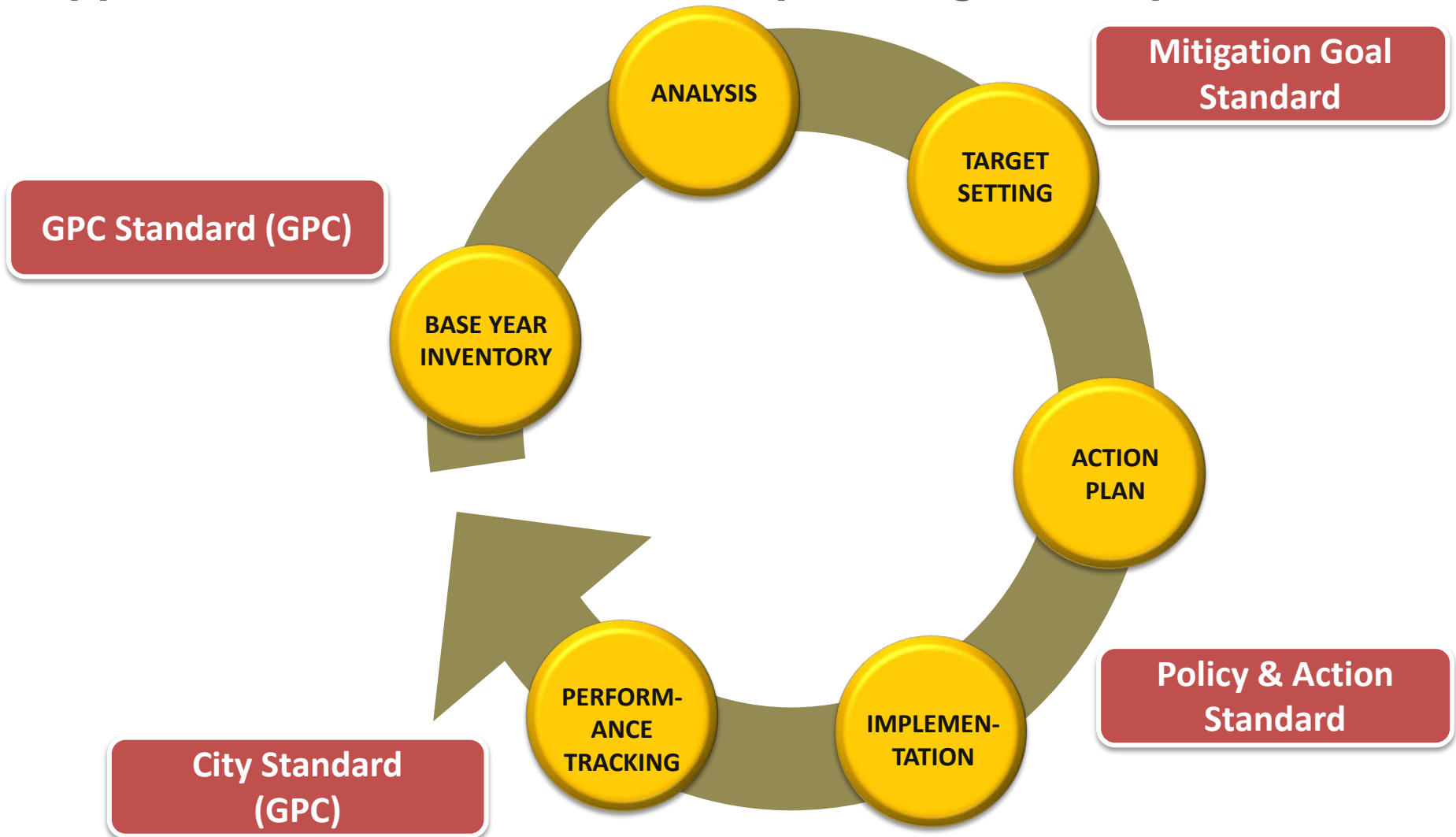


Mitigation Goal
Standard



Global Protocol for
Cities (GPC)

Application in low carbon cities planning and implementation



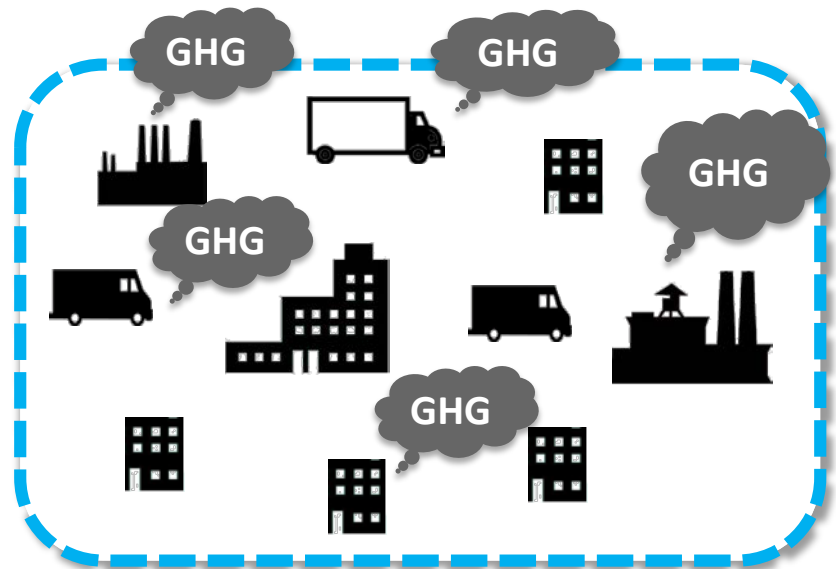
City Standard (GPC)

Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

An Accounting and Reporting Standard for Cities



A standard for measuring and reporting all in-boundary and trans-boundary GHG emissions of a city



City Boundary

Contents of the GPC

PART I: INTRODUCTION AND REPORTING REQUIREMENTS

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PART II: CALCULATION GUIDANCE BY EMISSION SOURCE

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PART III: TRACKING CHANGES AND SETTING GOALS

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12	Managing Inventory Quality and Verification	144

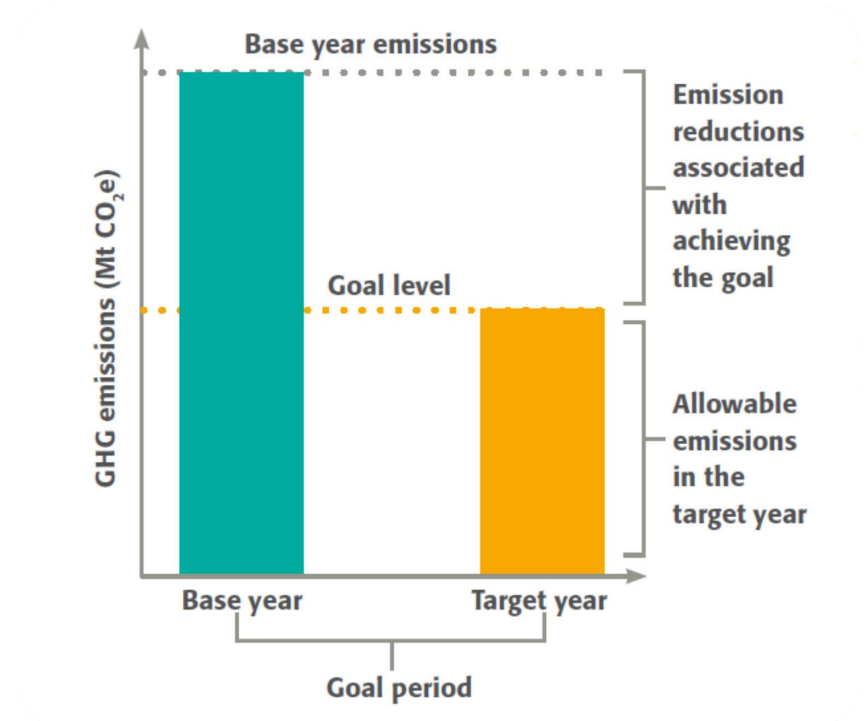
Mitigation Goal Standard

Mitigation Goal Standard

*An accounting and reporting standard
for national and subnational
greenhouse gas reduction goals*



A standard for designing mitigation goals and tracking progress toward meeting the goals



Mitigation Goal Standard



Mitigation Goal Standard

*An accounting and reporting standard
for national and subnational
greenhouse gas reduction goals*



It sets out requirements and guidance for

- ❖ Designing a mitigation goal
- ❖ Defining accounting methods for tracking progress
- ❖ Calculating allowable emissions in the target year
- ❖ Assessing and report progress toward meeting a goal
- ❖ Assessing and reporting whether a goal has been achieved

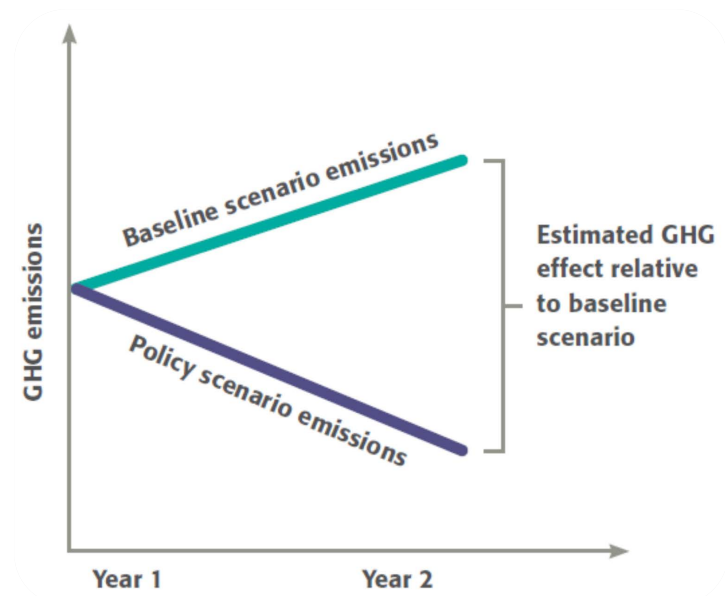
Policy and Action Standard

Policy and Action Standard

*An accounting and reporting standard
for estimating the greenhouse gas effects
of policies and actions*



A standard for estimating and reporting the change in GHG emissions and removals resulting from policies and actions



Additional resources

- Sample reporting template
- E-learning course
- Excel calculation tool
- Sector guidance documents
 - AFOLU
 - Energy supply
 - Residential and commercial buildings
 - Transportation
 - Waste

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Building Efficiency Accelerator

Types of Tracking Progress:

1. Selecting indicators & methods to track progress on BEA Actions
2. Methods for measuring impacts of city energy efficiency actions

Impact Estimation for BEA

- Impact estimation analyses for 7 cities
- Important to assess the potential effects of policies and projects in a relevant, consistent, and accurate way
- Process for cities:

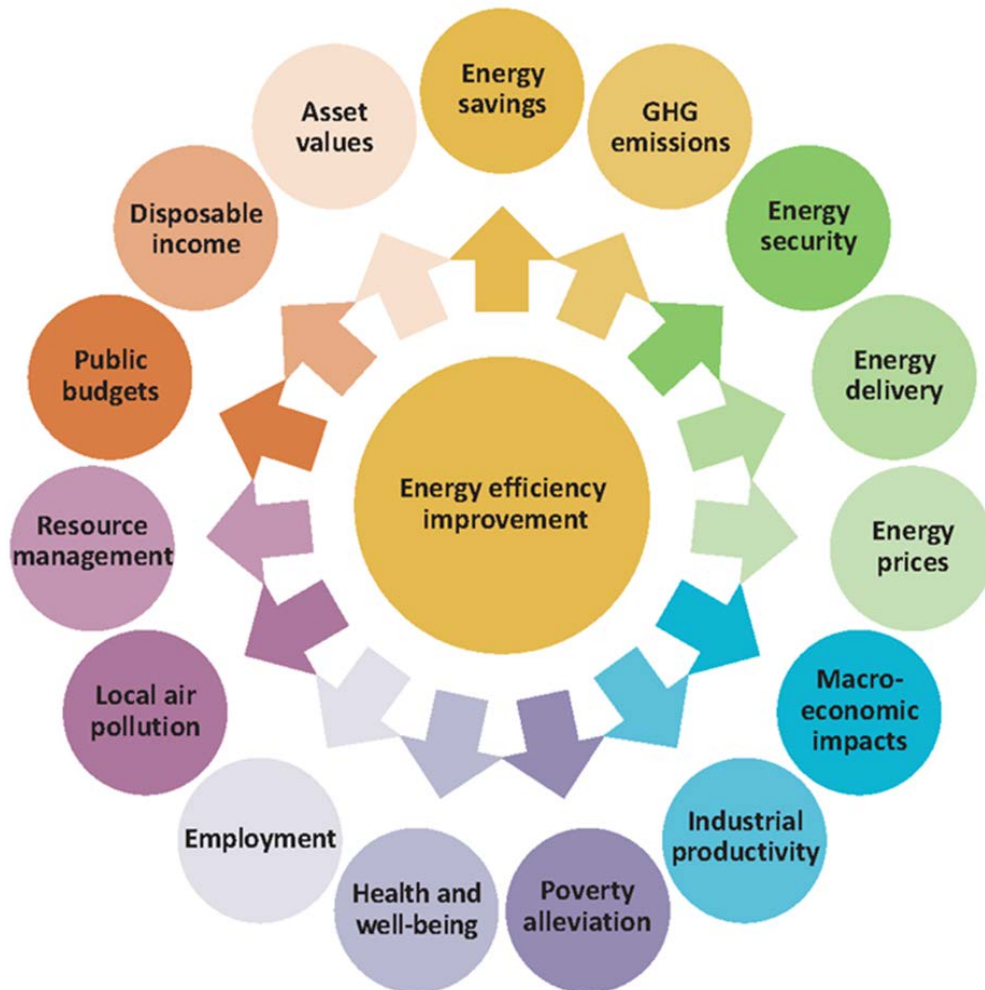


- Potentially more guidance/resources for all cities with progress

Why tracking the GHG impacts of BEA actions?

- Measure emissions/energy savings
- Identify reduction opportunities
- Prioritize intervention strategies
- Set emission reduction goals
- Monitor progress
- Benchmark with other cities

The Multiple Benefits of Energy Efficiency (IEA)



*Energy
Efficient
Prosperity*

Energy efficiency as
a means to support
economic and social
development

Broader sustainable development impacts can be assessed

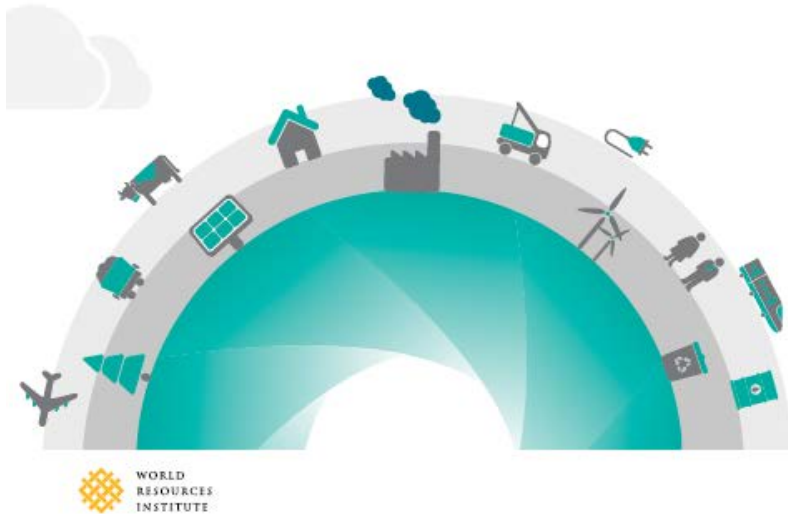
Category	Examples of non-GHG effects	
Environmental effects	<ul style="list-style-type: none"> • Air quality and air pollution (such as particular matter, ozone, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NO_x), lead, and mercury) • Water quality, water pollution, and water scarcity • Ozone depletion • Waste 	<ul style="list-style-type: none"> • Toxic chemical/pollutants • Biodiversity/wildlife loss • Loss or degradation of ecosystem services • Deforestation and forest degradation • Loss of top soil • Loss or degradation of natural resources • Energy use
Social effects	<ul style="list-style-type: none"> • Public health • Quality of life • Gender equality • Traffic congestion 	<ul style="list-style-type: none"> • Road safety • Walkability • Access to energy, thermal comfort, fuel poverty • Stakeholder participation in policy-making processes
Economic effects	<ul style="list-style-type: none"> • Employment and job creation • Productivity (such as agricultural yield) • Prices of goods and services (such as decreased energy prices) • Cost savings (such as decreased fuel costs) • Overall economic activity (such as GDP) 	<ul style="list-style-type: none"> • Household income • Poverty reduction • New business/investment opportunities • Energy security/independence • Imports and exports • Inflation • Budget surplus/deficit

Policy and Action Standard



Policy and Action Standard

*An accounting and reporting standard
for estimating the greenhouse gas effects
of policies and actions*



The standard helps to answer the following questions:

- ❖ What effect is a given policy or action likely to have on GHG emissions in the future?
- ❖ Is a given policy or action on track and delivering expected results?
- ❖ What effect has a given policy or action had on GHG emissions?

Purpose of the standard

- To help users **assess the effects** of policies and actions in an accurate, consistent, transparent, complete, and relevant way
- To help policymakers **develop effective strategies** for managing and reducing GHG emissions
- To support consistent and transparent **reporting** of emissions impacts and policy effectiveness

Objectives of assessing policy/action impact

- **Inform policy selection and design** by comparing policy options based on their expected GHG effects
- **Evaluate policy effectiveness (and cost-effectiveness)** in delivering intended results
- **Report** on GHG effects of policies and actions
- **Attract and facilitate financial support** for mitigation actions by estimating GHG reductions

Additionality

Policy & Action Standard

- Determine whether a policy or action results in GHG effects that are additional to what would have happened in the absence of the policy or action

Project Accounting

- Determine whether a GHG mitigation project would have been implemented in the absence of financing or incentives generated by an offset crediting program

When to use the standard?

Before policy implementation

- To estimate expected future effects of a policy or action
- Ex-ante assessment

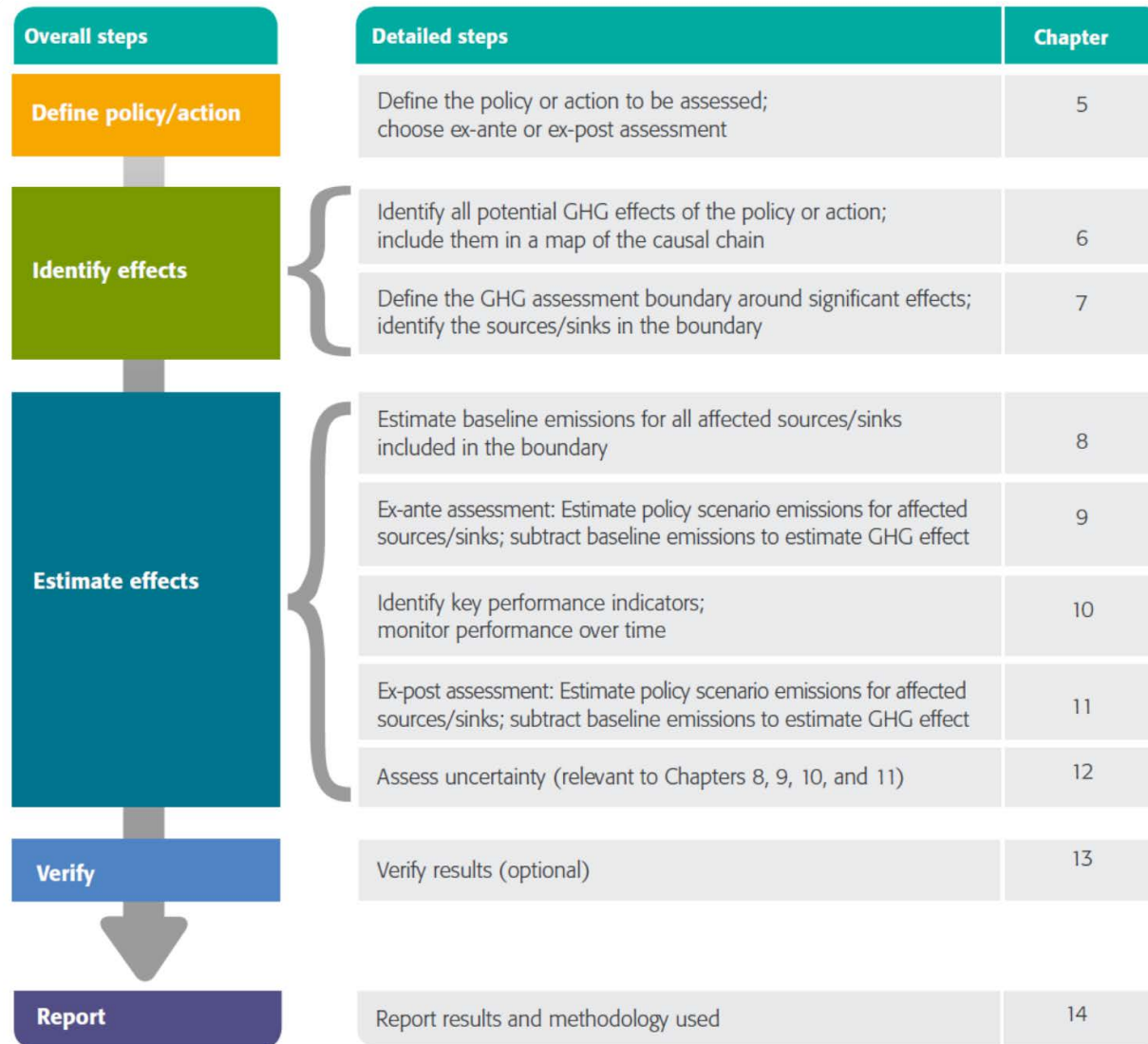
During policy implementation

- To estimate achieved effects to date, ongoing performance, and expected future effects of a policy or action

After policy implementation

- To estimate what effects have occurred as a result of a policy or action
- Ex-post assessment

Steps in policy/action assessment



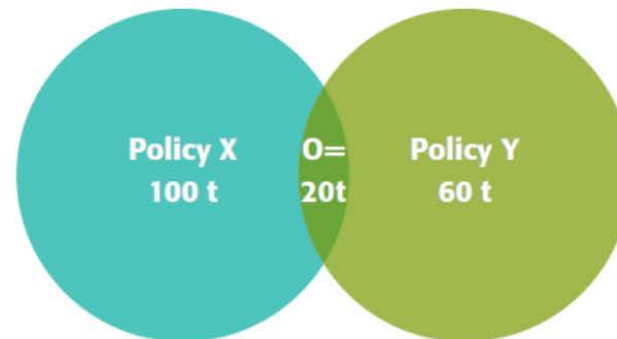
Step 1: Define policy/action to be assessed

Independent



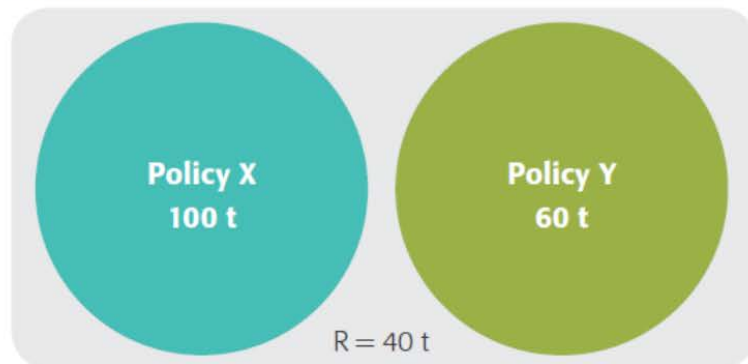
Combined effect = $X + Y$
Combined effect = $100 + 60 = 160 \text{ t CO}_2\text{e}$

Overlapping



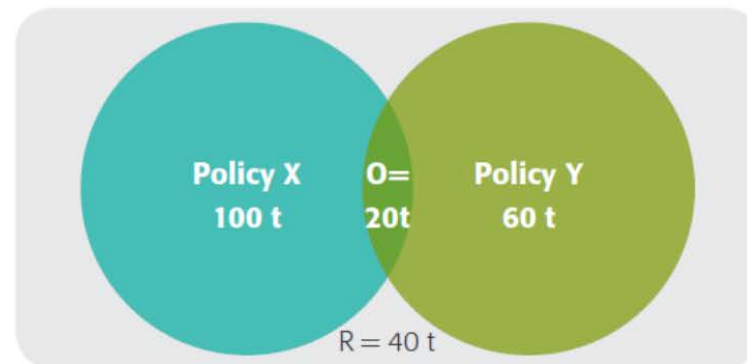
Combined effect $< X + Y$
Combined effect = $100 + 60 - 20 = 140 \text{ t CO}_2\text{e}$

Reinforcing



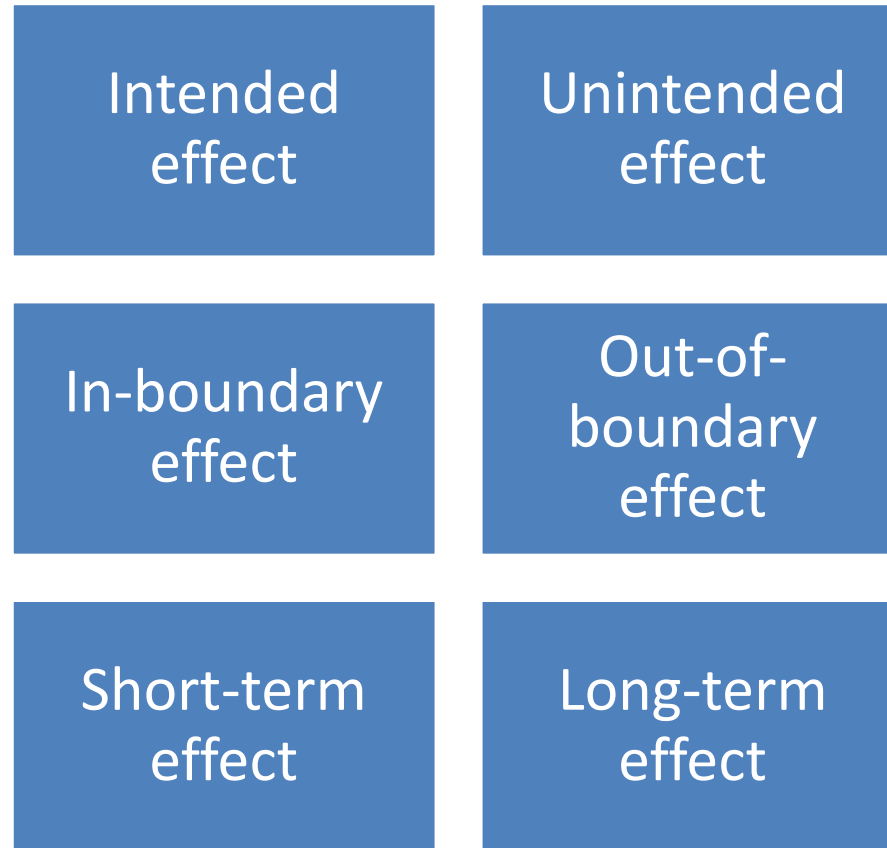
Combined effect $> X + Y$
Combined effect = $100 + 60 + 40 = 200 \text{ t CO}_2\text{e}$

Overlapping and reinforcing

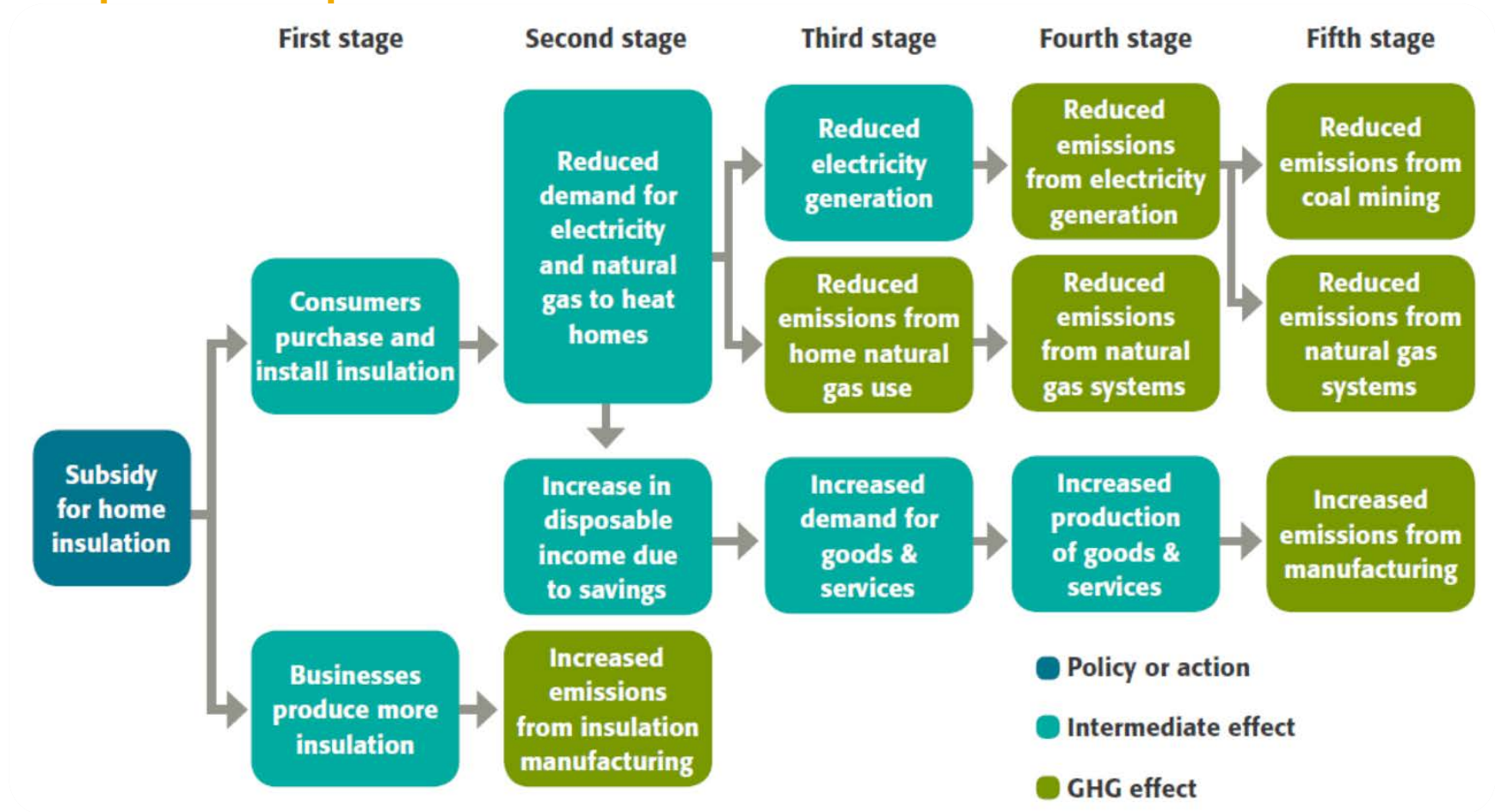


Combined effect may be $>$ or $< X + Y$
Combined effect = $100 + 60 - 20 + 40 = 180 \text{ t CO}_2\text{e}$

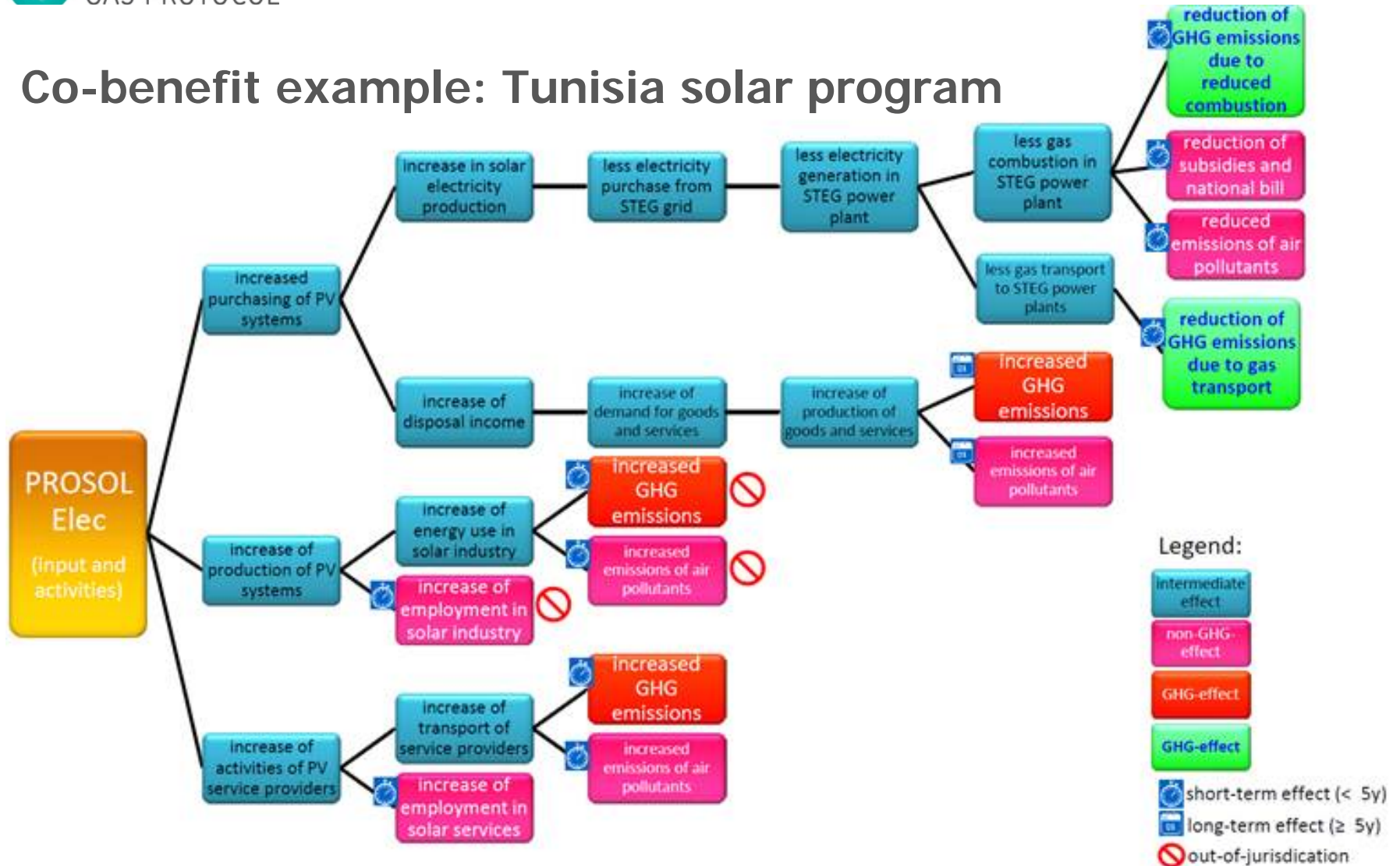
Step 2: Identify potential effects



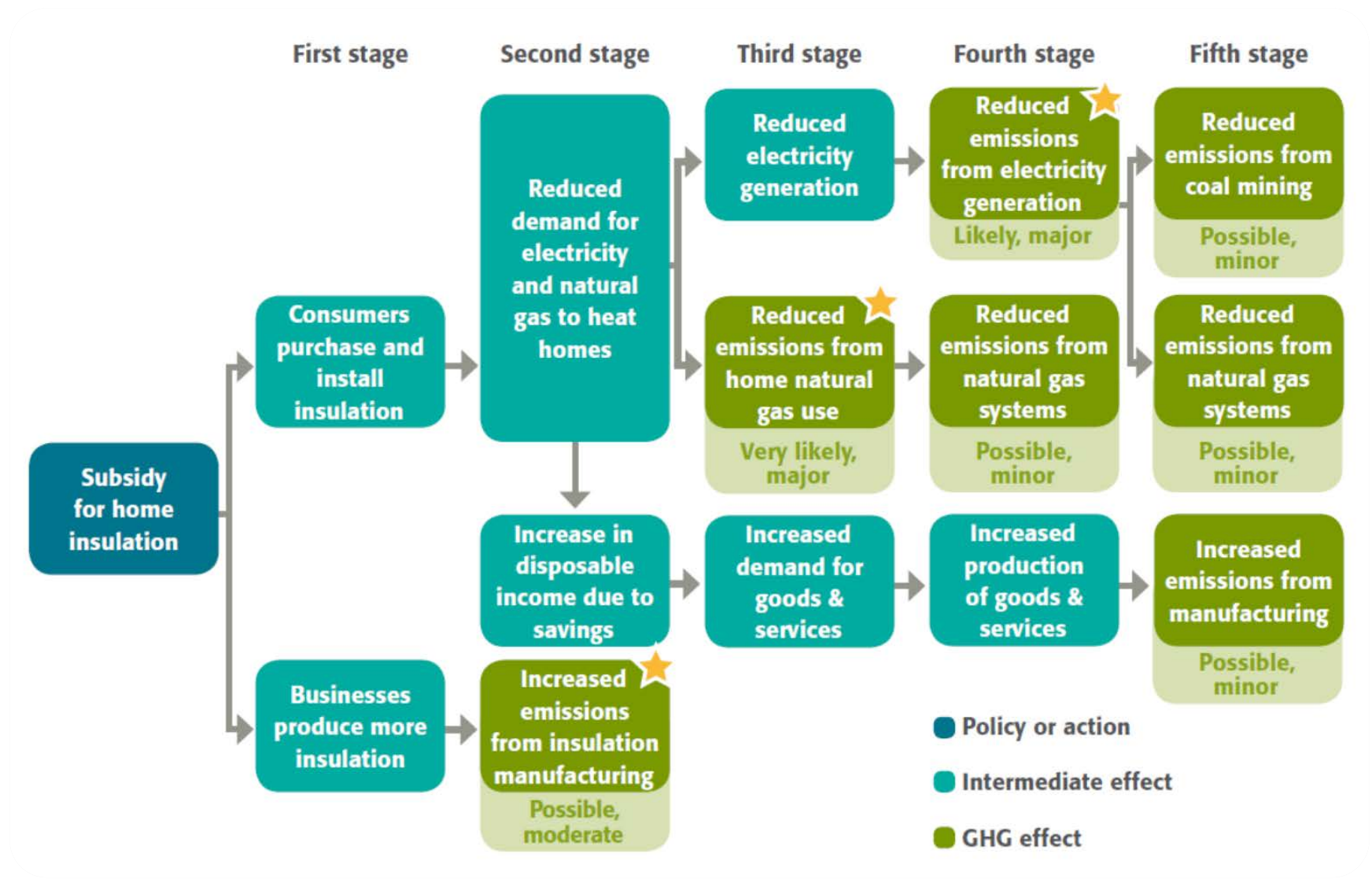
Step 3: Map the causal chain



Co-benefit example: Tunisia solar program

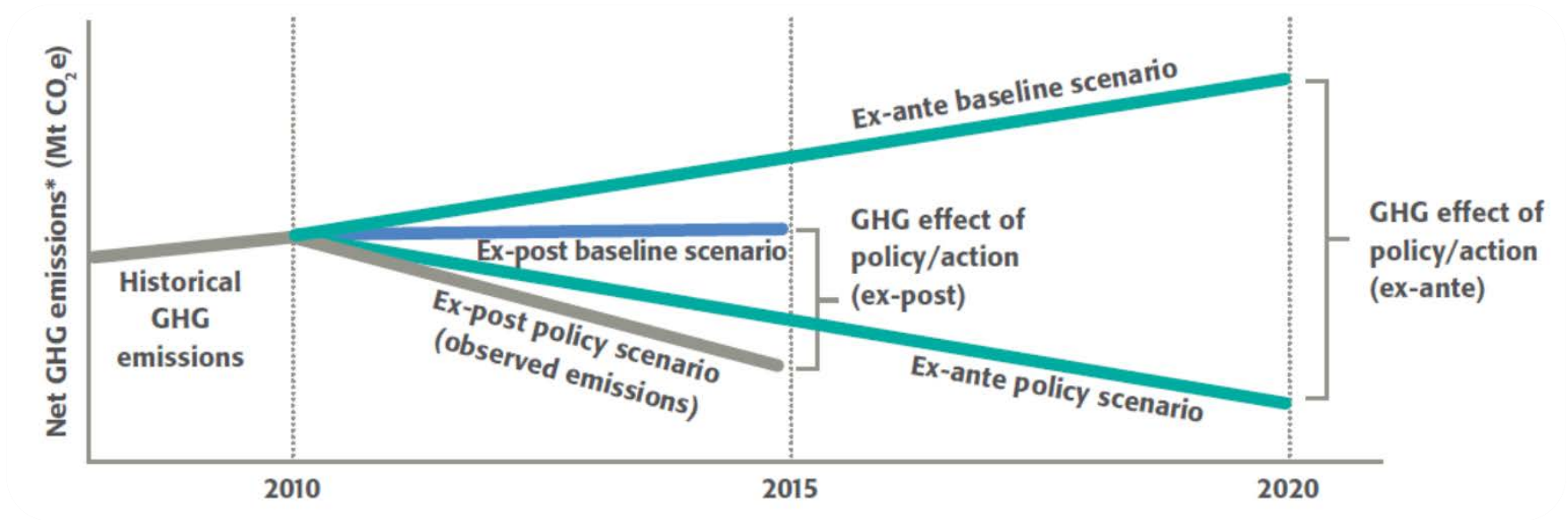


Step 4: Define assessment boundary

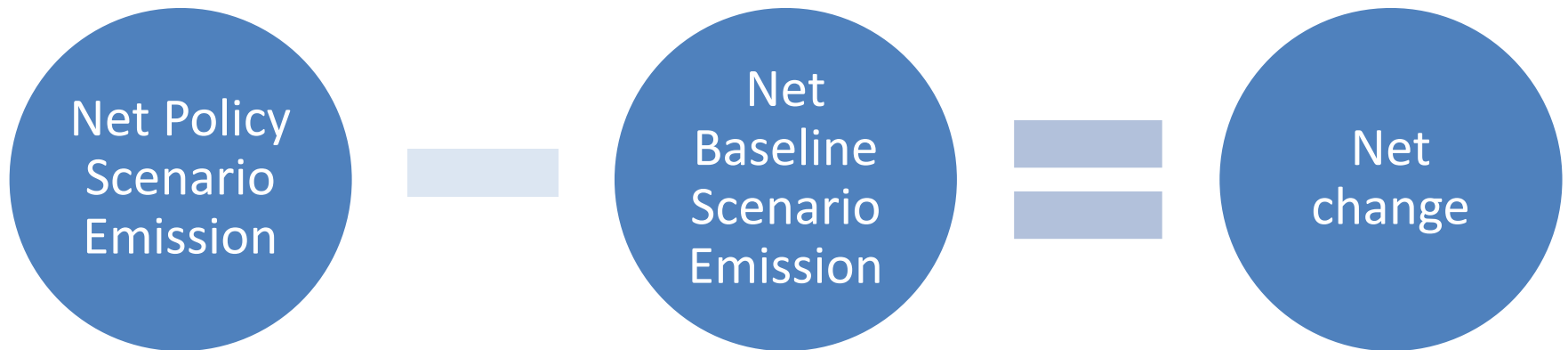


Step 5: Define baseline and policy scenarios

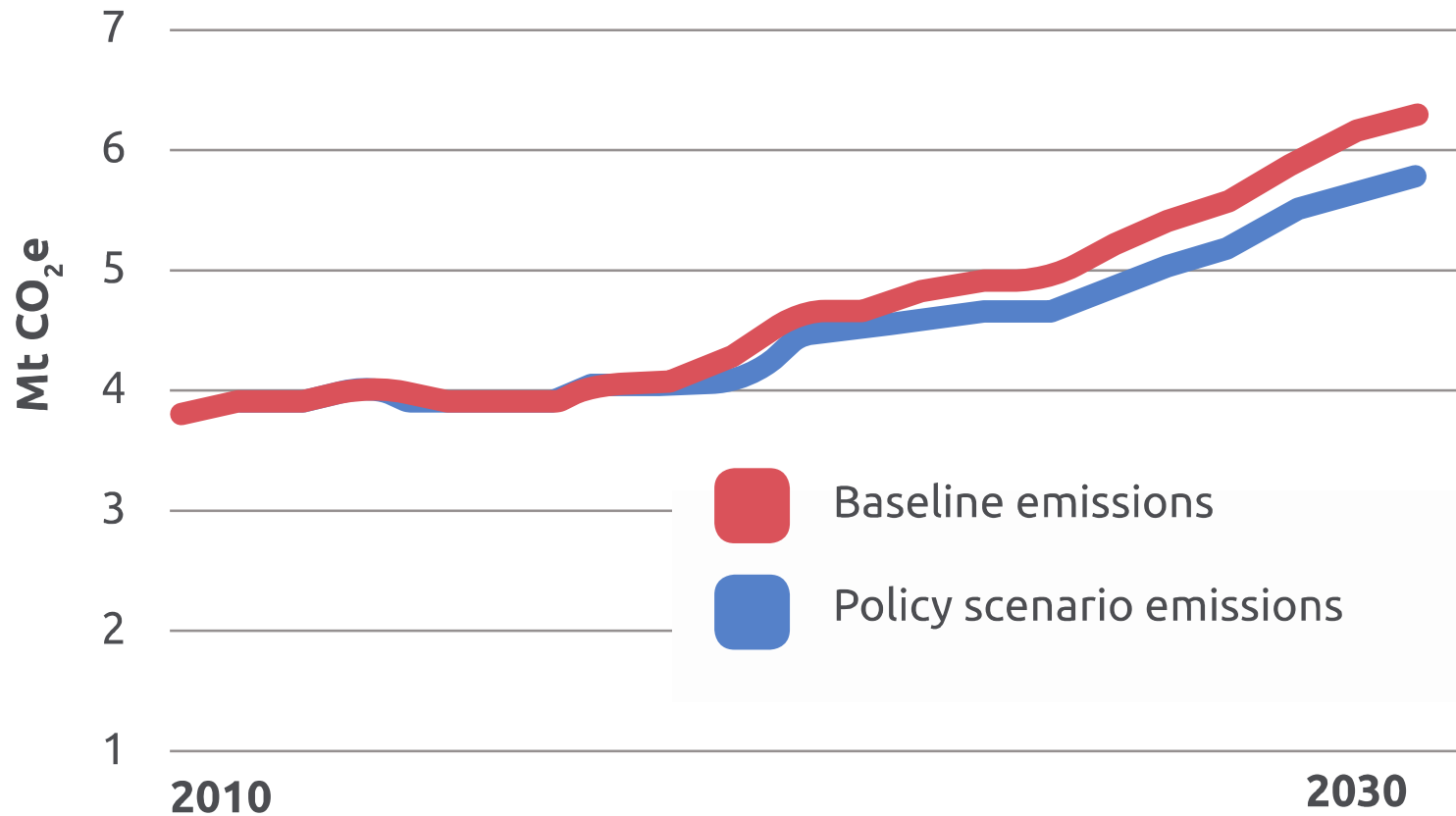
- ❖ **Ex-ante assessment:** The process of estimating expected future GHG effects of a policy or action
- ❖ **Ex-post assessment:** The process of estimating historical GHG effects of a policy or action



Step 6: Estimate GHG effect



Example: Tunisia solar energy program



Step 7: Verify and Report

- Five parts to the reporting requirements and template:
 1. GHG assessment information
 2. Description of the policy or action
 3. Estimated change in GHG emissions and removals
 4. Methodology
 5. Optional reporting information

Monitoring plan example: Tunisia energy conservation NAMA in the building sector

Indicator or parameter (and unit)	Source of data	Monitoring frequency	Measured, calculated, or estimated (and uncertainty)	Responsible entity
Job creation				
Number of employees in new and existing companies that provide energy services for buildings	ANME accreditation system and human resources department	Annual	Measured (Low uncertainty)	ANME
Creation of new companies				
Number of new companies created to provide energy services for buildings	ANME accreditation system and human resources department	Annual	Measured (Low uncertainty)	ANME
Saved energy costs for end users and saved energy subsidies for the Tunisian government				
(Energy savings by source from GHG ex-post assessment) × (Energy prices for electricity, natural gas, LPG, kerosene, wood, charcoal)	GHG ex-post assessment and ANME sources on energy prices and subsidies	Annual	Measured and calculated (Low uncertainty)	ANME

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BEA Webinar Series for Cities: Tools for Sustainability

- **Webinar #1: Standards to Achieve City Sustainability (April 26/27)**
- Webinar #2: Energy and Emissions: Mapping the Impacts (May 23)
- Webinar #3: Using Data to Measure Policy Impacts (June 27/28)
- Webinar #4: Reporting Results for Success (July 18)



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Thank You

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