

5 Creating a list of all relevant non-state and subnational actions

This chapter describes how to develop a list of non-state and subnational actions considered relevant for the assessment, start gathering and organizing the data needed for further analysis, and address gaps in information.

Checklist of key recommendations

- Compile a list of relevant non-state and subnational actions occurring within the assessment boundary
- Clearly note any specific criteria used to include or exclude actors and actions in the analysis
- Document all methods and assumptions used to fill data gaps; when statistical techniques are used to fill data gaps, document the methods used and data points that are estimated

Depending on the objective selected, users may want to complete the steps in [Chapter 7](#) on collecting information on national policies and actions or projection models *before* undertaking the steps in [Chapters 5](#) and [6](#).

5.1 Create a list of relevant non-state and subnational actions

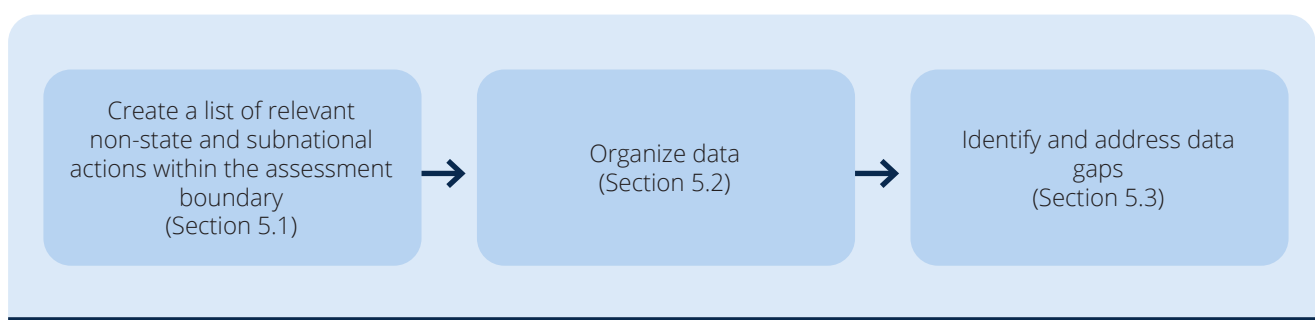
It is a *key recommendation* to compile a list of relevant non-state and subnational actions occurring within the assessment boundary. The list should reflect the assessment boundary. It should include all non-state and subnational actions that fall within the sector(s), actor group(s) and action types selected in [Chapter 4](#), and address the type of emissions and GHGs selected. Users should seek to identify actions for their assessment that will ultimately result in a reduction of GHG emissions. A number of key elements may be helpful to consider when identifying relevant actions, although it should be noted that not all actions may contain every one of these elements.

Users can consider the following to help determine whether an action should be included in the list:

- Documentation of the action includes a clear mention of climate change mitigation, GHG emissions reductions or support for a climate policy.
- The description of the action indicates that the action clearly aims to reduce GHG emissions.
- The action is focused on a specific activity or technology known to reduce GHG emissions.

FIGURE 5.1

Overview of steps in the chapter



- The action specifies a base year and/or a target year by which to achieve a reduction of GHG emissions.
- The action will take place (at least partially) within the boundary determined in [Chapter 4](#).
- The action is additional to BAU or normal practice, and therefore truly contributes to exceeding the national targets.
- The action specifies intended impact using known, comparable and quantifiable metrics, and clarifies any assumptions – this will reduce limitations in the assessment.

The focus in this step is on compiling a list of actions that fall within the assessment boundary and ideally contain sufficient information (or the information can be obtained) indicated in the elements below that will be useful for further analysis. It is a *key recommendation* to clearly note any specific criteria used to include or exclude actors and actions in the analysis.

5.2 Organize data

Different assessments may require different types of data. For example, a broad assessment with an objective to determine the impact of non-state and subnational actions on a country's overall emissions pathway will require information on base year emissions of the non-state and subnational actors, which can be estimated if no information is provided directly by non-state and subnational actors.⁴⁰ If an action does not specify a base year, users can use the year the action was established as the base year. To calculate additional emissions reductions from a city that pledges to increase its share of renewable electricity generation, users need information about the city's energy mix, baseline share of renewables, intended share of renewables as a result of the action, and technology-specific emission factors to convert megawatts of renewable electricity generation into emissions avoided.

At a minimum, users should collect information on actors, sectors targeted, the geographic coverage of actions, and targets in their list of relevant non-state and subnational actions. Additional information may also be required – for example, the year the

action was established or adopted, the base year and target year, the latest inventory year and inventory emissions, the current status or reported progress of the action, and whether the action is voluntary or mandatory. If the assessment includes all action types, users may want to also record the type of action to organize actions for later processing and to help inform a decision on whether to include the action in the final assessment.

Users may also want to record any known details about the origin of, or impetus for, the action being established – for example, whether a business action is in response to a regulatory requirement, or whether a subnational action is contributing towards a target of a higher-level jurisdiction. If such information exists, it will be helpful in determining overlaps in [Chapter 9](#). For subnational commitments, it may also be useful to collect information on the region in which a city is located to avoid double counting impacts due to geographical overlap. Users may want to separate non-state and subnational energy supply targets from non-energy supply targets (i.e. production-related targets) to support the overlap analysis in [Chapter 9](#).

[Table 5.1](#) provides a template for organizing the collected information; users can add more categories as needed. Organizing this information by sectors will help in later steps. Users can also organize actions according to whether they are legally binding or voluntary commitments and carry this through the assessment to aggregate impacts for each category of actions separately (also see [Box 6.3](#)). This can help reduce uncertainty in results, because legally binding measures are more likely to be implemented.

Users should start with available data from national and international sources. This may include gathering any information previously used in developing climate policies or scenarios, drawing from international databases, or requesting data from data management organizations. A list of the most widely used and internationally accepted data sources for non-state and subnational actions is included in [Appendix A](#). Many databases are regularly updated, and therefore users may want to periodically update their list of related non-state and subnational actions that will feed into the national assessment.

[Box 5.1](#) provides tips for collecting information on non-state and subnational actions. Identifying non-state and subnational actions is an iterative process and should be updated with each assessment. Therefore, users should also record where and how the information has been collected. Depending on

⁴⁰ For information on how to quantify base year emissions, refer to WRI (2014a).

TABLE 5.1

Template for gathering and organizing information relating to non-state and subnational actions

	Guidance	Hypothetical example 1	Hypothetical example 2
Actor	Name of the non-state or subnational actor	City of Amsterdam	Safran (French multinational company)
Sector(s) targeted	Based on IPCC categories or existing climate models or tools	Energy	Industrial process and product use
Geographic coverage	Global/national/regional/city	City	Global
Action type and whether it is legally binding	Identify the action type and whether it is legally binding	Non-GHG target, non-binding	GHG target, non-binding
Base year emissions	Note base year emissions, if available	-	18,920 tCO ₂ e
Target	Include base year, target year and any assumptions, if available	Install 75,000 MW of renewable energy capacity by 2020	Reduce operational CO ₂ e emissions by 5% from 2015 to 2018
Monitoring of progress	Note if progress towards fulfilling the action is monitored	Unclear	Yes
Data sources	Note the data source(s)	Global Climate Action portal	CDP
Action retained for further analysis	To be completed in Chapter 6 but has been included here for completeness		

Note: The table is for illustrative purposes only, and specific data-collection requirements may vary based on the objective of the analysis.

the scope of the analysis, it will be helpful to organize the collected data and use adequate tools to make the data machine readable, so that the data are easy to filter and process further.

Users should also begin to organize information in a manner that makes it easier to identify potential overlaps and avoid double counting in the subsequent steps. This is especially the case if users are conducting a broad assessment involving a range of actor groups and action types. For example, users may find it useful to develop and apply a tiering (ordering) system to identify actions that could be subsumed under broader targets, to avoid later double counting of emissions reduction impacts ([Box 5.2](#)). Further actions within a sector could also be organized by geographical location to help users

identify relationships where overlaps are likely. Actions pertaining to higher subnational jurisdictions, such as regions and states, may encompass those within lower jurisdictions (e.g. counties, cities, businesses). Alternatively, users could organize the information at a later step (see [Section 8.1](#)).

BOX 5.1**Tips for collecting information on non-state and subnational actions**

Clarify data needs. Users should decide their data requirements based on the objectives for conducting the assessment. Standards, methodologies, verification systems and data quality vary widely among existing international databases. In addition to data published on these platforms, users may want to capture further details, such as how likely it is that the non-state or subnational action will have the desired impact, or any information that can help users to make rational assumptions about overlap with other actions and national policies.

Build on existing data. Users should leverage existing databases and networks, and build on what has already been collected to avoid duplicating existing data-collection efforts.

Prepare any necessary tables, spreadsheets and other tools to organize information. Users may want to tailor tables and templates to their circumstances and their assessment objectives. Over time, users may want to consider ways of automating data collection and put in place quality control measures. Although this may require a heavy initial effort, it will provide pay-offs in the future when replicating and repeating assessments.

Take time initially to set up a clear process and infrastructure for collecting information. Data gathering can be time-consuming and complex, because non-state and subnational actors follow different methodologies and produce diverse information. Establishing a system, creating clear timelines, and allowing sufficient lead time to collect and process the data will facilitate a smoother process.

Consider any legal or privacy concerns when collecting data or information from third-party providers or directly from non-state and subnational actors. To build and maintain trust of non-state and subnational actors, and alleviate any concerns, it may be useful to prepare a statement of intent outlining how the collected data or information will be used. Alternatively, confidentiality agreements, memorandums of understanding or other formal arrangements may be considered.

Develop a working list of contact information to gather additional details as needed. Even after an initial set of information has been collected, users may later need to contact specific national and other actors or networks for further details to fill data gaps.

BOX 5.2**Example of a tiering approach**

Global Climate Action report: The assessment organizes non-state and subnational actions into two tiers:

- Tier 1 – quantifiable policies, top-down goals and targets (e.g. a city renewable energy goal in the United States)
- Tier 2 – underlying incentives and programmes that may be mechanisms to help achieve the top-down targets but are difficult to quantify on their own (e.g. incentive programmes for renewable energy, siting laws, green tariff programmes with local utilities).

The Tier 2 actions are often subsumed under the Tier 1 actions. They are not separately quantified and accounted for, to avoid double counting of actions.

5.3 Data gaps

Data availability can be a significant challenge for some users. Users may not be aware of existing non-state and subnational actions, and, even when these actions are known, the information available may be incomplete. Actions other than emissions reduction targets often have higher data requirements, but are more likely to have incomplete data. In some cases, users may find that existing sources provide insufficient information and may wish to supplement this information with new data from the target group of non-state and subnational actors. This may extend the time needed for the assessment, but the more up-to-date data may result in more accurate analysis.

Some countries may wish to create a national database for non-state and subnational actions covering all sectors ([Box 5.3](#)). Establishing a database requires significant effort, time and capacity, but could be valuable if users plan to repeat assessments over time. This can be especially relevant for policymakers aiming to conduct broad, economy-wide assessments. In addition, such a database could allow tracking of progress and provide recognition of actions, which may further motivate non-state and subnational actors to set more ambitious climate mitigation goals. It is also helpful for policymakers who want to identify opportunities for future engagement with non-state and subnational actors. Users may be able to liaise with the United Nations Environment Programme (UNEP), UNFCCC or individual data providers to obtain a starting point for their own database and avoid duplication of efforts. Users should note that the more loosely defined a national database is, the less useful it may be as a source of information to quantify mitigation actions and integrate them into national GHG planning and processes.

Incomplete data can hinder further data analysis. It is a *key recommendation* to document all methods and assumptions used to fill data gaps; and, when statistical techniques are used to fill data gaps, to document the methods used and data points that are estimated. Below are a few options to address data gaps:

- Use national sources for multilevel information exchange (e.g. the National Environmental Information Exchange Network⁴¹ in the United States or Fossil Free Sweden).

- Conduct extended stakeholder consultations or surveys. For example, users can consult industry associations for non-state actions within a given sector. These also offer additional opportunities for engagement with the private sector.
- Conduct literature reviews, both nationally and internationally.
- Use statistical interpolation techniques – for example
 - » develop models to project future emissions pathways on the basis of estimated population or GDP growth
 - » apply a “nearest neighbours” approach that estimates baseline emissions by comparing a city with nearby cities that report emissions data; this approach is used by the Global Covenant of Mayors for Climate & Energy in their aggregation of cities’ targets⁴²
 - » extrapolate commitments to actors that have signed on to a platform but have not specified their emissions targets, as was done for the Fulfilling America’s Pledge report
 - » scale down national activity data using appropriate allocations and weighting factors. WRI and the Global Covenant of Mayors for Climate & Energy are collaborating to develop a new open platform using this technique. The platform will provide disaggregated, standardized data to cities on activities and emission factors to support inventories and climate action planning.⁴³ It will provide data on cities across the United States, as well as for 15 other countries, by the end of 2019.

In addition, it may be useful to conduct a sensitivity analysis that demonstrates the range of uncertainty associated with adopting one data modelling technique over others.

- Review existing programmes by multilateral development organizations, such as the World Bank, the United Nations or multilateral development banks, which all work with

⁴² Global Covenant of Mayors for Climate & Energy (2018).

⁴³ www.wri.org/our-work/project/us-climate-initiative/tracking-global-engagement.

⁴¹ For more information, see: www.exchangenetwork.net.

BOX 5.3

National database of non-state and subnational actions

Fossil Free Sweden (FFS), established by the Swedish Government, is an example of a national database. More than a purely data gathering undertaking, it is an attempt to gather a critical mass of non-state and subnational stakeholders around a common goal, and eventually help the government to make more ambitious decisions. It has more relaxed requirements for signing up than the Global Climate Action portal and other major international databases on non-state and subnational actions. Non-state and subnational actors sign up themselves to FFS. Although the original purpose of FFS is bigger than creating a list of non-state and subnational actions, and integrating the impact of these actions into national emissions planning, a database of this kind is a big step towards filling data gaps that may exist when relying solely on international databases.

subnational and non-state actors and can provide valuable data.

- In the case of cooperative initiatives, consult the initiative's secretariat.
- Consult individual data providers that feed into databases such as the Global Climate Action portal.

If attempts to bridge data gaps fail and users continue to deal with insufficient information, they may want to redefine their objectives and/or the scope of the analysis ([Chapter 4](#)). Users should also analyse how the lack of information affects the uncertainty in calculating impacts of non-state and subnational actions.⁴⁴

⁴⁴ See Hsu et al. (2019).

6 Selecting non-state and subnational actions for inclusion in the assessment

This chapter provides criteria that help users decide which actions identified in Chapter 5 should be included in the assessment. It explains how to determine the suitability of each non-state and subnational action based on the availability of quantitative information, the magnitude of the potential impact, and the likelihood of the action achieving its target(s). The chapter discusses several indicators for characterizing and understanding the non-state and subnational actions in a country.

Checklist of key recommendations

- Evaluate non-state and subnational actions to determine their suitability for further analysis, and develop a shortlist of selected actions

6.1 Criteria for suitability

Not all actions are equally suitable for inclusion in the impact assessment. It is a *key recommendation* to evaluate non-state and subnational actions to determine their suitability for further analysis, and develop a shortlist of selected actions. Users should examine each non-state and subnational action in their initial list (obtained in [Section 5.1](#)) to determine its suitability against the following criteria, and develop a final shortlist of actions:⁴⁵

- Quantitative information is available to allow further assessment of the action.

- The action will have an impact of significant magnitude.
- The action is likely to be achieved.

These are discussed in more detail below. This step helps fill the “Action retained for further analysis” row in [Table 5.1](#) in [Section 5.2](#).

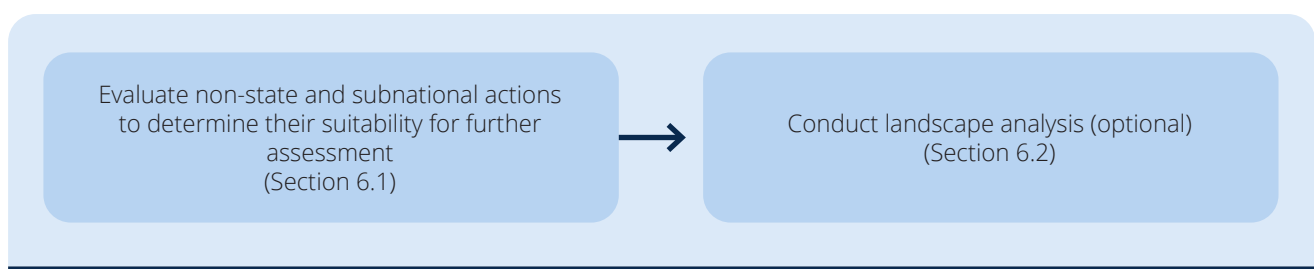
Actions that do not meet these criteria should be excluded from further assessment. Users should record their rationale and assumptions as they apply these criteria to select non-state and subnational actions for subsequent quantification and aggregation of impacts. This will also help users to revisit and modify the analysis over time if additional data or information become available.

6.1.1 Availability of quantitative information

Non-state and subnational actions will need to be quantified in subsequent steps to assess their impact. Therefore, it is important that information is available that is measurable and convertible to energy- or emissions-related metrics. Actions should include specific, clear and quantifiable forward-looking outcomes related (or convertible) to an energy and/or emissions impact. The following questions can help users determine whether

FIGURE 6.1

Overview of steps in the chapter



⁴⁵ These criteria also include those referenced by the Marrakech Partnership for Global Climate Action.

sufficient quantitative information is available to support subsequent steps:⁴⁶

- Is a time frame or target year specified?
- Does the action aim for a specific outcome(s)?
- Is the target energy or emissions related? If not, can it be converted to an energy or emissions outcome?
- Does the target apply to a specific geographic location? This is especially relevant for corporate goals.
- Is it a numerical target? If not, is it reasonably possible to convert it into a numerical target? See also [Chapter 8](#).
- Are baseline data available or able to be estimated?

[Box 6.1](#) gives some hypothetical examples to illustrate quantifiable non-state and subnational actions.

6.1.2 Magnitude of impact

Actions should achieve a significant magnitude of GHG impact. Users should note that it is not necessary to accurately calculate GHG effects in this step, and the potential impact after considering overlaps will be quantified in [Chapter 9](#). Users can estimate potential emissions reductions and

organize actions in terms of their major, moderate or minor impact ([Table 6.1](#)). Actions with minor impact can be excluded from further consideration. This will help focus the assessment on actions with major or moderate impacts and channel scarce resources to gather information for these actions only. The excluded actions should, however, be revisited in later assessments or if there is reason to believe that the potential impact is no longer minor.

Potential impact will already be known for actions with stated GHG mitigation targets, whereas other actions may require more subjective assessment. Users can also consult the *Policy and Action Standard* for further information on determining the magnitude of impact. Magnitude should be classified as major, moderate or minor based on evidence to the extent possible. Evidence may include prior results of similar actions from existing literature or experience, consultation with experts and stakeholders, or other methods. If there is no evidence, expert judgment should be used.

BOX 6.1

Availability of quantitative information for non-state and subnational actions

A subnational action that targets energy efficiency of appliances by mandating an increase in efficiency up to the level of current best practice can meet the criteria. Even if there is no direct quantitative target, users can deduce quantitative targets based on information available in prior studies applying best practices in energy efficiency of appliances.

A non-state action focusing on information dissemination to raise awareness about land-use practices that cause a rise in GHG emissions does not meet the criteria. This action should not be considered further because it is not impact- or results-oriented and has no quantitative target, unless behavioural studies in this case can be linked to mitigation impacts. This does not imply that such initiatives could not have an important impact on mitigation or are not necessary; they can potentially be significant in enhancing an enabling environment to facilitate other actions. However, their impact is very difficult to attribute and quantify, and hence they are excluded from further analysis in this guide.

⁴⁶ Refer to WRI (2014a) for more details on target-related information that may be needed, and to WRI (2014b) for similar information on policies and actions.

TABLE 6.1

Categorizing magnitude of potential impact

Magnitude	Description
Major	Change in GHG emissions or removals is likely to be significant in size (>10%).
Moderate	Change in GHG emissions or removals could be significant in size (1–10%).
Minor	Change in GHG emissions or removals is insignificant in size (<1%).

Source: Adapted from WRI (2014b).

6.1.3 Determine the likelihood of achieving non-state and subnational action targets

Users should also determine the likelihood that non-state and subnational actions will achieve their targets. The following qualitative questions can help determine which actions should be considered, based on their likelihood of achievement:

- Is the action legally binding? This can often be a strong indicator that the action will likely meet its target.
- Why was the action initiated?
- Is there clear ownership of the action?
- Is there any accountability for the non-state or subnational actor? Is there any information on past performance of the actor, ideally for similar actions (e.g. other voluntary mitigation actions that the actor pursued)?
- Are there any plans for monitoring progress towards the achievement of targets? One of the Global Climate Action portal criteria for including actions on the portal is whether actions will be monitored.
- Have some (partial) results already been achieved?
- Do non-state and subnational actors have the technical capacity to deliver on their commitments?
- Are sufficient funds allocated to initiate and implement activities necessary to achieve the action?

- Are there political cycles or potential changes in administration that could undermine or strengthen a subnational action?
- Are there indications relating to the financial health of a non-state actor that could undermine its commitment?
- Have similar actors with similar actions in similar circumstances successfully achieved their goals?

When dealing with a small set of actions, users can also quantitatively analyse the likelihood of achievement – for example, by checking progress of each target individually. This may not be feasible if a large number of actions exist within the assessment boundary.

It is important to note that there is no single, common methodology to determine likelihood, and this exercise can be quite subjective. Therefore, understanding the likelihood of achievement should be informed by available data and facts, published literature, prior experience or performance, modelling results, risk management methods, consultations with experts and stakeholders, and so on.

[Table 6.2](#) provides options for likelihood of achievement. Actions that can likely/possibly achieve their potential impact are considered for further analysis. Actions that are unlikely to achieve their targets should not be considered further. [Boxes 6.2](#) and [6.3](#) illustrate how to determine likelihood using examples and insights from other assessments.

TABLE 6.2

Assessing likelihood

Likelihood	Description
Likely	<p>Strong reason to believe that the non-state or subnational action's target will be achieved. This may be determined based on indications such as that:</p> <ul style="list-style-type: none"> • the action is already at an advanced stage • funding is available • clear ownership and responsibilities exist • the necessary capacity and resources have been mobilized • the action is results/impact oriented • an (internal) incentives system exists • a monitoring system is in place • GHG inventory data have shown that progress is under way • the action produces outputs that are consistent with its target.^a For example, a cooperative initiative aiming to reduce deforestation in supply chains is expected to engage with companies and their supply chains. But, if it only produces knowledge, it may be considered active, but its output is not consistent with the desired goal and the action is less likely to result in impact • non-state/subnational actions are embedded in a public policy or planning instrument • the action has a clear implementation period.
Possible	<p>Some reason to believe that the non-state or subnational action's target will be achieved. Cases where the likelihood is unknown or cannot be determined should be considered possible. Whether to include an action with a possible likelihood depends on the level of accuracy and conservativeness (caution) users aim for in their assessment.</p>
Unlikely	<p>Few reasons to believe that the non-state or subnational action's target will be achieved. This may be determined based on indications such as that:</p> <ul style="list-style-type: none"> • the action is not (yet) under way • ownership is unclear or responsibility is unassigned • limited or no funding is available • GHG inventory data do not show any progress.

Source: Adapted from WRI (2014b), based on IPCC (2010).

^a This is based on the function-output-fit (FOF) approach, which says that an impact is likely to occur if the action produces a fitting, attributable output such as product development, technical "on the ground" implementation or infrastructure. Underlying this approach is the assumption that an action's output should be consistent with its intended impacts (Chan et al. 2015, 2018).

BOX 6.2**Hypothetical examples to determine likelihood**

A company has consistently set and achieved five-year emissions reduction targets since 2005. Its most recent report indicates that the company is on track to achieve its 2020 target and that it has also committed to setting a science-based target. The targets are agreed upon at board level, and the company has an employee incentive scheme linked to employees' achievements. Based on these observations, the company is likely to achieve its target, and the action should be included in the assessment.

In 2012, a city set its first ever emissions reduction target – 75% reduction in GHG emissions by 2050 from a 2010 base year. There are no interim targets or milestones, despite the long period over which the target is to be achieved. The city currently has no renewables in its electricity generation portfolio and is home to significant cement operations. There has been little planning so far to ensure that the target will be met, even though the mayor had committed \$5 million in 2012 to make some progress. No coherent strategy has been developed to take deep actions in major emitting sectors. Based on the information available, it is unlikely that the city will achieve its target.

BOX 6.3**Insights from assessments to determine likelihood**

India corporate actions assessment: This pilot verified whether companies were on track to meet their voluntary targets. The likelihood of achievement of targets was assessed qualitatively using the following criteria:

- committed actions and plans to achieve the target
- historical emissions reduction trends
- assessing the progress of reduction compared with the target
- other public commitments related to renewable energy, participation in Green Building Adoption, Green Procurement Policy, and so on.

Applying these criteria to individual companies, targets at the company level were assessed as:

- likely to be achieved – on track to meet or overachieve the target
- possible to achieve – not on track, but initiatives would lead to achieving at least 70% of the target
- unlikely to be achieved – actions to achieve target are lagging, but with minimal action 25% of the target may still be achieved.

Estimated reductions by the company were weighted as per these percentages.

Fulfilling America's Pledge report: No explicit likelihood assessment was carried out, but, to be conservative, the study excludes certain types of actions, which can be seen as implicitly determining likelihood. For example, if a city had underlying commitments in specific sectors (e.g. renewable energy and energy efficiency) to achieve its goals, such goals were included because the underlying commitments made it more realistic that the goals would be achieved.

Further, two categories – “existing actions” and “pledged actions” – were developed, which allowed differentiation based on concreteness and stringency. Existing actions are those that have been formally adopted by local and regional governments, are legally binding, and are currently being implemented. Pledged actions are not legally binding and may not show any clear indication of being implemented, even though they may be clearly defined intentions (e.g. executive orders, mayoral announcements, voluntary corporate commitments).

6.2 Conduct landscape analysis

Users who are interested in characterizing and understanding the existing landscape of non-state and subnational actions should be able to do this analysis once actions have been shortlisted. Such analysis provides helpful insight into the type of actors, actions and sectors that are covered; identifies opportunities for engagement with these actors; and promotes new actions. It can also help users to understand to what degree a policy or action has been adopted by public and private non-state and subnational actors, thus reflecting the implicit mandate or consensus around different types of actions. The landscape analysis can be used to obtain an initial picture of the range of climate actions under way in a country. It can help establish a foundation for assessing the aggregated impact of non-state and subnational actions in subsequent years.

This analysis is an optional step. It can be done as a stand-alone exercise or as part of a comprehensive impact assessment exercise. Users can identify several indicators that can provide a snapshot of the scope of non-state and subnational actions within a country or sector. Some examples, based on the analysis done under several studies, including the India corporate actions assessment, the Fulfilling America's Pledge initiative (phase 1), the Global Climate Action report, and the Global Covenant of Mayors 2018 Global Aggregation report, are:

- population, GDP and emissions of states and cities with existing GHG targets compared with country totals
- types of sectors covered by businesses taking action – for example, the 53 companies considered under the India corporate actions assessment represent more than 10 sectors, including automobile, chemicals, engineering, pulp and paper, and services
- emissions from businesses taking action as a percentage of industry emissions in the country (e.g. emissions from the 53 companies in the India corporate actions assessment account for 25% of India's industrial sector emissions)
- number of states, cities and businesses with GHG reduction targets ([Figure 6.2](#))
- types and number of climate-friendly policies and actions adopted by states, cities and businesses ([Figure 6.3](#))

- legally binding versus voluntary actions across different actor groups
- sectors in which companies have made the highest number of commitments – for example, the Global Climate Action report indicated that companies in China have made the most commitments in the electrical equipment and machinery, technology hardware, and chemicals (113) sectors
- targets (and the type of targets) versus no targets – for example, companies in the India corporate actions assessment had GHG intensity targets and carbon neutrality targets, while a few companies only intended to reduce their emissions with no accompanying target
- growth in actions over time – for example, the Global Covenant of Mayors tracks growth in the number of cities committing to the Global Covenant of Mayors initiative over time.

FIGURE 6.2

Number of states, cities and businesses with GHG reduction targets

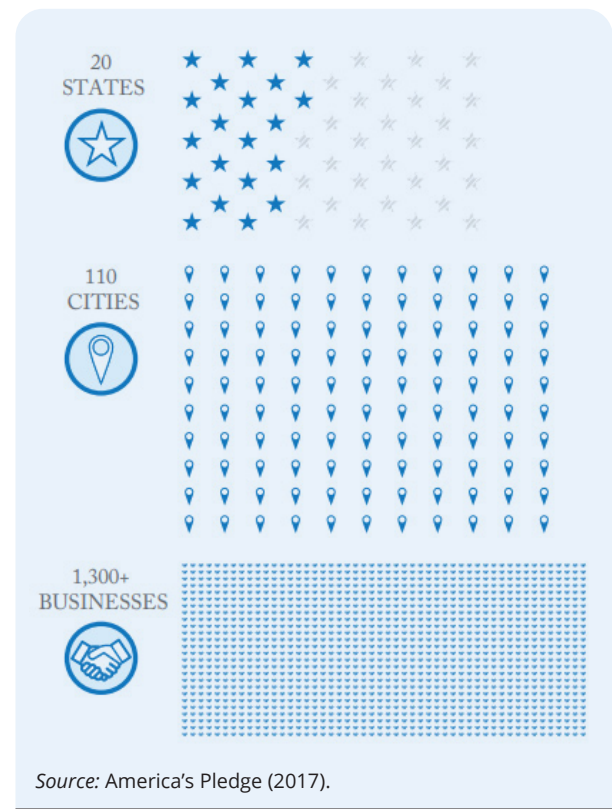
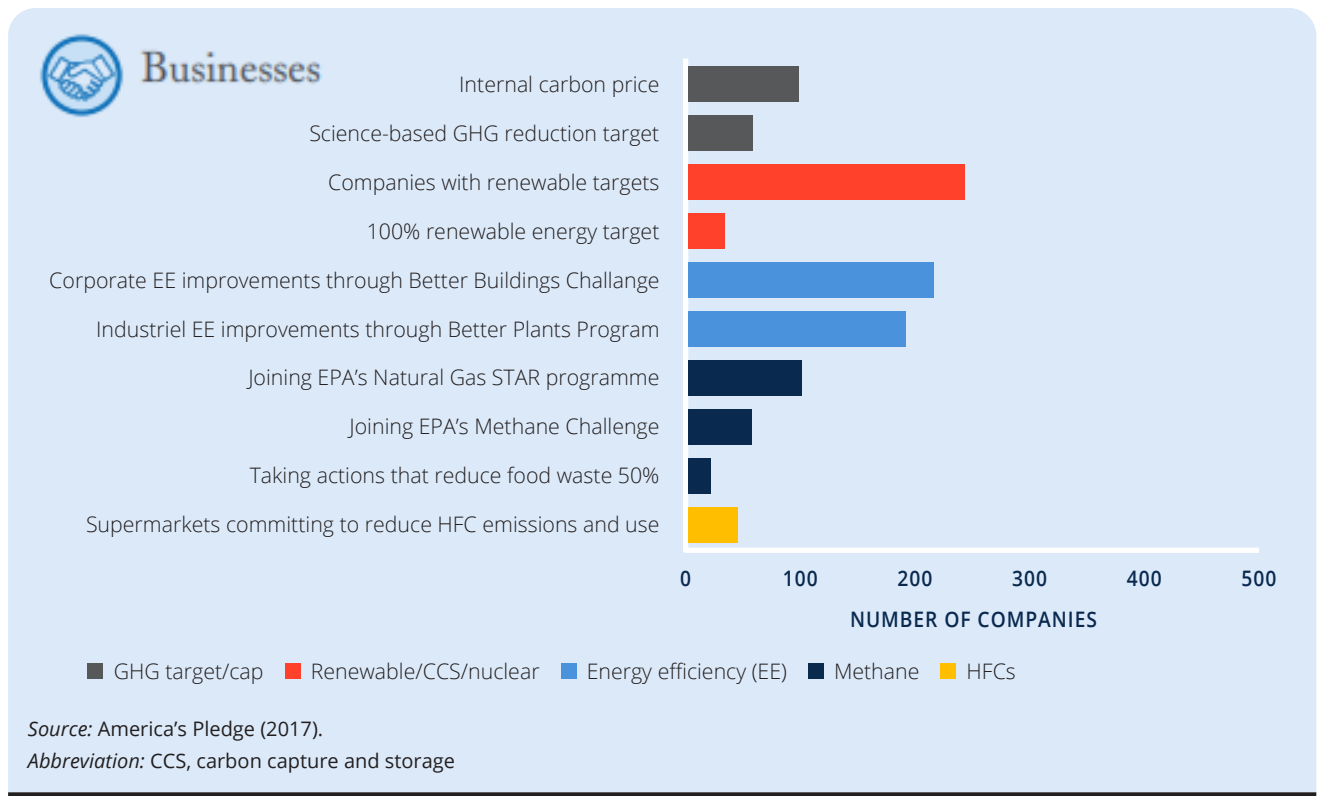


FIGURE 6.3

Type and number of businesses adopting climate-friendly actions



7 Listing relevant national climate mitigation policies and actions

This chapter explains how to develop a list of relevant national mitigation policies and actions, depending on the objectives of the assessment. This information will be used later to determine any overlaps with non-state and subnational actions, to avoid potential double counting of impacts. It will also be helpful in developing a current policies scenario to pursue the set of objectives that require integration into national policies, if applicable.

Checklist of key recommendations

- List all relevant national climate mitigation policies and actions that relate to the objectives of the assessment
- Document a scenario or model of current policies that will be used for the set of objectives that require integration into national policies
- Gather and organize necessary data for national policies

7.1 Identify national mitigation policies and actions

This chapter focuses on gathering information on national mitigation policies and actions that users will need to compare the potential impact of non-state and subnational actions with national policies. Similar to non-state and subnational actions, national policies may include policies that do not directly

target GHG emissions reductions but contribute to reductions, such as energy conservation building codes, appliance standards and labelling schemes.

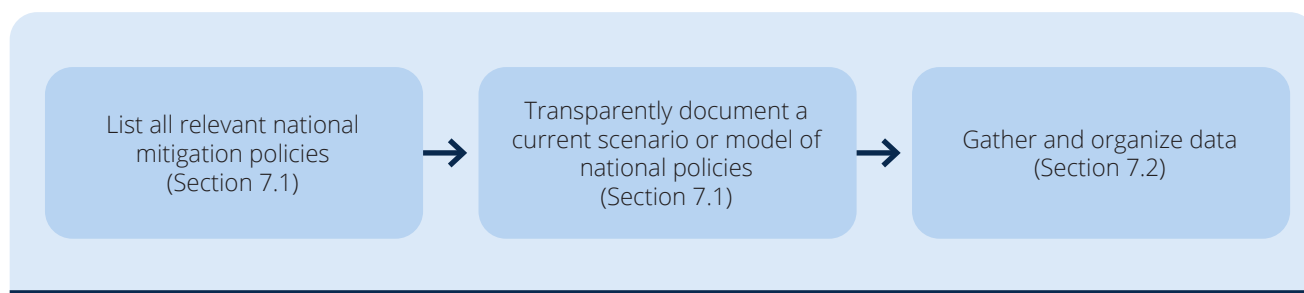
It is a *key recommendation* to list all relevant national climate mitigation policies and actions that relate to the objectives of the assessment. If the assessment is limited to a sector, the list would include all national policies that could have an impact on the sector.

Information on national policies that relate to mitigation is needed to understand overlaps between non-state and subnational actions and national policies. This helps users to identify *additional* non-state and subnational actions – that is, actions that are not subsumed under national policies or carried out as part of implementing national policies (see [Section 9.4](#) for more information on determining overlaps with national policies).

The information on national policies is also needed to assess the set of objectives that involve integrating the impact of non-state and subnational actions into national emissions projections or targets – for example, when comparing the impact of non-state and subnational actions with that of national policies, or understanding how non-state and subnational actions influence the national emissions projections. [Box 7.1](#) illustrates how the comparison between national policies and non-state and subnational actions was done in the Global Climate Action report.

FIGURE 7.1

Overview of steps in the chapter



BOX 7.1**Comparing national policies and non-state and subnational actions**

As a starting point, the Global Climate Action report uses a “current national policies” scenario, which considers only currently implemented national policies. To capture the uncertainty embedded in future projections, two current national policy scenarios are considered: a scenario produced by the NewClimate Institute and another produced by the Netherlands Environmental Assessment Agency (PBL). Both are supplemented with land use, land-use change and forestry (LULUCF) and agricultural sector projections from the International Institute for Applied Systems Analysis. The current national policies projections included major energy and climate policies implemented as of July 2017.

A “current national policies plus individual actors’ commitments” scenario was developed, building on the current national policies scenario. As the name suggests, it included quantifiable actions from individual non-state and subnational actors in addition to national policies. The scenario assumed full implementation of non-state and subnational actions – that is, reductions based on likelihood of achievement were not discounted. Further, it did not consider barriers to implementation. The scenario considered and quantified the overlaps across national policies and non-state and subnational actions.

Source: Data-Driven Yale, NewClimate Institute and PBL (2018b).

If users have access to a modelled scenario representing current national policies, they may want to ensure in this step that the scenario is up to date, and includes all relevant national policies and actions. If such a scenario does not exist, users can use the list of national policies to develop a new scenario representing national policies. Often these scenarios include information on at least a few key subnational policies and actions. For users interested in integration-related objectives (e.g. determining the contribution of non-state and subnational actions towards achieving the national climate change target), it may be helpful to conduct this step before gathering relevant information on non-state and subnational actions (described in [Chapters 5](#) and [6](#)). Users can then determine to what extent existing non-state and subnational actions may already be included in modelled scenarios of national policies, so that they can gather data on these actions. It is a *key recommendation* to document a scenario or model of current policies that will be used for the set of objectives that require integration into national policies.

This step is not necessary for users who are only interested in bottom-up aggregation of non-state and subnational actions to determine their potential impacts, without comparing them with national policies or considering their additionality to national policies. However, in such cases, users should transparently note that the assessment results do not account for potential overlaps with national policies and cannot be considered additional to national actions without further analysis.

7.2 Gather and organize data

It is a *key recommendation* to collect and organize necessary data for national policies. [Table 7.1](#) presents a suggested template for the kind of information users should gather at a minimum. Users should list all sectors and subsectors targeted by the identified national policies and actions, based on the main IPCC categories. They should also include specific targets, including reference levels and target years, and the metrics used. Users should apply the same suitability criteria used for determining whether non-state and subnational actions should be included in the analysis ([Section 6.1](#)). Finally, all data sources should be documented.

There are several options for gathering information on national mitigation policies and actions to complete [Table 7.1](#):

- Consult existing national registries and databases. Some countries may have databases of climate mitigation policies that should be consulted first.
- Review the most recent national climate reports such as biennial reports (BRs) or biennial update reports (BURs), national

TABLE 7.1

Template for information gathering on national climate mitigation policies and actions

	Hypothetical example
Relevant national policies and actions	Reduce emissions from coal power plants
Share of sector's emissions in national emissions	10%
(Sub)sector(s) targeted	Energy
Target (including base/target year and metrics used, if available)	Reduce GHG emissions from coal power plants by 30% by 2030
Is this an NDC target (i.e. included in the NDC)?^a	Yes
Is the policy NDC-specific or does it contribute to achieving the NDC?^a	Yes
Impact on national emissions projections	-
Data sources	Environment Ministry

^a This information is not needed if users have chosen assessment objectives that are not directly related to the country's NDC.

communications and NDCs.⁴⁷ Such reports often include information on climate policies that can be useful. A country's NDC is also likely to provide information on GHG emissions reduction targets at national and/or sectoral level.

- Consult a dedicated national body, if applicable. Some countries have an (inter) ministerial or similar body with oversight of emissions mitigation and/or responsibility for steering the NDC process, which can be useful in filling data gaps.
- Consult relevant line ministries, depending on the assessment objectives, to verify that the information contained in BRs or BURs is up to date, or to confirm whether any new policies are in the pipeline. Official roadmaps can also be a relevant source of potential mitigation policies. However, this can be a resource-intensive exercise.

⁴⁷ BRs and BURs are submitted by Annex I and non-Annex I countries, respectively, to the UNFCCC secretariat, and contain information about national climate mitigation policies. Submitted BRs and BURs are available at: http://unfccc.int/national_reports/biennial_reports_and_iar/submitted_biennial_reports/items/7550.php and http://unfccc.int/national_reports/non-annex_i_natcom/reporting_on_climate_change/items/8722.php; the interim NDC registry is available at: <http://www4.unfccc.int/ndcregistry/Pages/Home.aspx>.

- Conduct literature reviews and search online databases. Literature reviews can provide additional information and analysis, which may be difficult to obtain from discussions with ministries alone. In general, increasing numbers of organizations are collecting information on mitigation policies and actions, and their effect on national emissions pathways, and are making it available in the form of online, open, searchable portals. The Climate Watch platform and the Climate Action Tracker are two such examples.⁴⁸ Climate Change Laws of the World is a global database that includes climate-related laws from 164 countries.⁴⁹
- Consult research organizations, consultancies and other stakeholders – for example, researchers from independent organizations, sector experts, UNFCCC focal points⁵⁰ and Global Climate Action portal data providers. This can also be a resource-intensive

⁴⁸ See: www.climatewatchdata.org and <http://climateactiontracker.org>.

⁴⁹ Further information on the Climate Change Laws of the World database is available at: www.lse.ac.uk/GranthamInstitute/climate-change-laws-of-the-world.

⁵⁰ UNFCCC focal points for each country are available at: http://unfccc.int/parties_observers/parties/national_focal_points/items/9336.php.

undertaking, and challenging if it first involves identifying and finding the right set of experts and stakeholders.

An approach combining the options above and using robust assumptions can help address data gaps and contradictions in the assessment. For example, assessments with an objective of determining the impact of non-state and subnational actions on overall emissions projections will require information on the effect of national mitigation policies and actions on a country's emissions pathway. This effect can be quantified if the information is not readily available ([Box 7.2](#)).⁵¹

BOX 7.2

Quantifying a country's emissions pathway under mitigation policies and actions

Suppose a country has a relative target below a given reference or baseline, such as 25% below expected emissions with current policies only, in 2030. The first step is to quantify baseline emissions in 2030 – that is, emissions for a “current policies” scenario. Some countries report estimated current policies emissions in their NDCs or other national submissions to UNFCCC. Supposing that the country has reported its current policies emissions in 2030 to be 500 MtCO₂e, then the target year emissions would be $500 \text{ MtCO}_2\text{e} \times (1 - 25\%) = 375 \text{ MtCO}_2\text{e}$.

But, if a country has not reported its current policies emissions in the target year, users should look at the definition of its current policies to calculate target year emissions for this scenario. If a current policies scenario, for example, assumes emissions growing at a constant rate (same as the GDP growth rate), target year emissions can be calculated as:

Current policies GHG emissions in 2030 = GHG emissions in the base year (as defined in the NDC) × GDP growth rate between the base year and 2030

GDP growth projections for the period can be obtained from national sources, as well as international sources (e.g. the International Monetary Fund). If GDP projections include a range, these can be used to calculate the range of estimated emissions in the target year.

⁵¹ See WRI (2014a) and WRI (2014b) for further information on quantifying impacts, and determining baselines and projections for different kinds of targets, respectively.