

4 Subnational green budgeting guidelines

The stocktake of existing subnational green budgeting practices in the OECD and EU, and the two case studies of Brittany and Venice, provide valuable insights into the prerequisites and mechanisms necessary to develop and implement a green budgeting practice. These insights helped to develop a set of six key guidelines for regions and cities to use in developing and launching their own subnational green budgeting practice. They are accompanied by recommendations for supranational bodies, national governments, and subnational governments as well as by a self-assessment tool that subnational governments can use to assess their strengths and potential gaps for launching a green budgeting practice.

The stocktake of existing subnational green budgeting practices in the OECD and European Union (EU), and the two case studies of the region of Brittany and the city of Venice (Chapters 5 and 6), provide valuable insights into the pre-requisites and mechanisms necessary to implement and develop a green budgeting practice at the subnational level. They are summarised in this Chapter as a set of six key guidelines for subnational governments of all types to use in launching their own green budgeting practice or strengthening an existing one. Each guideline is accompanied by a series of recommendations differentiated for the international community, and national and subnational governments. Furthermore, the guidelines are also accompanied by a self-assessment tool in Excel format¹ that subnational governments can use to assess their strengths and potential gaps for launching a green budgeting practice (Box 4.1).

Box 4.1. Subnational green budgeting self-assessment tool

The self-assessment tool (SAT) allows any subnational government to evaluate where it stands across seven green budgeting dimensions: the context; diagnostic tools and indicators; political and administrative commitment; budgeting practices; organisation; revenue approach; and scientific approach. For each dimension there is a series of sub-criteria against which the user ranks their level of experience ranging from “advanced” to “none”. The answers given for each sub-criteria translate to a numerical score between 0 and 3 (3 corresponding to advanced), which is then combined to produce an average score for each of the seven dimensions. On the “Synthesis & General Information” tab, the user can then see a visualisation (radar graph) of their average scores for all seven dimensions, allowing them to identify their strengths and gaps with respect to green budgeting in a user-friendly format.

For more information see Annex A.

The guidelines and recommendations outlined in this Chapter were developed to help regions and cities overcome the methodological challenges, operational challenges, resource challenges, and political challenges outlined in Chapter 1, and to launch a successful green budgeting practice that endures over time. Recommendations are provided for national and subnational governments, as well as for the international community, as all of these stakeholders play an important role in fostering subnational green budgeting.

Table 4.1. Six key guidelines to start or develop a green budgeting exercise at the regional and local levels

Guidelines	Detailed guidelines
1. Conduct a diagnostic of local environmental and climate challenges as a pre-requisite to launching a green budgeting practice	<ul style="list-style-type: none"> • Prepare a transversal territorial diagnosis that is consistent across government levels and in line with national and regional planning schemes • Use the diagnostic to define specific objectives for the territory as well as associated performance indicators • Include all stakeholders in the process of defining green objectives and performance indicators
2. Ensure strong, high-level involvement and support from both the administrative and elected sides of government	<ul style="list-style-type: none"> • Support green budgeting practices through strong political involvement and support • Ensure the implementation of the necessary means thanks to high-level administrative management

Guidelines	Detailed guidelines
3. Ensure the practice relies on a robust, shared scientific basis to facilitate public trust and ensure the practice can adapt to changing scientific evidence	<ul style="list-style-type: none"> • Develop shared repositories of climate and environmental science and assessment methodologies
4. Adopt a step-wise approach to implementing green budgeting in order to learn from previous steps and reinforce the alignment of the practice with local strategic priorities.	<ul style="list-style-type: none"> • Gradually widening the scope of green budgeting helps to get the process started • Cross green budgeting with the government's other priority budgeting approaches and green initiatives
5. Integrate the green budgeting practice into existing public financial management procedures and tools to help ensure the practice endures	<ul style="list-style-type: none"> • Budget procedures and tools must be adjusted to integrate the green budgeting approach • Integrate green budgeting into internal and external audit procedures
6. Include revenues within the scope of the green budgeting practice to ensure the entire budget aligns with green objectives	<ul style="list-style-type: none"> • Ensure sufficient permanent funding and the mobilisation of all available green revenue sources for climate and environmental action • Analyse the environmental and climate impact of revenue sources

Guideline 1. Conduct a diagnostic of local environmental and climate challenges as a prerequisite to launching a green budgeting practice

Green budgeting practices must be based on cross-cutting diagnoses of a regional and local environmental and climate challenges that specify the subnational government's green objectives, the financial means required to implement these objectives, and the indicators that will be used to monitor progress.

To carry out these diagnoses and define these indicators, subnational governments must be able to rely on clear assignments of responsibilities, have sufficient financial and technical resources and have access to scientific information adapted to their characteristics. Robust governance tools are also needed to manage all the internal and external interactions linked to the green budgeting project.

Rationale

Subnational governments play a key role in policy areas directly related to environmental protection such as biodiversity protection, renewable energy, circular economy, water and sanitation, etc. Through these responsibilities and local knowledge in these areas, they can develop ambitious policies to limit environmental damage, mitigate and adapt to climate change, and preserve or restore natural resources. But other responsibilities such as transport, housing, urban planning or economic development, can have opposite consequences and thwart the environmental objectives of the territory while responding to other economic, social or development constraints.

It is thus necessary to develop environmental planning documentation that tries to assess these impacts, be they positive, negative, or neutral, and evaluates their territorial consequences in a comprehensive manner. This is the case, for example, in urban development plans or in regional land use planning and development plans. These documents frequently include a comprehensive territorial environmental diagnosis, and even identify and quantify the green objectives for a given territory. However, setting these green objectives and identifying relevant performance indicators in the planning documentation is not always required by regulation and instead can be left up to the discretion of regional and local governments.

In most cases, setting and meeting environmental and climate objectives remains a national government prerogative, often included within international commitments. The description of the “environment” responsibility of subnational governments as it appears in national regulations can be brief and limited to some specific tasks (e.g. natural heritage inventories, delimitation of protected areas, etc.) instead of giving a “general clause of competence” regarding environmental matters to subnational governments in their jurisdictions. Obligations imposed on subnational governments regarding the environment are therefore listed as specific sectoral responsibilities and frequently reference the means necessary to perform these tasks (for instance setting up a carbon low-emission zone within large cities) rather than the expected results (for instance reducing greenhouse gas [GHG] emission on the territory). When performance obligations are established, their time schedule often largely exceeds the electoral mandate period and they lack long-term vision and requirements.

Despite this, some subnational governments design environmental and climate strategies and set precise and ambitious green targets. These commitments can be laid out in subnational planning documentation. Such environmental and climate action plans are instrumental to include quantified and binding objectives. This is a complex process from a political point of view because subnational governments make commitments on strategies that they do not necessarily fully control, as the strategies also rely in part on independent third parties, and for which they do not always have the skills or necessary means to implement. Moreover, their green initiatives and efforts can be thwarted by the actions of other governments (both within their country and internationally) and, conversely, subnational governments must not achieve their goals by transferring their own constraints on other territories, by developing for instance carbon-intensive imports.

Before starting a green budgeting practice, subnational governments need to have prepared a comprehensive environment and climate strategy, that includes measurable targets and performance indicators, and have integrated it into their planning documentation. In doing so, subnational governments will have an idea of where they stand and where they want to go with respect to their environment and climate policy. This clarity is necessary before launching a green budgeting exercise, as the essence of green budgeting is to make use of the tools of budgetary policy-making to achieve environmental and climate objectives. Therefore, having said objectives, and ensuring that they are shared and understood by all internal and external stakeholders and that they are consistent with national commitments, is a prerequisite for starting green budgeting.

Prepare a transversal territorial diagnosis that is consistent across government levels and in line with national and regional planning schemes

Though sometimes isolated as a specific competence, generally the “environment” competence (referring to environmental preservation and restoration) is shared between levels of government and nested within a subnational government’s operational competences.

Environmental planning, for example, is most often a regional responsibility, in decentralised and regionalised countries. In countries where this is the case, all municipal governments must subscribe to a regionally-defined approach and integrate its principles into their respective programming documents. Consistency between the planning documents of different levels of governments must therefore be ensured to optimise efforts across the region and avoid any form of institutional competition between subnational governments in a given territory.

This planning documentation frequently includes environmental diagnostics which are a prerequisite for green budgeting implementation. The diagnosis should be territorial, in order to consider regional and local specificities, while also being co-ordinated among subnational levels (in countries with multiple tiers of subnational government) and consistent with national and international environmental and climate objectives.

Objectives of the territorial climate and environmental diagnosis

The diagnosis requires a comprehensive approach that measures the state of a given territory across all environmental and climate axes: climate adaptation, climate mitigation, biodiversity, circular economy, water use and pollution, and air quality. The diagnosis should also associate the key actors within a given territory, both public and private, to understand their impact – be it favourable, neutral or harmful – their economic model, and their interactions within the territory.

The diagnosis should be based on similar work already carried out at higher levels of government in order to be consistent across all levels of government but also with national and international objectives and requirements (e.g. Greenhouse Gas Emissions Reduction Targets). The co-ordination between levels of government should also aim to avoid creating an undue administrative burden.

The documentation resulting from the diagnosis should be concise and provide a quantified measurement of the state of the local or regional environment to give a clear vision of the territory's weaknesses and strengths and serve as a starting point for further action. Through the diagnosis, a subnational government positions itself as a central player in its territory, and therefore, widely communicating on the results of the diagnosis is essential to enhance buy-in from local stakeholders and ensure that the regional or local government formally commits itself to the targets it sets.

Comments on practices

During the last decade, national governments have developed various planning and contractual instruments to serve territorial environmental objectives. Generally, these instruments guide subnational governments on how to carry out territorial environmental and climate diagnostics and set green objectives, as well as provide methodologies on how to achieve said objectives. However, in some cases, these instruments have increased administrative burdens without always simplifying territorial action or improving the co-ordination between different levels of government.

Integrated approaches to defining subnational green objectives frequently remain to be built to avoid redundancy between existing tools, guarantee their consistency, and lighten the administrative load of subnational governments. Regulatory planning documentation imposed on subnational governments by national governments are not always operational; the requirements do not necessarily fit into time horizons that respond to the scale of the work expected, to the scale of environmental and climate emergency that the governments are facing, or to their electoral mandates.

Recommendations for national governments

- Ensure that each subnational government has sufficient regulatory means to boost or co-ordinate policies for environment and climate action within its territory. The cross-cutting role of subnational government regarding environmental policies in its jurisdiction should be acknowledged.
- Consolidate legal and regulatory contractual and planning requirements to help subnational government define transversal green projects, avoid competition between governments, and reduce the administrative burden.
- Provide diagnostic tools and technical assistance to subnational governments, which includes cross-disciplinary expertise on environmental and climate issues and territorial engineering² services for smaller subnational governments such as small municipalities or municipal associations.

Recommendations for subnational governments

- Co-ordinate a comprehensive territorial environment and climate diagnosis and pool efforts between the different levels of government to avoid redundancies or inconsistencies.
- Make use of technical climate and environmental expertise and technical assistance within national government agencies and departments, especially territorial engineering assistance.
- Involve all territorial stakeholders in the development of the diagnosis in order to share findings and ensure an accurate understanding of local issues.
- Communicate widely on the results of the diagnosis and the resulting environmental and climate strategy to generate buy-in from local stakeholders and to commit subnational governments on the results to be reached.

Use the diagnostic to define specific objectives for the territory as well as associated performance indicators

Green budgeting makes use of budgetary tools and procedures to assist subnational governments in achieving their green objectives. The territorial diagnosis, through the identification of local challenges, is a starting point for setting up the objectives and associated performance indicators that will serve as the basis of a green budgeting practice. Defining relevant performance indicators comes with challenges that should not be overlooked.

Objectives of quantified targets

The purpose of performance indicators is not to compare or benchmark subnational governments but to track the progress of a given territory towards a target and to promote the co-ordination of a government's action with that of other levels of government, with other approaches (climate, air, energy, etc.) and with the action of other government departments (planning, transport, etc.).

Quantified environmental and climate performance indicators establish an initial state and a target to reach and then help to monitor changes over time and the progress made towards reaching a target. Indicators must therefore be sufficiently precise and rely on data that is updated frequently and available over time. The green objectives linked to the performance indicators should be long-term (e.g. reduce GHG emissions to net-zero by 2050) but also include milestones to be reached within local electoral mandates. This breakdown of long-term green objectives into shorter-term milestones is an integral part of the Climate Budget methodology outlined in the stocktake in Chapter 3.

Subnational governments can find guidance on how to define relevant climate and environmental territorial indicators from international organisations (OECD, n.d.^[1]; 2021^[2]; Eurostat, 2021^[3]) and national organisations, such as national statistical institutes or national environmental agencies. For example, INSEE, the French national statistical agency produces a set of Territorial Sustainable Development Indicators. The data for each territorial indicators corresponds to the 17 United Nations Sustainable Development Goals and is made available for different geographical levels: municipalities, departments, and regions (INSEE, 2022^[4]). ISTAT, the Italian National Statistical Agency has also developed a collection of statistical indicators for monitoring the Sustainable Development Goals in Italian regions and autonomous provinces (ISTAT, 2020^[5]).

Comments on practices

Quantified environmental indicators are not systematically available or easy to interpret within the planning and programming documents of subnational governments. When these indicators are defined, public information on the government's compliance with an expected trajectory within their electoral mandate is

not always easily accessible. A systematic and complete evaluation of the means necessary to reach the targets within the specified timeframe is also frequently lacking.

Public information often focuses on concrete achievements (number of kilometres of new bicycle paths constructed or the increase in the number of electric buses on the road) favourable to the environment while the information on expected results (e.g., decrease in the territory's greenhouse gas emissions) can be scattered among several different documents. This is partly linked to the fact that the targets can be difficult to measure (due to the lack of territorialised data) and to achieve, in particular because of the many stakeholders influencing the results. It is thus easier, from a political point of view, to set targets for the subnational government as an entity rather than targets for the territory as a whole, which would imply setting objectives and committing to results that partly depend on the action of third parties. This situation can create an escalation of “who has spent the most” for the environment and climate rather than who has achieved the most.

Among existing subnational green budgeting practices, there is a tendency to define clear and regularly monitored green objectives directly within budget documentation. This is the case in Oslo, which has a 2030 emissions reduction target that is broken-down into annual targets in their annual Climate Budget (C40, 2022^[6]). Broadly speaking, however, subnational governments are still not systematically quantifying the medium and long-term financial needs associated with achieving their green targets, although there are some promising studies in progress supported by public or private environmental structures.

Recommendations for national governments and the international community

- Provide methodological support to subnational governments to define relevant local environmental and climate indicators and improve the availability, dissemination, and updating of territorialised environmental and climate data.
- Set up technical assistance and territorial engineering service for subnational governments or support initiatives that offer this type of service (think tanks, universities, international organisations).

Recommendations for subnational governments

- Rely on recognised methodologies to define, monitor, and communicate on the environmental and climate indicators chosen to track the progress made towards meeting subnational green objectives.
- Measure and quantify the overall financial commitment needed to achieve stated environmental and climate objectives within a multi-year projection, in order to ensure that these objectives can be realised and that sufficient public revenues are available.

Box 4.2. The DK2020 project for Danish municipalities

The DK2020 Danish Municipalities project was launched in 2019 with 20 Danish municipalities, to develop municipal climate action plans in line with the Paris Agreement objective of carbon-neutrality by 2050. The initiative was extended in 2021 to include nearly all Danish municipalities and the five Danish regions, thanks to a partnership with Danish Municipalities KL (the Danish Association of Municipalities). Finalised climate action plans for all members are expected by mid-2023.

Through the DK2020 project, Danish municipalities receive help from C40 Cities, CONCITO (a Danish climate think tank) and Realdania (an environment non-profit). C40 Cities provides participating subnational governments with a climate action planning framework and CONCITO provides an analysis of existing practices among Danish municipalities. Realdania provides methodological and scientific

support. The sharing of best practices and resources between municipalities is a key aspect of the project.

Source: Realdania (2021^[7]), DK2020, <https://realdania.dk/projekter/dk2020> (accessed on 2 May 2022).

Include all stakeholders in the process of defining green objectives and performance indicators

Green objectives and their associated performance indicators must cover all green domains, and be both consistent with national and international long-term goals and specific to the subnational government that is defining them. The process of defining subnational green objectives and performance indicators should also involve all of the territory's stakeholders in the process.

Objectives

Green objectives and indicators should relate both to the direct action of a subnational government (e.g. measuring the evolution of GHG emissions linked to its own activities) but also to its indirect actions (e.g. measuring the evolution of GHG emissions of the companies that receive subsidies or contracts from the government). Green objectives may thus depend on third parties that are not financially linked to the subnational government (e.g., the evolution of GHG emissions of companies established in a given territory but that have no financial link with the government) but potentially fall under its regulatory jurisdiction (in terms of town planning, land use planning, etc.) and have institutional relationships with the subnational government.

The green objectives of a government must therefore be developed and shared with the territorial stakeholders since their buy-in and support is crucial to the achievement of the objectives.

Comments on practices

The identification and inclusion of all territorial stakeholders (local authorities but also companies, associations, and individuals) in carrying out a territorial environmental and climate diagnosis and defining performance indicators helps to understand the economic model of each of the stakeholders and the local ecosystem. It also helps to reconcile potentially divergent environmental, social and economic interests.

There are several examples of comprehensive stakeholder engagement practices for developing subnational climate and environmental objectives among OECD countries. In France, the region of Brittany organised a *Breizh COP*, based on the model of the United Nations Conference of the Parties, to construct its territorial climate and environmental strategy with the participation of the region's main socioeconomic stakeholders. In Norway, the city of Oslo has constructed a municipal carbon budget which requires cross-sectoral commitments from city's private and public organisations in order to reach the objectives (City of Oslo, 2021^[8]).

Recommendations for subnational governments

- Associate third parties to the territorial diagnosis and the definition of indicators through continued collaboration and transparency on the methodology and the results.
- Define new territorial governance tools to improve stakeholder co-operation, improve conflict resolution, and capitalise on private-public partnerships.

Guideline 2. Ensure strong, high-level involvement and support from both the administrative and elected sides of government

Strong political and administrative involvement is necessary to start a green budgeting practice. The involvement of elected officials should be formal and public in order to give the project the necessary political weight. The involvement of the administration at the highest level is also essential to ensure that the necessary human and financial resources are in place to implement the green budgeting project.

Rationale

Budget construction, that is the choice and prioritisation of expenditure and revenue, is a central element in the implementation of the policy agenda of a subnational government. Despite the diversity of subnational organisation across the OECD, the budget construction process shares many similarities across jurisdictions.

The first step is the translation of a subnational government's policy agenda into orientations, programmes and actions. This policy agenda reflects the political project for which the executive officials have been elected. These programmes are then allocated to government departments or services. Based on these guidelines, and considering relevant legal and regulatory constraints, each department or service estimates their operating and investment needs for the financial period and submits their budget requests.

Budget arbitration is then carried out by elected officials, with the help of administrative personnel who provide information and perform simulations (considering the government's financial history and its actual or potential revenues) to ensure the feasibility and the compliance of the projected expenditures with budgetary and accounting standards. As a final step, the budget is voted on by elected officials and becomes binding for the administration.

For the revenue side of the budget, it is generally the Department of Finance who is in charge of putting together forecasts and providing other departments with information on projected revenues and resources. Though financial services are frequently called upon to find new revenues, elected officials pay keen attention to these projections as they directly influence the decisions they make on how to fund and finance their policy agenda (i.e. taxation vs services pricing, borrowing vs self-financing) and subsequently the ability of the administration to implement said policy agenda. Revenue raising decisions are also subject to legal and regulatory limitations as well as political constraints (especially as local elections approaches). Overall subnational governments tend to have more limited revenue raising autonomy, particularly relating to taxation.

The increasing complexity of standards that apply to subnational management, in particular to fiscal management as well as the diversity of fields and modes of public action have limited the budgetary and financial leeway of elected officials and given administrative officials a larger role in the budget construction process. Regarding revenues, the already limited autonomy of subnational governments in this regard has been accentuated in many countries by the efforts undertaken during the last decade (prior to the pandemic) to limit compulsory levies, public debt and deficits, the progressive redistribution of taxation between central governments and subnational governments, and the increase in fiscal equalisation mechanisms.

Green budgeting aims to integrate environmental and climate concerns throughout the budgetary process. As a result, the different stages of the budgetary process, for both expenditure and revenues, must then be adapted to incorporate this new green lens, from the setting of the policy agenda to the arbitration phase

and the final budget vote. Achieving this requires steadfast, high-level support from both political and administrative officials.

Support green budgeting practices through strong political involvement and support

A high-level of political involvement in a green budgeting practice illustrates the priority given to achieving ambitious and clearly defined climate and environmental targets. Although administrative officials are primarily the ones responsible for putting together a subnational government's budget, it is important to remember that the budget is above all a prerogative of elected officials. Elected officials are also accountable for the subnational budget and have to communicate on budget's choices to the citizens, both on the expenditure and revenues sides. Increasing the importance of climate and environmental considerations within the budgetary process, from the budget elaboration phase to arbitration, is therefore a project that must be driven by elected officials and fully supported by the head of the regional executive or the mayor. Such commitment was identified as a key to success among existing subnational green budgeting practices (Nordregio, 2020^[9]; OECD, 2021^[10]).

Objectives of high-level political involvement and support

By supporting the green budgeting practice, elected officials help reinforce the cross-cutting nature of the exercise by showing that green budgeting is not a project that concerns just the Department of Finance nor is it about only looking at projects with a direct environmental and climate impact, but rather it is a project that involves all departments and all government activities. Green budgeting goes beyond characterising the environmental and climate impact of expenditure and revenues (budget tagging), to include changes to the budget arbitration and follow-up processes, and as such, a green budgeting practice requires providing climate and environmental awareness and training to all elected officials (executive and deliberative assemblies) giving these issues an important place alongside social, economic or financial priorities of the government.

Supporting the project also demonstrates the willingness to accept the implementation cost of the project. These costs include human resource costs and costs associated with building the methodology, updating internal information technology (IT) systems, training staff, and ensuring consistency with the extra-budgetary policies (procurement, subsidies, regulatory production, etc.).

Comments on practices

The stock-take of existing subnational green budgeting practices and the two green budgeting case studies both identified having a high-level of political involvement and support as a key factor for the success of a green budgeting practice (Box 4.3). It was found in the Nordic countries where municipal practices of climate-sensitive budgets and carbon budgets have been developing for several years, in France where a growing number of municipalities and regions have undertaken climate budget evaluations, and in Spain with the Autonomous Community of Andalusia's holistic green budgeting approach.

Recommendations for national governments and the international community

- Promote green budgeting as part of the public sector's toolkit for achieving green objectives and ensure existing budget regulations and legislation do not hinder its adoption.
- Start or enhance green budgeting practices at national-level to develop a shared national-subnational government dynamic.
- Improve access to training and information for regional and municipal elected officials on the mechanisms and challenges of green budgeting by supporting organisations that promote and exchange knowledge on subnational government's green budgeting approaches.

Recommendations for subnational governments

- Adopt a political resolution to launch a green budgeting project that includes adequate reporting to the government's deliberative assembly on the project's progress.
- Ensure there is transparent and consistent promotion of the green budgeting practice through high-level political communication (head of the subnational government, elected official in charge of budget, elected official in charge of environment) to demonstrate the importance given to the practice and its cross-cutting nature.

Ensure the implementation of the necessary means thanks to high-level administrative management

Budget construction is frequently decentralised in subnational governments, with each department contributing to the process through the identification and assessment of its own operational and investment expenditure needs. A green budgeting practice therefore involves mobilising a broad set of internal government stakeholders, whose buy-in to the project is key to its success.

Objectives of high administrative involvement

Incorporating green budgeting into the budgetary process requires significant work, especially upfront work at the start of the exercise, from both the budget and environment departments, who must work together to specify the scope of the practice, define a methodology, and prepare an implementation strategy.

The first iteration of a green budgeting practice can be carried out in a relatively centralised manner. However, if the practice is to continue long-term, other governments departments cannot permanently remain on the side-lines as they will need to develop the internal capacity to be able to analyse the environmental and climate impact of their future budget requests. This requires all government departments to receive training on climate and environmental issues and on how to operationalise the green budgeting methodology, and subsequently for them to integrate this knowledge into their existing workflow.

Green budgeting often requires new operational data to be collected internally or from external partners and made available to the project team. Collecting this data requires the project team to analyse the various interactions of the subnational government with third parties. As a result, it can lead to changes in the way the subnational government and external partners work together, and result for example in changing contractual agreements between the government and third parties to include climate or environmental clauses.

A comprehensive green budgeting project therefore requires an evolution of the budgetary procedures and reporting systems, a possible adaptation of IT systems to capture and manage new data necessary for the process, an evaluation of the subnational government's relationships with third parties and potential changes to these contracts. Such changes cannot take place without a high-level of support and commitment from administrative officials, especially from the head of the regional and municipal administration. The executive management will have to ensure that the necessary human and financial resources are provided and, if necessary, propose a step-by-step approach, by widening progressively the scope of the environmental and climate axes covered and the operational services and entities involved in the exercise.

Comments on practices

A common characteristic of the subnational green budgeting practices identified in the stocktake is the involvement of high-level administrative officials, in particular the executive manager together with the budget and the environment managers, in the practice.

Recommendations for national governments and the international community

- Facilitate the dissemination of green budgeting at the subnational level by creating spaces for practitioners and experts to convene and share their experiences and best practices.
- Organise frequent seminars and trainings for senior members of subnational administrations to enhance their awareness, knowledge and understanding of climate and environmental issues and green budgeting practices, both national and international.

Recommendations for subnational governments

- Create a project governance structure that includes high-level administrative officials from a range of departments to support the transversal implementation of green budgeting.
- Entrust the overall supervision of the project to the senior management of the region or municipality.

Box 4.3. The green budgeting exercise in Brittany

In Brittany, the climate assessment of the budget was launched at the request of the regional President and supported by the Regional Vice-President in charge of Finance, Human Resources, General Resources, and European and International Affairs. The project was launched during a public event organised together with a public financial institution (*Banque des Territoires*) and a training institution specialised in the inclusion of scientific approach in decision processes (IHEST). Representatives of municipal governments, key Breton stakeholders, and the OECD were also involved as speakers during the event, which was an occasion to promote green budgeting, present an inventory of existing French and international practices which the region could learn from, and initiate a discussion, and initiate a discussion on the methodology and organisational structure to set up by the region for a rapid start (IHEST, 2021^[11]). Following this symposium, steering bodies were set up according to a “project-based” organisation within the regional administration to direct the project.

The first phase of Brittany’s green budgeting exercise took approximately six months and resulted in the definition of a reference framework for the climate budget and an initial comprehensive assessment of the region’s 2020 closed accounts. In the second phase, the scope and methodology (perimeter, scientific hypothesis, integration into decision-making processes) set out in the first phase were finalised, and a process for applying the methodology to analyse the 2022 draft budget was defined.

Brittany’s green budgeting practice exemplifies high-level transversal involvement of both political and administrative officials. The political side of the government is represented within the steering committee by the regional councillor in charge of the budget together with several other regional councillors and vice-presidents in charge of key regional policy domains. The Director General and the deputy Director General of the regional government also participate in the committee while operational direction is shared between the budget and environment managers.

Source: Brittany Case Study (Chapter 5); IHEST (2021^[11]), *Vers une budgétisation verte en Bretagne : piloter la transition climatique et écologique*, <https://www.ihest.fr/wp-content/uploads/2021/06/IHEST-UT2020-synthese.pdf>.

Guideline 3. Ensure the practice relies on a robust, shared scientific basis to facilitate public trust and ensure the practice can adapt to changing scientific evidence

A shared scientific culture based on sound climate and environmental assumptions and evaluation methodologies is essential to enable the development of green budgeting at the sub-national level. International organisations and national governments have a role to play in disseminating this culture, notably by continuing to develop green and transitional taxonomies adapted to local and regional authorities, and by supporting networks of experts and research on these subjects. For their part, local and regional authorities must improve the level of training of staff and elected representatives in environmental and climate matters and be very transparent about the green budgeting approach undertaken and the methodologies used.

Rationale

Green budgeting aims to make better use of public budgets to achieve the climate and environmental targets of a government. There are numerous green budgeting tools that subnational governments can use such as green budget tagging, environmental and carbon impact assessments, green expenditure reviews, carbon budgets, and environmental fiscal reform, among others (see Chapter 2). All of these tools must rely on underlying scientific assumptions and proven assessment methods, which are not always available especially at the territorial scale, are often fragmented by environmental sector and are also evolving rapidly due to scientific progress and field observation and evidence. Environmental and climate science and data also require an internal understanding of these topics in order to be used effectively and credibly.

The scientific basis underlying a green budgeting practice must be robust, to adapt to rapidly changing scientific evidence, as well as shared throughout the administration. Achieving this requires developing or updating shared information and data repositories and providing frequent training on the latest climate and environmental science developments to both elected and administrative officials.

Environmental and climate scientific data is extensive but often scattered by field of intervention and the scientific recommendations are evolving rapidly due to advances in research and on the ground evidence. To promote green budgeting within the greatest number of subnational governments, a significant amount of work is needed to develop and maintain scientific hypotheses and assessment tools, conduct regular training on the latest environmental and climate science updates with administrative and elected officials, but also works and data sharing.

Develop shared repositories of climate and environmental science and assessment methodologies

In general, the material competences assigned to subnational governments vary considerably from one country to another; however, it is possible to identify some common trends. For example, regional governments are frequently assigned a general planning competence, often prescriptive through regional development plans, and which can include the environment without this area being an exclusive competence of this level of government. Economic development or professional training are also frequently regional responsibilities. In contrast, responsibilities such as the construction and maintenance of school buildings, urban public transport development, and water, sanitation, and waste management are frequently assigned to municipal governments.

Subnational governments do not always have in-house teams with sufficient scientific knowledge to assess all of the climate and environmental impacts of their actions in each domain within their field of competence (transport, waste management, economic development, etc.). This makes the dissemination of existing green budgeting methodologies and of the underlying scientific evidence used to classify the environmental or climate impact of expenditure and revenue items an important factor in enabling the spread of green budgeting among subnational governments.

Objectives of shared methodologies

A systematic internalisation, in each subnational government, of all skills for the production and continuous updating of environmental and climate scientific literature and assessment methodologies would be neither realistic nor efficient, especially for the smallest subnational governments. It is therefore essential for governments to be able to rely on shared repositories of climate and environmental knowledge and data, and green budgeting methodologies, adapted to their fields of competences and to specific national budgeting contexts. In this regard, ongoing work to develop national and international green budgeting benchmarks is welcomed, as it can improve the dissemination of green budgeting methodologies and principles among subnational governments. It is important to note, however, that the purpose of shared methodologies and assessment methods is not to compare subnational governments at national or international level.

Comments on practices

At national levels, the development of repositories of climate and environmental knowledge, data, and impact evaluation methods, in addition to green budgeting methodologies, has been several years in the making. For example, in 2019, the French government published its proposed national-level green budgeting methodology, thereby making information on how they classified their expenditure (i.e. the scientific assumptions on the climate and environmental impact of a given activity) publicly available for other governments, including subnational governments, to make use of (CGEDD/IGF, 2019^[12]). Similarly, I4CE published a climate evaluation of the 2019 French State budget making publicly available the methodology they used, which subsequently led them to collaborate with several French municipalities to develop a similar methodology that was adapted to the municipal budgetary context (I4CE, 2019^[13]). In the same vein, the *Ecobilanci* methodology published by the Italian State can be also useful for other national and subnational governments, and contribute to building shared knowledge that supports the development of green budgeting (see case study of Venice in Chapter 6 and MEF (2022^[14])).

This kind of documentation, however, is not widespread at the subnational level, in part because the number of subnational green budgeting practices are limited compared to national-level practices. Nevertheless, some national bodies have taken up the issue with the aim to help subnational governments to adapt national methodologies to their contexts and own concerns. In France, the think tank I4CE has published detailed guides for municipal climate budgetary assessments (climate budget tagging) and is working to adapt the documentation to regional competences (I4CE, 2020^[15]). These guides provide methodological advice for measuring the climate adaptation and mitigation impact of municipal budgets; for the time being, the guides do not specify how to create a relationship between these assessments and the monitoring of environmental and climate performance indicators by municipalities. However, the importance of future work outlining how to make this connection is underlined in their guides. Similarly, various tools to measure the biodiversity impact of subnational government policies have been developed in recent years by public and private institutions (Comité Français de l'UICN, 2014^[16]). Notable among these tools is the Global Diversity Score (GDS) from CDC-Biodiversité, initially developed for companies and financial institutions but currently being extended to subnational governments (CDC Biodiversité, 2021^[17]).

The development of green and sustainable taxonomies by several institutions worldwide also contributes to providing subnational governments with the scientific evidence necessary for carrying out a green budgeting exercise. Taxonomies provide information on how to classify economic activities according to their impact on the environment and climate change; this can be a useful tool for subnational governments to use in identifying the climate and environmental impact of budget items. Commonly used taxonomies, such as the EU Taxonomy of Sustainable Activities (EC, 2021^[18]) or the Climate Bonds Initiative Taxonomy (Climate Bonds Initiative, 2020^[19]) are not yet adapted to subnational government policy domains nor do they comprehensively capture transitional activities (activities that in the long-run are harmful to climate objectives but can be considered beneficial in the short-term in comparison to currently used technology or practices). Furthermore, using taxonomies often requires collecting very granular data. This poses a problem for many subnational governments as their existing IT systems are not designed for this or, alternatively, there is a time lag associated in collecting such granular data and it is not readily available at the time of the budget vote. These challenges need to be overcome for subnational governments to make full use of taxonomies within their green budgeting practices.

National laws and regulations related to climate change and the environment are also an importance source of scientific hypothesis on climate and environment and changes in regulatory expectations generate updates to the scientific assumptions underlying subnational green budgeting practices.

In France, several subnational governments (mainly cities, inter-municipal co-operation bodies, departments and regions) have started budget climate assessments, most often based on the methodology developed by I4CE (Box 4.5). These experiences show the value of sharing experiences and using “ready-to-use” methodological guides and their updates. However, the initial feedback shows that the development phase of such a project, even with the use of previously documented methods, remains quite time-consuming.

Recommendations for the international community

- Co-ordinate the development and alignment of green and transitional taxonomies for the public sector that cover all areas of subnational government intervention, including economic development.

Recommendations for national governments

- Engage in and facilitate vertical co-operation with subnational governments to develop national green and transitional taxonomies for the public sector, in particular for the subnational level, and align them with international standards.
- Widely disseminate to subnational governments the green budgeting methodologies, scientific hypotheses, and other assessment tools used in national-level practices.
- Encourage the establishment of national and international subnational green budgeting networks and communities of practice that convene experts and subnational government elected and administrative officials.
- Develop turnkey tools to help the smallest subnational governments (mainly municipalities) to implement green budgeting approaches.
- Insert as broadly as possible the existing methodologies and taxonomies in national labels and public subsidies or procurement eco-conditionality's requirements.
- Encourage the financial sector to integrate green budgeting practices into their financing conditions for subnational governments, in particular to integrate eco-conditionalities clauses into their financing products.

Recommendations for subnational governments

- Organise frequent training on green budgeting methodologies, taxonomies, and methods for integrating climate and environmental considerations into project and expenditure assessments.
- Participate in national and international subnational green budgeting networks and communities of practice to share best practices, knowledge and tools, and enhance synergies among green budgeting practices in other jurisdictions.
- Capitalise on the cutting-edge climate and environmental research (methodologies, underlying scientific hypothesis, etc.) carried out at think tanks, academic institutions, and associations of subnational governments by soliciting their feedback and involvement in the green budgeting practice.
- Communicate transparently to the public and key stakeholders on the green budgeting methodology used and the underlying climate and environmental science it is based on.

Box 4.4. Andalusia's Green Budget Fund as a best practice for training administrative staff on green budgeting and on broader climate and environmental issues

In the framework of its climate strategy, the Autonomous Community of Andalusia (Spain) has developed a EUR 1 million Green Budget Fund set up to fund projects that integrate a green perspective into the region's budget. Proposed projects must focus on at least one of several green objectives including environmental protection, the fight against climate change, environmental sustainability, and/or mitigating the socio-economic impacts associated with climate change mitigation and adaptation. In addition, proposals are also required to address one of three budget-programming objectives which include promoting climate impact assessments; fostering the development and monitoring of budget objectives, actions, and indicators; and promoting capacity building and climate change awareness among public officials, particularly regarding the relationship between climate change and the budgetary process.

Source: Junta de Andalucía (2021^[20]), *Sustainable Finance Framework*, https://www.juntadeandalucia.es/export/drupaljda/Andalusia_Sustainability_Framework_March_2021.pdf.

Box 4.5. Use of the European taxonomy in the climate assessment methodology of I4CE budgets

I4CE developed their climate budgetary assessment methodology. It classifies current and capital expenditure according to its impact on climate change mitigation and adaptation. The classification methodology is aligned with the European Taxonomy on Sustainable Activities (EC, 2021^[18]). For municipal policy domains covered by the taxonomy (i.e. transport, waste management, etc.) the methodology's definition of what is harmful or favourable expenditure coincides with the technical criteria set out in the EU Taxonomy.

The use of the taxonomy is helpful to avoid long technical debates and instead focus on operationalising the methodology; however, in its current form the EU Taxonomy is not fully adapted to the needs of subnational governments as it covers only a few of their policy domains and does not sufficiently take into consideration transition activities.

Source: I4CE (2020^[15]), *Évaluation climat des budgets des collectivités territoriales: guide méthodologique*, <https://www.i4ce.org/download/evaluation-climat-des-budgets-des-collectivites-territoriales-guide-methodologique>; EC (2021^[18]), *EU Taxonomy for Sustainable Activities*, https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en#regulation.

Guideline 4. Adopt a step-wise approach to implementing green budgeting in order to learn from previous steps and reinforce the alignment of the practice with local strategic priorities

Green budgeting practices should be implemented gradually, in order to take into consideration the priorities of the subnational government, to capitalise on foreign or national experiences, to put in place the necessary elements for the practice, to involve all stakeholders, and to adjust the government's broader budgetary policies to its climate and environmental objectives. This realistic approach must nevertheless be accompanied by an ambitious implementation programme, adapted to local issues, the financial means of the subnational government and its technical capacity.

Rationale

A step-by-step approach to implementing green budgeting can help trigger a “virtuous” momentum and better define and co-ordinate a subnational government's strategic priorities.

Green budgeting encompasses a variety of different tools and practices at national and subnational levels. The subnational green budgeting practices identified in the stocktake in Chapter 3, even when they fall within a methodological framework that is partially or wholly standardised at the national-level, are all unique exercises adapted to very local environmental and climate objectives and the human and financial resource capacity of the subnational government.

Analysis of these practices points to the complexity of implementing a green budgeting methodology and the time required to develop one that is comprehensive, consistent and integrated into a subnational government's overall climate and environmental strategy. The stocktake also showed that, even in the absence of such a comprehensive and stabilised methodology, the contributions of the green budgeting approach are almost immediate in terms of “change management”. A gradual, step-by-step implementation of a green budgeting practice is therefore recommended to manage the complexity and to mitigate pushback that can arise when large-scale changes are implemented too fast or too abruptly.

Gradually widening the scope of green budgeting helps get the process started

Various scope issues must be addressed to launch a green budgeting approach

The first question relates to the choice and definition of the environmental axes to be covered as a priority. The European taxonomy's environmental objectives can be used to define these axes; they cover climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, protection and restoration of

biodiversity and ecosystems. It also includes social criteria, which is not always the case in sustainable taxonomies under development in other countries or geographical regions (OECD, 2020^[21]).

Climate mitigation and adaptation are very central in observed subnational green budgeting procedures, due to the broad responsibilities of subnational government in these areas and their participation in the national and international carbon-neutrality objectives (European Committee of the Regions, 2019^[22]). Biodiversity is also a major concern, especially for regions that have frequently large competencies in that field (through for instance the management of sensitive natural areas) but also for municipalities that have major responsibilities and obligations in terms for instance of soil artificialisation. Other priorities (marine and aquatic resources, pollution...) can also be introduced from start in the green budgeting approach when the local context justifies it. Green budgeting thus intends to analyse the impact of public action on each specific environmental concern; it is however not conceived as a measure of a global or averaged environmental impact that would be reductive and would therefore not inform the political decision in a satisfying manner.

A second issue is to determine how the budget cycle will be covered by the green budgeting approach. The approach aims to cover the whole budgeting cycle from strategic planning and annual or multiannual fiscal framework (*ex ante*) to the budget execution and evaluation (*ex post*). It can thus include annual provisional budgets, multi-annual plans, closed accounts but the tools and methodologies to be developed to include climate and environmental concerns can ask for adaptation from one stage of the budget procedure to another, due to differences in the accounting granularity, the needed extra-financial information for characterisation of the expenditure or the voting methods that can differ between provisional budgets and closed accounts.

Various approaches can be retained concerning the perimeter to be covered, going from a screening of all expenditure and revenues, to that of a part only of the expenditure. If some green budgeting projects have limited the analysis to annual investment expenditure assessment, others are actively working on methodologies to cover the whole budgets perimeter; in this case, the methodological difficulties can be significant, all the more so as research is less developed on the current expenditure and revenue's analysis.

A last issue concerns the association of the stakeholders in the procedure. Regions frequently have a large part of transfer expenditure in their budgets while municipal utilities cover large fields of public services in sectors such as energy, water supply and sanitation, transports... Enlarge the green budgeting scope to this first circle of stakeholders could therefore facilitate the exercise by clarifying the end use of public funds.

Objectives of a gradual implementation

It is challenging and costly to cover simultaneously all perimeters. A gradual approach helps progressively increase awareness on environmental and real scientific issues and train staff to understand the ins and outs of a green budgeting methodology. When gradual, the approach can be integrated in the existing teams' roadmaps rather than calling on new staff or external consultants. It also gives time to transpose methodologies for instance from an environmental field to another or from provisional budgets to close accounts, whose framework, tools or voting procedures can differ.

A phased implementation is also useful for spreading out the costs over time and adapt procedures (and relationship with stakeholders) and information systems when data need is better known.

However, if green budgeting is a practice that should ramp up over several years, it is also crucial to have an ambitious schedule from the start to ensure that the measures taken in an environmental field will not interfere with other objectives that would come later.

Progressive implementation should not lead to losing sight of the need for multi-year planning that provides for the necessary means to achieve the objectives defined in the territorial diagnosis and planning documents of the subnational government.

Comments on practices

The observed green budgeting experiments sometimes relate to a climate assessment of the provisional budgets (this is the case of several municipalities and regions in France), and are conceived as a decision-making support tool, or focus on the closed accounts and help to evaluate the impact of the policies effectively implemented or to justify the action of the government in the climate or environmental field. They can also relate to a more specific objective such as the greenhouse gas emissions of the territory (carbon budgets).

In several cases, the experiences are enriched while remaining focused on their initial scope, but some governments sometimes present their approach as gradual, with the objective to progressively cover all environmental issues, financial documents and stakeholders and aiming to create links between budgets and environmental objectives of the subnational governments. As of now, no such global experiences have been identified at subnational levels.

Recommendations for national governments and the international community

- Define and disseminate the various green budgeting practices and tools in order to help a gradual appropriation by subnational government, thus encouraging step-by-step initiatives through the share of knowledge and engineering resources.

Recommendations for subnational governments

- Build on existing national and subnational green budgeting practices to develop a step-by-step approach to implementing green budgeting and communicate widely on the scope and the forthcoming steps.
- Plan an ambitious but realistic scope extension schedule that is adapted to local contexts, financial means, and technical capacity of the subnational government.

Cross green budgeting with the government's other priority budgeting approaches and green initiatives

Climate and environmental concerns come alongside to other types of priorities whose consideration has increased in the last decades, such as the fight against gender and social inequalities. Moreover, climate or environmental problematics and policies frequently have large impacts on those issues. For instance, the French think tank I4CE, through a social and climate evaluation of the 2021 French State budget, showed that 93 % of the budgetary measures having an impact on climate mitigation (either favourable or harmful) also had a social impact, mainly in terms of health and poverty (I4CE, 2022^[23]).

The reflection on an articulation between green budgeting and other kinds of priority budgeting is therefore essential so that the budget process can fully inform elected officials on the consequences of their budgetary arbitrations, both in terms of expenditure and revenues.

Objectives of crossing green budgeting with other approaches

Social, gender and environmental issues are not independent. Recent studies tend to prove that the effect of damage to environment are unequally distributed and particularly affect poorest populations in general and women in particular, who are highly affected by climate change, deforestation, land degradation, desertification, growing water scarcity and inadequate sanitation (OECD, 2021^[24]).

To make an informed budget decision, a large amount of information is therefore required relating to the various objectives targeted. This data need may require changes in the information systems but also in the contractual relations of the subnational government with its partners, by introducing economic, social, gender-related conditions in the government's procurement, subsidising and public service delegation policies. Analysing all these parameters simultaneously helps, in addition to improving the decision-making process, to rationalise the expectations of the local authority with regard to its partners.

Comments on practices

Several countries have implemented cross-priority budgeting, to include simultaneously, for instance, gender and climate considerations (the Mexican and Bangladeshi national government budgets (International Budget Partnership et al., 2021^[25])) or social and environmental concerns (Ville de Clermont-Ferrand, 2021^[26]) (see Box 4.6). In some other cases, both budgets are constructed by the subnational government, but their results are not necessarily co-considered in the budget decision-making process (Junta de Andalucía, 2021^[20]).

Recommendations for national governments

- Provide a legal basis for the consideration of social, gender and environmental issues in budgetary processes through inclusion of the requirement in the legal or regulatory corpus applicable to the subnational governments.

Recommendations for subnational governments

- Define cross-priority budgeting expectations within the subnational government with the support of high-level elected officials and administrative officers, in particular to reconcile social and green objectives.
- Associate public, private, and nongovernmental stakeholders in developing the green budgeting methodology, defining the green budgeting implementation process, and gathering the necessary evidence to put in place efficient actions to reach green objectives.
- Review subnational government procurement policies as well as any environmental and social clauses within public contracts as part of the implementation of green budgeting.

Box 4.6. Clermont-Ferrand's approach of a socio-environmental rating of the multiannual investment programme

The municipality of Clermont-Ferrand (France) constructed its last multiannual investment programme (2021-30) using an evaluation tool including both environment and social impact measurement. The environmental rating tool uses a decision tree inspired by I4CE's methodological approach. The social tool estimates the project contribution to the diminution of social inequalities, inclusion and social mix, territorial balance, and user and citizen involvement. The results of these two ratings are consolidated and used during budget debates to help official to make informed decisions. They also give a visualisation of the distribution of the planned investment amounts over the mandate period, according to their political, environmental and social rating.

This approach helped mobilising elected officials on environmental and social issues in a cross-cutting manner and take better-informed and reasoned decisions.

Source: Ville de Clermont-Ferrand (2021^[26]), "Evaluation socio-environnementale d'une programmation pluriannuelle d'investissement Retour d'expérience de la Ville de Clermont-Ferrand", https://www.adcf.org/files/AdCF-Direct/2021.10-Clermont-Ferrand_Evaluation-socio-environnementale-PPI.pdf (accessed on 15 April 2022).

Guideline 5. Integrate the green budgeting practice into existing public financial management procedures and tools to help ensure the practice endures

Budgetary procedures and tools need to be adapted to incorporate the green budgeting dimension. National governments can help by adapting the granularity of public accounting requirements or adjusting the format of budgets to allow for better identification and presentation of the climate and environmental impact of expenditures and revenues.

At the subnational level, internal procedures need to be adjusted to integrate green budgeting at all stages of the budgetary process with, if necessary, the implementation of new governance mechanisms to involve all stakeholders in the process. Internal and possibly external audits can help to ensure the robustness of the procedures and to reassure stakeholders of the quality of the work.

Rationale

At the national level, past experiences of priority budgeting such as gender budgeting have shown the effectiveness of a robust legal foundation to ensure the budgeting practices continue long-term (Gonguet et al., 2021^[27]). According to the International Monetary Fund (IMF), the experiences of gender budgeting at national-level showed that the promotion of the practice is facilitated by including key issues, such as a clear mandate for the Ministry of Finance, the definition of key terms, general objectives and organisation, and the key requirements in a primary legislation. This legal recognition avoids having green budgeting be a one-off exercise and reduces the risk of backtracking arising from changes in the economic or political environment. These observations are also relevant to other types of priority budgeting such as gender budgeting and can apply at both the subnational and national levels.

Beyond this general recognition of the importance given to the green budgeting approach, it seems essential to adapt the operational procedures and tools to ensure the green budgeting long-term effective implementation and to carry out regular internal evaluation of the methods and results. It is a necessary condition to moving from incremental budgets – which remain the norm in many subnational governments – to priority budgets.

Budget procedures and tools must be adjusted to integrate the green budgeting approach

Formal political approval of the implementation of green budgeting, from a subnational government's deliberative assembly, makes it possible to validate the project and to define the main environmental and climate axes it will cover, the expectations for the project, and a general implementation strategy, which includes the project's governance structure.

Concrete implementation of the green budgeting process then requires a gradual ramp-up phase during which the methodology is defined and tested. This first phase can be carried out with reduced technical means and the team developing the project can be limited compared to all the parties usually participating in the budget process.

The next step is to integrate the approach within internal budgetary procedures, both at the stage of budget elaboration and execution. This entails training all the administrative personnel who will be involved in the budget process and that will have final operational responsibility for the implementation of the green budget. This also involves adapting internal IT systems to the methodology, to any changes in data collection and archiving that are required, and to any changes in internal and/or external reporting requirements.

External parties have an important role in environment issues and are the source of a large part of the information necessary for the evaluation of expenditure and projects; co-ordination mechanisms with all stakeholders are therefore necessary.

Objectives of adjusting procedures and tools

The in-depth adaptation of internal budgetary procedures and tools is key for ensuring the continuity of a green budgeting practice over time. Formalising and standardising budgetary processes in an occasion to question all methodological steps and to validate the answers provided through their inclusion in budgetary procedures and tools. The adjustment of these procedures further justifies the need to integrate green budgeting into the professional training of elected representatives and administrative staff.

Having suitable long-term tools ensure the preservation of the audit trail thanks to the archiving of the changes and their justifications as well as that of the results obtained. It is also a condition for limiting the costs of carrying out green budgeting exercises by automating some of the tasks.

Comments on green budgeting implementation practices

The organisational structure and tools implemented in the green budgeting practices identified in the stocktake (Chapter 3) vary greatly depending on the political dimension given to the project, its exact scope and methodology (carbon budget, climate budget, green budget, etc.), and the size of human and financial resource capacity of the subnational government. This last point is crucial; for some governments, financial constraints are such that the definition and implementation of green budgeting must be done with equal means (see Chapter 6, case study of Venice) or external funding must be found. Because there is such diversity in terms of scope, organisational structure, methodology, etc. among existing subnational green budgeting practices, it is not possible to provide a general quantification the cost of setting up such a practice.

The stocktake in Chapter 3 identified a diverse set of existing green budgeting practices. Some integrated green budgeting principles into budget circulars and arbitration methods (Municipality of Clermont-Ferrand, France), or changed the format of their budget to include a green budget statement (Municipality of Oslo, Norway). In some cases, specific staff were recruited to launch the process (Municipality of Växjö, Sweden), or external public or private consultants or agencies (CLEAR methodology, Municipality of Venice, Italy – see Chapter 6).

A main complexity also lies in linking the budget and the environmental and climate objectives, to measure the realisation of the actions and targets included for instance in the climate plans or the low carbon strategy of the government. In most experiences this part of the work remains to be defined and implemented either because the environmental and climate performance indicators are not defined precisely enough, or because the results are not regularly monitored (see Guideline 1).

Internal and external communication is essential to convince all stakeholders of the relevance of the green budgeting practice. It can include specific elements relating to green budgeting methodology (Occitanie Region, France) or a mere statement on green expenditure and revenues.

Some subnational governments or associations of governments (27^e Region, France and the Municipality of Växjö, Sweden), are also working on the development of environmental accounting (Box 4.7). This work, complex from a methodological point of view, as it is not easy to express environment in monetary items, and difficult to implement operationally, remains relatively undeveloped for the time being even if it arouses the interest of researchers and some local decision-makers. But experiences remain positive in terms of capacity building and transversal co-operation within the government (Energy Cities, 2019^[28]).

Recommendations for national governments

- Adapt the granularity of public accounting standards to facilitate the identification of expenditure and revenues favourable or unfavourable to the environment and climate.
- Adapt budget formats to make it easier to present green expenditure and revenue and thus enhance the transparency of their contribution to the climate and environmental objectives of the subnational government.
- Participate in the financing of practical training programmes for elected officials and administrative staff, adapted to the different levels of local authorities.

Recommendations for subnational governments

- Define and integrate the concept of green budgeting into budgetary procedures by specifying:
 - The green budgeting approach: definition and scope, inclusion of environmental and climate indicators in budget monitoring and evaluation processes.
 - The necessary internal organisation at the various stages of the budgetary process: responsibilities and duties, including adjustment of job descriptions if needed, and the horizontal co-ordination mechanisms between departments.
 - The methodology: repositories of scientific hypothesis and analysis methodologies, including their updating process, the requested training of administrative staffs in charge of budget preparation, implementation and control procedures in all the government's departments.
 - Guidance on the use of environmental and climate evaluation in the decision-making process.
 - How the impacts of green budgeting on the achievement of green objectives will be monitored.
- Adapt IT systems to be able to collect environmental and climate financial and extra-financial data (especially for activities subsidised by the government).
- Create new IT interfaces between policy planning and budgeting practices.
- Define governance mechanisms to be put in place for the inclusion of external stakeholders in the green budgeting process.

Box 4.7. CARE, a comprehensive accounting method in respect of ecology and ecosystems

In recent years, there has been an acceleration of initiatives in favour of reformed accounting and reporting methods, in order to take into account natural capital and the sustainability of economic models.

The CARE methodology (a comprehensive accounting method in respect of ecology and ecosystem) is one example of these works. It was first developed in the 1990s by Robert Gray, a professor at St. Andrews University (Scotland), and has been followed up on by two French searchers, Jacques Richard and Alexandre Rambaud, since the beginning of the 2010's. CARE accounting introduces the notion of triple capital, and posits that human and natural capital as resources to be preserved in addition to financial capital. Highlighting the damage suffered by the three types of capital makes it possible to take appropriate measures to preserve these resources or avoid the damage, and to predict the costs of preservation. CARE is therefore a historical cost accounting which is based on the same principles as those of traditional accounting. It reflects a kind of ecological debt that needs to be managed over time in order to ensure environmental performance in addition to financial or human performance.

The implementation of this model can be difficult. It requires considerable scientific expertise and the method for defining natural and human capital also has to be specified and standardised. Moreover, this methodology is not compatible with existing International Financial Reporting Standards (IFRS) (a set of accounting rules for the financial statements of public companies that are intended to make them consistent, transparent, and easily comparable around the world) which further complicates its adoption.

The IFRS Foundation is also considering the need to set up global sustainability standards and the creation of the International Sustainability Standard Board (ISSB) was announced during COP26. The ISSB will be responsible for setting new IFRS standards around sustainability to improve the consistency and comparability of sustainability reporting and reduce its complexity; but the approach will most likely focus on investors needs more than on those of other stakeholders.

Source: La 27ème Région (2020^[29]), "Transformer nos outils de mesure pour piloter les transitions", <https://www.la27eregion.fr/transformer-nos-outils-de-mesure-pour-piloter-les-transitions/>.

Integrate green budgeting into internal and external audit procedures

Having external and internal audit mechanisms adapted to the decentralisation context is crucial to ensure budgetary and financial supervision and control. Financial audits are necessary to assess the quality of financial reporting and the reliability and accuracy of financial information and management.

When internal audit processes exist within a subnational government, these functions are frequently assumed by departments in charge of risk management or management control (ECIIA, 2022^[30]). They can also be carried out by a dedicated commission or by auditors appointed by the deliberative assembly. In budgetary and accounting matters, audits often take the form of internal controls, limited to the checking of the proper application of accounting and financial procedures and the compliance of budgetary management with the applicable legal and regulatory provisions. Conversely, performance audits aimed at evaluating the effectiveness and efficiency of the processes are less developed due to lack of human and financial resources and of an organisation adapted to this type of control.

Countries usually also have external controls in addition to internal audits. It can be conducted by the national government (e.g. the Ministry of Finance), supreme audits offices that may or may not have a network of regional chambers (e.g. Cour des Comptes in France, Corte dei Conti in Italy, or the NIK in Poland, among others), and independent public or private commercial auditors.

With respect to green budgeting, an audit of the integration of the approach into the broader budgetary process has both internal and external benefits. Internally, it contributes to the solidity of the exercise by improving the green budgeting tools and the decision-making processes; externally, it enhances the credibility of the exercise by providing transparency into the implementation of the green budgeting

approach. This last point is particularly important in a context where accusations of green washing can easily be made for experiments whose scientific or technical quality is not proven.

Objectives

Auditing the green budgeting process gives insurance on the quality of the procedures, of the assumptions used to measure the environmental and climate impact of the budget, and on the ways that, and extent to which, the results were included in the decision-making process. It supports the continuous improvement of processes as well as their soundness.

An audit also provides quality insurance for a subnational government's external stakeholders, in particular the financial ones, who have requirements to green their activities by directing their financing towards environmentally and climate friendly projects.

The purpose of the audit is to examine the entirety of a green budgeting practice to ensure that the methodologies for evaluating revenues and expenditure are relevant and updated regularly to account for changes in the government's environmental planning as well as new climate and environmental scientific research. An audit must also ensure the compliance of the budget execution with the budget planning and check that the information gleaned from green budgeting and provided to elected officials for decision-making is reliable and easily usable.

An additional purpose of an external or internal audit is to guarantee that the green budgeting process fulfils its objective to better align a subnational government's budget, both expenditure and revenue sides, with their green objectives.

In the absence of an established internal or external auditing procedure, a high-level of transparency about the green budgeting methodology and the results achieved can also be a guarantee of the soundness of the entire practice. The development of green labels can also reinforce the credibility of the exercise (Box 4.8). However, a formalised internal or external auditing process is considered the best practice for the objective, outside view it brings.

Comments on practices

There are very few examples of internal or external audit practices related to subnational green budgeting. This can in part be explained by the overall limited development of internal auditing procedures within subnational governments in the OECD and EU, but also by the small number of green budgeting practices identified to date.

Recommendations for national governments

- Support the external and internal audit of budgeting procedures at subnational level and the inclusion of audited procedures in national green labels
- Encourage the development of a "green budgeting" evaluation expertise within external audit public bodies (e.g. regional courts of auditors), notably through awareness raising and training programmes. Encourages the emergence of organisations specialising in external environmental auditing.

Recommendations for subnational governments

- Include internal or external auditing as an integral component when implementing a green budgeting practice.
- Communicate widely, both internally and externally, on the procedure used to integrate a green budgeting methodology into the broader budgetary process.

Box 4.8. The inclusion of the climate budgetary assessment in the French label “Cit’ergie”

The Cit’ergie label (climate - air - energy label) is the French version of the European Energy Award (EEA®). It is one of the two labels of the French programme “Territory Committed to the Ecological Transition” (Territoire Engagé Transition Écologique), together with the circular economy label. It validates the policies implemented by municipalities and inter-municipal co-operation bodies to support the green transition and energy efficiency. This label helps to improve the transversal mobilisation within the administration, to objectify the results obtained and to set up new climate and environmental actions with the help of the experts of the ADEME (the French public agency dedicated to assisting governments in the implementation of environment, energy and sustainable development policies). The label is also an asset for accessing European subsidies. In 2021, ADEME incorporated I4CE’s climate budgetary assessment (a green budgeting methodology) into their 2021 Cit’ergie label criteria, thereby encouraging more municipalities to adopt green budgeting. The criteria specifies that the results of climate budgetary assessment should be presented to elected officials prior to budget discussions.

Source: ADEME (2021^[31]), *Programme Territoire Engagé Transition Écologique*, <https://territoireengagetransitionecologique.ademe.fr/referentiel/organisation-interne/>.

Guideline 6. Include revenues within the scope of the green budgeting practice to ensure the entire budget aligns with green objectives

Although there is often little room for manoeuvre on the revenue side at subnational level, green budgeting should also cover the revenue side of subnational budgets. The first step is to measure the resources needed to cover climate and environment-related current and capital expenditure, and to ensure that all available funds, both traditional and innovative, are mobilised. Green budgeting also helps to ensure that the structure of revenues is in line with the subnational governments' green strategy, by analysing the overall environmental and climate impact of elected officials' funding choices.

Rationale

Subnational government revenues in OECD and EU countries, in particular current revenues, are generally determined within a restrictive framework, with little or no leeway on taxation, caps on utility pricing, and potentially limits on borrowing or other forms of external financing.

Moreover, subnational government revenues are the result of a trade-off between political decisions on how to finance public action – taxation or pricing, self-financing or borrowing – and financial constraints – it can be hard for subnational governments to not make sure of certain resources for a political reason (i.e. a climate or environmental commitment) considering broader government needs to finance operating expenses and investment.

In the OECD and EU countries, the revenue autonomy of subnational government differs widely from one country to another, depending on the level of fiscal decentralisation. In the recent years, the revenue autonomy of many subnational governments in the OECD and EU has been further restricted. This can be attributed to several factors including an increase in budgetary constraints, restrictions on borrowing, the impact of the COVID-19 crisis, the impact of equalisation mechanisms on some subnational budgets and the addition of new expenditure responsibilities to be financed, have also reduced subnational

governments room for manoeuvre across Europe and the OECD, in particular their possibility to act on revenues (OECD, 2021^[32]; 2021^[2]). What does revenue green budgeting then mean in this context?

Firstly, including revenues within the scope of a green budgeting practice aims to ensure that public revenues are sufficient to fund and finance the action needed to achieve a subnational government's medium and long-term green objectives and that all available financial sources are effectively mobilised.

Including revenues within green budgeting is also about ensuring that a government's revenue structure is aligned with their climate and environmental objectives. For example, there are different ways to green subnational tax systems, including eliminating the anti-green bias of existing subnational taxes (a classical example is analysing the property tax system to ensure it is not encouraging urban sprawl (OECD, 2018^[33])); and using local taxes to foster green practices and developing subnational environmental taxes. (OECD, 2021^[2])

Defining what revenue sources can be considered as green is therefore an important step. Current literature on the topic defines revenues two ways: by *base* or by *finality*.

With regards to the *base* approach, a green revenue source (generally a tax or a fee) is a behavioural tool whose basis is a physical unit having an unfavourable impact on environment. These kinds of revenues help to send a price-signal to consumers and divert them from consuming or purchasing products and carrying out activities that are harmful to the environment. These tools are interesting, although their usage faces concerns about price elasticity of demand, social acceptability, or legality (centred on maintaining equality between taxpayers). Moreover, these tool's efficiency is normally correlated with a decrease in their revenue over time, a situation that can be problematic for subnational governments who cannot necessarily compensate for these revenue losses with other revenue streams.

Currently there is no universal, generally accepted definition of environmental taxes; the OECD defines an environmental tax as "a tax whose tax base is a physical unit (or proxy of it) that has a proven, specific negative impact on the environment. Four subsets of environmental taxes are distinguished: energy taxes, transport taxes, pollution taxes and resource taxes" (OECD, 2005^[34]). Broader definitions of environmental taxes, or more generally green revenues, can be chosen for green budgeting practices. Such definitions could include all kinds of taxes or assimilated products on activities or products having a negative impact on the environment or climate, or whose amount is calculated considering the environmental performance of the underlying product or service. Environmental taxation can thus include taxes that create incentives in favour of cleaner production or consumption habits (French Ministry of Finance, 2021^[35]). Revenue earned from green revenue sources does not necessarily have to go towards funding green expenditure items.

Regarding the *finality* approach to defining environmental revenues, the revenue base is not necessarily linked to the environment, but the resource is restricted to the financing of environmental projects. It can cover a large range of revenues, from taxes and fees to subsidies, loans or bonds. There is no internationally standardised definition of what counts as a green bond, however, progress to this effect has been made in the last decade and new standards and labels have emerged.

At national government level, the incorporation of revenues into green budgeting generally focuses on the implementation and the efficiency of environmental taxes, with the definition of what is an environmental tax varying according to the country. At the subnational level, green budgeting practices that include revenues in their scope should cover the entire revenue side of the budget, to ensure an effective mobilisation and structuring of all available resources for the financing of the government's environmental and climate action. Subnational governments must indeed measure which resources will cover the needs of green investment but also the needs of functioning (operation). The latter are not financed by long-term resources as for investments (subsidies, loans, self-financing) but by operating resources (taxes, fees, etc.). This part of the needs is often poorly known and poorly appreciated, yet it is essential to have an overall view of the needs to cover green expenditure, including grants and subsidies (e.g. climate funds,

environmental earmarked funds, etc.), taxes, user charges, fees, land value capture instruments and other property income e.g. royalties (OECD, 2019^[36]; 2022^[37]; 2021^[38]).

Ensure sufficient permanent funding and the mobilisation of all available green revenue sources for climate and environmental action

Even if some projects can be identified as purely environmentally or climate-related, environment and climate are above all cross-cutting competences and the overall funding and financing needs of subnational governments for these areas are frequently only partially identified, being intertwined with the standard operational services funding requirements. This can result in a poor estimation of the permanent financial resources available to cover a subnational government's current and investment expenditure needs related to the climate and environment.

The cross-cutting nature of climate and environmental issues thus implies that expenditure on environmental and climate action should not be financed exclusively through green revenues but also with the general budget of the government. When analysing revenues within the scope of a green budgeting practice, subnational governments must therefore ensure that both general and specific revenues are available. Using earmarked sources of revenues (climate/environmental funds and subsidies, green loans or bonds, etc.) in addition to general revenues, is a necessity and can be an opportunity to diversify the sources of financing, or even to access dedicated funding for small or the most fragile governments (that would not have access to such funds if there were not earmarked for environmental or climate action).

Revenue analysis gives a measure of the share of green revenues (environmental/climate subsidies, green loans and bonds, green taxes or fees) favourable to the environment and climate, that come in addition to general budget revenue sources. These green revenues can include current products, such as taxes or fees whose proceeds are intended to finance green expenditure, or investment products, such as grants, endowments, green loans or bonds, directed toward green projects or subject to eco-conditionality clauses (OECD, 2022^[39]; 2022^[37]).

Revenue analysis is also the occasion to consider the use of innovative financing mechanisms. Such mechanisms can initiate a step-by-step movement towards more virtuous behaviour (using for instance "intracting", an internal performance contracting developed in Germany)³ or facilitate access to new types of financing (such as carbon finance, private-public partnerships, equity financing, impact bonds, loans, and more – see OECD (2021^[40])). However, to date, in many European countries the extremely low borrowing cost for subnational governments discourages some of them from using innovative but slightly more complex financing mechanisms in favour of more traditional financing options. Moreover, in some cases, subnational governments have even eschewed earmarked funds dedicated to the environment or climate because they include too many covenants can rapidly become more expensive and complex than the traditional financing to which subnational governments are entitled.

In recent years, and in particular following the release of post-COVID-19 economic recovery plans which have a strong climate and environmental focus, the number of calls for proposals have increased considerably, often coming from a multitude of national or international funders. For subnational governments, these calls for proposals are an opportunity to finance pre-existing projects or to develop new ones. While this increase in the availability of funding is promising, it has aroused a certain amount of criticism particularly concerning the delays and complexity of the instruction, which often make them inaccessible to small governments; the focus on investment, despite the fact that operating expenditure can play an important role in the green transition; the multiplicity of ways to access the funding which makes it difficult to keep track of what is actually available; and the lack of funds dedicated to long-term projects.

Objectives of revenue analysis

Though remaining insufficient to cover the green investment needs of subnational governments, available funds for the financing of climate and environmental projects have drastically grown during the last decade, be it through public funding, such as national or international funds and subsidies, or financing such as green bonds or loans. Post-COVID-19 national and EU recovery plans have accentuated this trend due to their strong focus on a green recovery.

The objective of a revenue analysis is twofold: firstly, it ensures that a subnational government's budget revenues are sufficient to permanently meet their climate and environmental funding and financing needs, and second, it allows them to verify that all available environment and climate-dedicated funding sources have been mobilised. Beyond the additional revenue that they provide, green funds are also an opportunity to diversify funding sources that could be useful in the future.

Comments on practices

No existing subnational green budgeting practices have thus far included a comprehensive revenue analysis. However, that is not to say that subnational governments are not working to do so in the future. In France, I4CE specified in its municipal climate budgetary assessment methodological guide that “revenues could be included in the analysis, but they have not been processed for the moment considering the little leeway of subnational governments on their revenues” (I4CE, 2020^[15]). In countries where subnational governments have more taxing powers and able to modify or create subnational taxes to align them with climate and environmental objectives, such inclusion may be very relevant, such as in Spain at the regional level for example.

The use of green financing instruments such as green loans and bonds is also rapidly growing at the subnational level. In the immediate term, the definition of these financing instruments is not standardised. This gives rise to variable reporting requirements from lenders and investors who view these products as an opportunity to green their portfolios and respond to increased scrutiny from regulators on the reality of the green commitments of major financial players, whether they be banks, insurers, investment funds or asset management companies.

Although financial sector actors show a continuous strengthening of their climate (and environment) commitments and policies, shortcomings in the implementation are still persistent and, according to regulators, this might hinder a real follow-up of the commitments. Green funding and financing may thus become the norm for the financial sector, and subnational governments, many of whom are pioneering these financial products, could be called upon to help advance this trend by imposing monitoring standards adapted to their realities, especially concerning their budget voting procedures and the follow-up of the operations.

Recommendations for national governments and the international community

- For national and international levels, ensure subnational governments have access to permanent sources of funding for their short-term and long-term climate and environment expenditure and investment needs.
- Facilitate subnational government access to financing and funding opportunities, as well as to financial engineering support and technical expertise. International organisations and national governments could, for example take, or support, initiatives that collect available financing and funding opportunities and sources of technical assistance into a centralised online portal (Box 4.9).

Recommendations for subnational governments

- Analyse and measure the need for permanent and recurrent funding and financing sources to cover climate and environment current and capital expenditure needs.
- Mobilise all sources of funding for climate and environmental projects and expenditure, including by pool engineering on local solutions and training personnel to be able to develop innovative funding and financing solutions.
- Participate in networks and communities of practice on funding and financing solutions for subnational climate action.

Box 4.9. Examples of platforms and networks

- Aides-territoires is a French public web site facilitating the search for aid from subnational governments and their local partners (associations, public establishments, companies, farmers). A search engine gives access to information on various financial and engineering aids and mechanisms to which subnational governments are entitled, making them more visible and accessible. Aids are posted by their own promoters and local governments can set up alerts to be informed of new mechanisms (ADEME, 2021^[31]).
- In Portugal, a Climate Action Portal is set to be launched (before 2023), as determined by the Portuguese climate law (98/2021) (Laboratório Nacional de Energia e Geologia, 2022^[41]). The portal will gather information about all financial support mechanisms and programmes for financing green and climate initiatives. It will disclose information about financing opportunities at all levels (European, national and local) for climate change mitigation and adaptation, available for private and public entities. It will also provide more general information about climate action in Portugal (e.g. emissions, goals, research and international agreements).
- The Project Preparation Resource Directory, an initiative of the Cities Climate Finance Leadership Alliance (CCFLA) and the Penn Institute for Urban Research, helps subnational governments and stakeholders identify project preparation facilities that can support them in developing green and resilient infrastructure projects (CCFLA, 2020^[42]). Moreover, CCFLA itself is a multi-level and multi-stakeholder coalition that provides a platform to convene and exchange knowledge among all relevant actors dedicated to urban development, climate action, and/or financing. It has set up a Financial Toolbox Action Group (FTAG) whose objective is to collaboratively advance identification and deployment of financial instruments that can help to scale climate finance in cities. In doing so, this action group helps bridge the supply and demand for sub-national low carbon and resilient infrastructure (CCFLA, 2020^[43]).
- The Compendium of Financial Instruments that Support Subnational Government Climate Action, developed by the OECD in collaboration with the European Commission, compiles qualitative information on 309 climate-related financial instruments (grants, loan programmes, loan guarantees, climate funds, contracts, etc.) available to subnational governments in all OECD and EU countries (OECD, 2022^[37]). The Compendium is a tool for policy-makers, academics, and the general public to use to identify and compare climate change targeted financial instruments available to subnational governments across countries.

Source: Laboratório Nacional de Energia e Geologia (2022^[41]), *Portugal Aprova a Lei Do Clima*, <https://www.lneg.pt/portugal-aprova-a-lei-do-clima/>; CCFLA (2020^[42]), *Project Preparation Resource Directory*, <https://citiesclimatefinance.org/project-preparation-resource-directory/>; CCFLA (2020^[43]), *Financial Toolbox Action Group (FTAG)*, <https://citiesclimatefinance.org/action-groups/financial-toolbox/>; ADEME (2021^[31]), *Programme Territoire Engagé Transition Écologique*, <https://territoireengagetransitionecologique.ademe.fr/referentiel/organisation-interne/>; OECD (2022^[37]), "Compendium of Financial Instruments that Support Subnational Government Climate Action", <https://www.oecd.org/regional/compendiumsubnationalrevenue.htm>.

Analyse the environmental and climate impact of revenue sources

An analysis of the environmental and climate impact of revenues is a complex but essential step for subnational governments to take as part of their green budgeting exercise. The first axis concerns the need to better align taxation systems with climate objectives, reaffirmed by the European Green Deal and the Paris Agreement. Though this point has already been underlined in the past, no significant progress has been observed during the last decade, notably in the EU (Eurostat, 2021^[44]).

Regarding taxation, subnational governments often have limited room for manoeuvre, in terms of defining the tax base – including tax exemptions, incentives etc. - and/or setting the tax rates. However, there are more or less extensive possibilities for action, particularly for the municipal sector. For instance, development taxes, which are commonly developed at the municipal level, can be used to address urban sprawl when the municipality has the authority to set the tax rates and can differentiate by area. Waste taxes can also be used through the inclusion of incentive shares in the rate (or pricing) of waste collection.

Beyond environmental taxation, when analysing revenues as part of green budgeting, the way in which a public service is financed can also favour, or be detrimental to, the green transition. For example, current debate on totally or partially free public transit, that is to say financing public transit through taxation rather than user charges, is a good example of these kinds of impacts, in that it aims to favour, through gratuity, a mode of transport theoretically virtuous from an environmental point of view. However, these kinds of choices are often intertwined with concerns that may be social (is social justice preserved if public transport is free for all?), economic (an increase of public transport use could result in a drop in demand for individual cars and may have repercussions on employment) or financial (will the government have the means to finance additional infrastructure if there is a strong increase in demand due to free access?).

Given the generally standardised structure of public revenues within a country, national bodies could play a role in analysing the green impact of subnational government revenues but in the end the revenue structure of subnational governments, which is an eminently political subject, should remain their own prerogative, within their room for manoeuvre regarding their revenues.

Objectives of the revenue analysis

The analysis of the environmental and climate impact of subnational government revenues aims to identify the revenues and financing structures that have an impact, intentional or not, on taxpayer or consumer behaviour. Such an analysis increases awareness on how revenues can contribute to or hinder the achievement of the government's environmental and climate objectives.

Comments on practices

Many reflections and experiments regarding environmental taxation and the way public services are financed have been conducted at the subnational level in the OECD and EU. For example, according to the Rapid Transition Alliance, 100 cities in the world have already set up free public transport (Rapid Transition Alliance, 2021^[45]).

Environmental tax audits are also being carried out, sometimes by associations of local governments, who see this as an opportunity to renegotiate with the national government for funding structures more suited to the constraints of their members.

Many governments are also working on innovative arrangements to meet their climate and environmental financing needs. But the smallest subnational governments frequently lack the technical and territorial engineering capacity necessary to take advantage of these innovative mechanisms.

Recommendations for national governments and the international community

- Promote and deepen research on the environmental and climate impact of revenue structures at the subnational government level and on the analysis of the environmental and climate impact of possible financing choices.
- At national level, enhance subnational governments' flexibility in terms of environmental taxation while also providing engineering and technical assistance for the implementation of such taxes.

Recommendations for subnational governments

Audit the contribution of all revenue source to the government's environmental and climate strategy and adjust the revenue structure to align with the government's green targets.

Box 4.10. Andalusia's Sustainable Finance Framework

To boost its climate strategy, the Autonomous Community of Andalusia (Spain) has developed a Sustainable Finance Framework to define the criteria to issue sustainable bonds (including green bonds) to finance social and environmental projects, and also to contribute to the development of green, social and sustainable bond and loan markets. The Sustainable Finance Framework follows existing green, social and sustainable bond labels (e.g. the Green Bond Principles, Social Bond Principles, Sustainability Bond Guidelines and the Loan Market Association's Green Loan Principles) and includes rules on the use of proceeds, on evaluating and selection projects, and on the management of proceeds and reporting. The Framework is also subject to external review.

The region has developed a green budget tagging methodology to be used to identify budget programmes to be funded by the proceeds of its sustainable bond issuances. Each budget programme was analysed in four ways:

1. First to determine whether the programme has a social, climate, or environmental impact.
2. Second, to determine whether the programme can be linked to the Green Bond Principles or the Social Bond Principles.
3. Third, to determine whether the programme meets the EU Taxonomy's technical screening criteria to be considered as significantly contributing to climate adaptation and mitigation.
4. And fourth, an analysis of the programme's budget indicators to ensure that they are adequate to meet post-issuance reporting requirements and to follow-up on programme execution.

The methodology allows the region to measure the amount of expenditure within each budget programme with a positive climate, environment or social impact and therefore the expenditure items that can be funded using sustainable bonds.

Source: Junta de Andalucía (2021^[20]), *Sustainable Finance Framework*, https://www.juntadeandalucia.es/export/drupaljda/Andalusia_Sustainability_Framework_March_2021.pdf.

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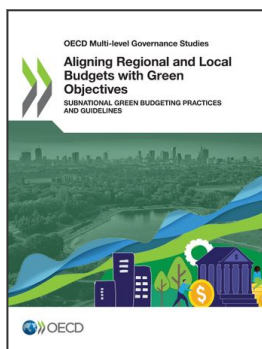
[26]

Notes

¹ See <https://www.oecd.org/regional/snggreenbudgeting.htm>.

² Territorial engineering is the set of professional expertise and know-how that public authorities and local actors need to carry out territorial development or sustainable planning, by means of tools and skills aimed at the design, implementation and evaluation of their territorial projects (Caisse des Dépôts, 2021^[47]).

³ “The energy department of a local government finances cost-efficient energy and water saving measures. The savings made by the technical department or municipally owned company on their energy bill are used to repay the energy department until full recovery of the investment capital. The technical department or municipally owned company then can freely dispose of the savings. The energy department therefore provides zero-interest loans to finance specific measures or packages of measures with no increase charged for risks, rewards or ROI” (Energy Cities, 2013^[46]).



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