



# THE OECD-EC SUBNATIONAL GOVERNMENT CLIMATE FINANCE HUB: HOW TO MEASURE AND ENHANCE THE FINANCIAL ROLE OF SUBNATIONAL GOVERNMENTS FOR A GREENER FUTURE?

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# A selection of recent works on multi-level governance, subnational finance and investment



ADB OECD 23 NOV 2022 | 4-5:30 PM GMT+8

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WORLD OBSERVATORY  
ON SUBNATIONAL GOVERNMENT FINANCE AND INVESTMENT (SNG-WOFI)

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What's the issue?

Regions and cities play a key financial role in the carbon-neutral transition and the global response to climate change. This is, in large part, due to their jurisdiction over crucial adaptation and mitigation-relevant policy areas such as land-use planning, zoning, waste management, transport, housing development, and more. However, despite this recognition, there is a lot that we do not know about their financial role.

- How much are subnational governments spending and investing on climate change adaptation and mitigation?
- How are their climate-related spending and investment financed over time?
- What public revenue streams are available to subnational governments to fund and finance their climate action? How can these sources be scaled-up?
- Are the spending, investment, and revenue-raising decisions of subnational governments aligned with their green objectives?

Given the urgency of the climate crisis, it is more important than ever to bridge this knowledge gap and improve our understanding of the financial role of subnational governments in the transition. In doing so, we will enhance our ability to track the progress regions and cities are making towards achieving the Paris Agreement commitments, and other green objectives, and to identify areas where further action is needed to align their expenditure and investment with their climate goals and mobilise additional sources of finance.

The Subnational Government Climate Finance Hub brings together the OECD's work on subnational public climate finance to bridge this knowledge gap and provide a centralised resource on the topic for policymakers, academia, climate finance experts, and all those interested in learning more on the subject.

What can the OECD and CFE offer?

The OECD supports evidence-based policymaking that will drive the carbon-neutral transition and promote sustainable, resilient, and inclusive regions and cities. We conduct policy analysis and share best practices in order to: (i) craft ambitious climate-based policies; (ii) improve coordination across levels of government; (iii) amplify subnational governments' significant, yet often overlooked, role in designing and implementing ambitious environmental and climate policies.

Based on the joint OECD and European Commission project *Measuring and Enhancing Subnational Government Finance for Environment and Climate Action in OECD and EU Countries*, the Subnational Government Climate Finance Hub encompasses three pillars of work:

- Climate Expenditure Tracker (Subnational Government Climate Finance Database & Methodology)
- Climate Revenue Tracker (Compendium of Financial Instruments that Support Subnational Government Climate Action)
- Subnational Green Subsidies (Guidelines, case studies, and self-assessment tool)

OECD ADB ASIAN DEVELOPMENT BANK

G20-OECD Policy Toolkit to Mobilise Funding and Financing for Inclusive and Quality Infrastructure Investment in Regions and Cities

Prepared by the OECD with input from ADB, in support of the Indonesian G20 Presidency

G20 INDONESIA 2022

SECRETARIAT FOR PUBLIC GOVERNANCE AND TERRITORIAL DEVELOPMENT

EFFECTIVE PUBLIC INVESTMENT ACROSS LEVELS OF GOVERNMENT

PRINCIPLES FOR ACTION

OECD NETWORK FOR BETTER LEADS



# WHY the Subnational Government Climate Finance Hub

- SNGs play a **key role** in the carbon-neutral transition:
  - responsible for a **large range of policies** that have a **direct or indirect impact on climate change**.
  - with **significant spending, investment** and **revenue** powers.
- **Article 2.1c of the Paris Agreement** : “make finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development
- Significant data gaps in understanding **the scale** of climate-related **spending, investment and revenue decisions.....** as well as **methodological challenges**



- **Filling data/evidence gaps**
- **Tracking progress**
- **Identifying & mobilising additional sources of climate finance**



# HOW: the 3 pillars of the Subnational Government Climate Finance Hub

## Climate Expenditure Tracking



- Online Subnational Government Climate Finance **Database** (climate-significant spending and investment)

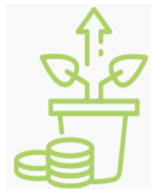
## Climate Revenue Tracking



- Online **Compendium** of Financial Instruments that Support Subnational Climate Action

Policy Paper  
"Tracking"

## Subnational Green Budgeting



- Subnational Green Budgeting **Guidelines**
- Case study reports: Region of Brittany & City of Venice
- Self-assessment Tool
- **Publication:** *Aligning Regional and Local Budgets with Green Objectives*



# Pillar 1 : Climate Expenditure and Investment tracking: the OECD Subnational Government Climate Finance Database

A unique methodology, built in two steps:

1. Use of COFOG level 2 data from the National Accounts, a unique repository of internationally comparable and harmonised government expenditure data by function
  - Three main COFOG categories: *Economic Affairs, Environmental Protection, and Housing and Community Amenities.*
2. Development of proxy coefficients to determine what constitutes climate-significant expenditure and investment, based on the EU Taxonomy for Sustainable Activities.

The screenshot shows the OECD Stat website interface for the Subnational Government Climate Finance Database. The table displays data for 'Climate-significant expenditure' in US dollars PPP from 2001 to 2019 for 33 OECD and EU countries. The table is organized by country and form of the state (Federal or Unitary).

Country	Form of the State	Amount (US dollars PPP)																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Australia	Federal country	5 364 958	6 755 701	6 905 4	8 015 006	8 566 554	9 166 64	11 250 006	11 592 337	14 827 359	16 279 213	20 432 75	21 126 797	22 887 611	20 945 529	18 050 232	18 912 154	22 413 488	25 460 125	26 385 176	
Austria		5 472 739	5 748 633	5 684 929	11 523 292	8 441 852	8 935 259	8 571 354	9 974 527	11 145 399	12 162 313	12 340 113	12 109 649	12 495 554	12 037 932	11 985 05	12 573 055	12 601 439	13 811 356	13 593 05	
Belgium		7 103 986	7 628 598	8 845 915	8 893 77	16 148 205	10 771 885	10 779 448	12 436 947	14 047 416	14 663 701	17 302 631	16 638 449	16 558 672	18 088 352	14 422 128	14 190 666	15 459 783	17 126 5	17 614 189	
Czech Republic	Unitary country	5 465 45	4 717 834	7 554 609	4 843 407	4 680 859	4 862 25	5 567 52	7 576 471	6 617 099	6 250 586	7 090 045	7 519 208	7 360 778	9 136 579	12 580 792	9 633 525	8 995 036	10 931 867	10 542 314	
Denmark		2 458 887	2 882 278	2 338 417	2 238 03	2 005 599	1 815 056	1 962 117	2 334 042	2 686 964	2 738 729	3 617 397	3 746 24	4 436 354	4 945 091	5 367 894	5 049 322	5 555 537	5 801 632	5 706 96	
Estonia		255 165	226 728	237 522	242 271	270 617	283 057	388 158	458 988	407 049	375 103	588 222	534 635	408 046	426 137	402 923	387 087	445 202	524 431	559 361	
Finland		1 172 199	1 342 171	1 484 403	1 653 052	1 582 878	1 452 069	1 428 328	1 763 916	1 982 185	2 041 889	1 933 212	2 157 249	2 587 693	2 698 096	2 611 933	2 632 484	2 645 459	2 336 941	2 335 119	
France		18 360 773	21 130 434	22 471 131	23 893 857	26 949 818	28 856 699	30 822 014	32 694 621	36 005 777	36 572 82	42 880 992	44 304 832	52 933 703	52 881 559	53 761 891	57 321 793	61 404 164	65 950 359	74 361 375	
Germany	Federal country	31 766 391	34 662 328	36 090 027	34 264 297	29 673 398	32 660 725	31 795 037	32 282 168	32 344 844	33 413 707	36 695 523	36 425 73	40 166 73	42 849 906	43 764 945	45 227 371	48 404 043	52 188 09	55 824 512	
Greece	Unitary country	1 192 538	2 455 24	3 279 203	4 158 725	2 207 752	2 822 78	2 929 428	3 309 055	3 343 218	1 817 422	2 840 597	4 084 903	3 135 368	4 694 371	4 684 085	3 337 671	3 325 913	3 800 742	3 800 742	
Hungary		2 270 24	2 902 544	2 291 033	1 121 002	1 112 208	1 765 643	4 029 985	2 733 195	2 342 871	2 780 482	6 145 396	7 579 903	7 494 174	6 569 695	8 085 051	4 359 638	5 395 302	6 398 656	6 597 616	
Iceland		49 998	51 167	54 989	53 768	50 853	54 639	56 305	71 343	74 569	65 341	66 458	68 103	76 868	77 814	95 375	110 068	111 392	125 952	126 433	
Ireland		2 011 606	2 390 982	2 372 972	2 442 271	2 506 472	2 965 318	3 746 061	3 979 463	3 484 823	3 828 339	3 025 169	2 749 153	2 279 139	2 382 013	2 589 532	2 731 724	2 821 854	3 331 295	3 545 222	
Israel		...	...	...	...	...	...	...	...	...	...	...	...	...	6 561 129	5 901 243	5 925 979	6 662 891	7 803 58	8 731 583	9 102 692
Italy		27 883 518	28 748 451	28 477 178	30 197 307	30 767 734	34 908 402	30 434 943	30 866 621	40 285 457	42 870 801	41 557 59	45 546 102	51 861 102	49 243 324	39 324 355	50 048 172	51 275 5	43 489 996	45 961 023	
Japan		...	...	...	64 029 016	63 993 371	65 453 117	70 729 086	79 316 789	73 604 641	76 400 766	74 176 656	80 549 609	83 757 508	83 950 516	84 675 328	84 919 031	85 462 695	85 948 586	85 948 586	
Latvia		479 534	595 325	514 631	580 408	676 447	716 562	789 458	1 006 829	1 080 216	1 169 075	919 494	1 334 152	1 265 254	1 673 607	1 707 748	935 024	1 310 019	1 106 159	889 668	
Lithuania		248 504	343 55	408 289	469 571	474 933	487 618	588 298	631 006	606 246	842 551	875 666	928 333	877 026	1 019 886	986 052	780 436	712 907	815 271	955 44	

Coverage: 33 OECD and EU countries, from 2001 to 2019  
[OECD Subnational Government Climate Finance Database](#)

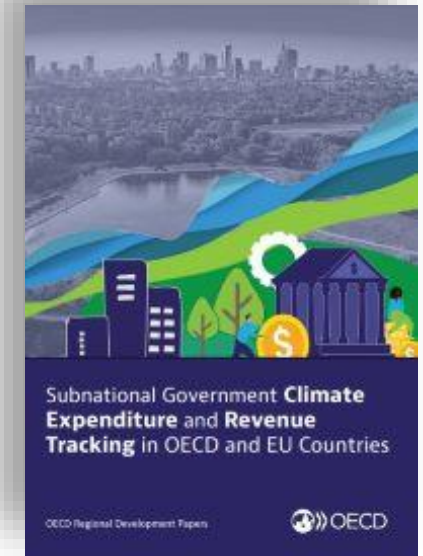
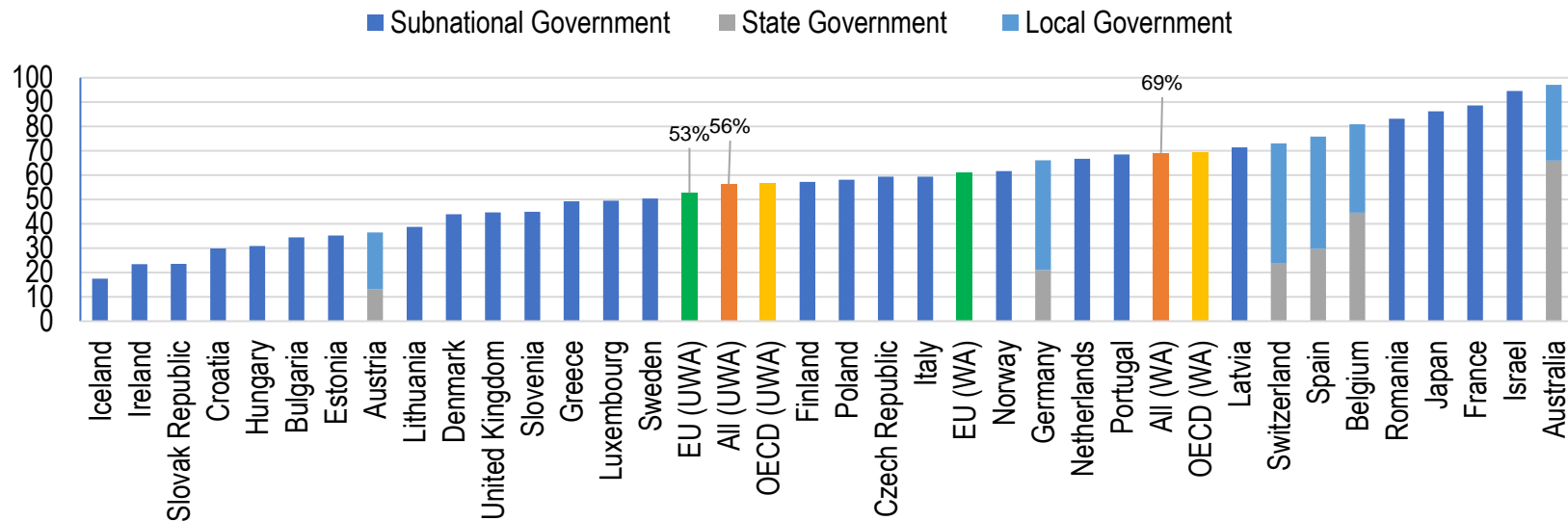




# Pillar 1: Climate Expenditure and Investment tracking: key findings

- ❖ In 2019, SNGs accounted for **63% of climate-significant public expenditure** and **69% climate-significant public investment** on average in 33 OECD and EU countries.
- ❖ **Climate-significant expenditure accounted for 1.1% of GDP** on average in 33 OECD and EU countries in 2019.
- ❖ The overall trend in subnational government climate-significant expenditure and investment is increasing, with **annual average rate of change of respectively +2.5% and +1.4% in real terms** between 2009 and 2019, and a great majority of the countries sampled having a positive annual average rate of change.

Subnational government climate-significant investment as a share of total public climate-significant investment, OECD-EU countries, 2019





# Pillar 2: Climate Revenue tracking - Compendium of Financial Instruments for Subnational Climate Action

- Due to the lack of data on climate-significant revenue sources, the revenue approach relies on a **qualitative methodology**.
- **The Compendium helps to:**
  - ❖ **Identify** potential sources of public **funding**
  - ❖ **Compare and learn** from other jurisdictions
- **Initiate dialogue** between levels of government, based on concrete evidence of the diversity and accessibility (or not) of climate-related revenue sources
- **Information available:**
  - ❖ Funds provider and beneficiaries
  - ❖ Type of instruments
  - ❖ Adaptation, mitigation, or both.
  - ❖ Under which conditions can the funding be accessed

The screenshot shows the OECD Compendium of Fiscal Instruments for Subnational Climate Action interface. It features a sidebar with filters for Country, Level of Government, Subnational Beneficiary, Sector, and Type of Instrument, all set to 'All'. The main table lists various instruments, with the selected entry for 'Waste Less, Recycle More initiative' from the State of New South Wales expanded to show details.

Instrument Provider	Name of Provider	Instrument Title	Instrument Sub-programme
Intermediate government	Province of Limburg	Waterways and holding basins	Subsidy for work on watercourses and holding basins
National government	Grand Duchy of Luxembourg	Water Management Fund	Water Management Fund
State/regional government	State of New South Wales	Waste Less, Recycle More initiative	Landfill Consolidation and Environmental Improvements
State/regional government	State of New South Wales	Waste Less, Recycle More initiative	Major Resource Recovery Infrastructure (MRR) Grants
State/regional government	Walloon Region	Walloon Recovery Plan	UREBA Programme
State/regional government	Canton of Vaud	Vaudois Climate Plan	Municipal Energy and Climate Plan (PECC)

**Fund**  
Type of Instrument  
AUD 337 million  
Total amount allocated

**Both**  
Mitigation or adaptation

**Hiatus**  
Status

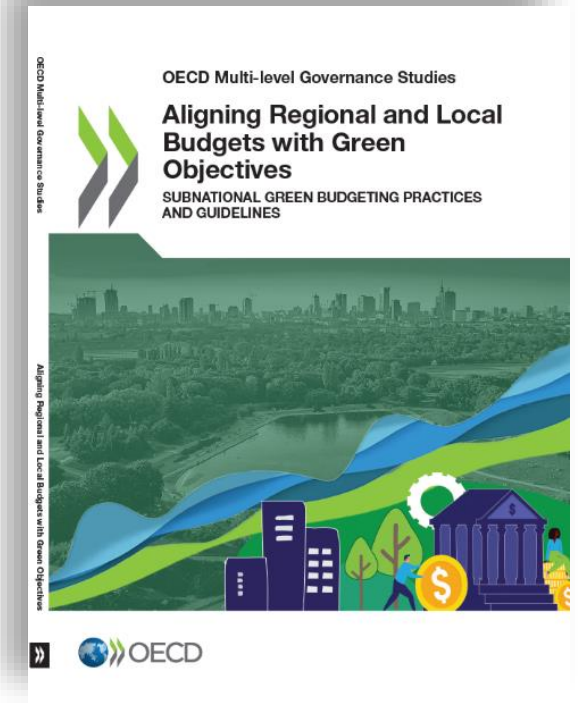
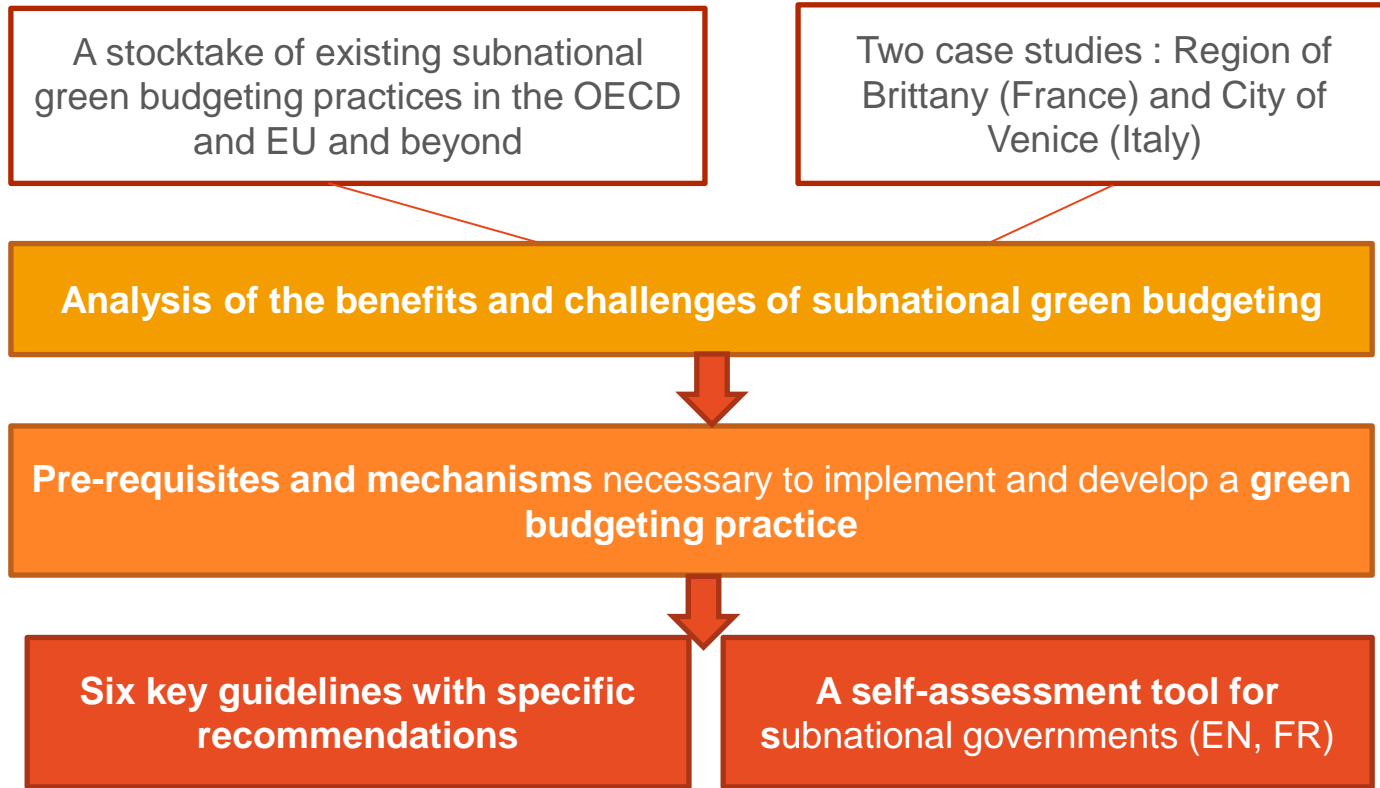
**SUPPORT DESCRIPTION:**  
This program funds the construction of new major recycling and waste processing facilities, to increase the amount of material being recovered, reused, recycled and reprocessed. It complements the Resource Recovery Facility Expansion and Enhancement program, which funds capital works for existing facilities. Over eight years, Waste Less, Recycle More will provide AUD 802 million to stimulate new investment and transform waste and recycling in NSW. It includes grant programs for local government, business, industry and the community, delivered by the NSW Environment Protection Authority and the NSW Environmental Trust.

Source(s)  
<https://www.epa.nsw.gov.au/working-together/grants/infrastructure-fund/major-resource-recovery-infrastructure>  
<https://www.epa.nsw.gov.au/working-together/grants>

Subinitiative Info



## Pillar 3: Subnational green budgeting



Policy highlights *forthcoming*  
(FR, IT, EN, ES)

Case study of Brittany in French

**Objective:** Help regions and cities overcome **methodological, operational, financial, and political challenges** to launch a successful green budgeting practice that **endures over time**.



# Subnational green budgeting: an emerging trend in the OECD and worldwide



- **Paris Collaborative’s definition of Green Budgeting:** “using the tools of budgetary policy-making to help achieve environmental and climate goals.”
- There is no systematic and comprehensive practices identified at subnational level, yet... **a growing body** of emerging practices in the OECD, EU, and beyond :

## France

- Bretagne
- Grand-Est
- Occitanie
- Paris
- Lille
- Strasbourg
- Clermont-Ferrand
- ... and more

## Other European countries

- Norway (Oslo, Hamar, Trondheim, Bergen)
- UK (Scotland)
- Italy (Sardaigne, Bologne)
- Spain (Andalusia, Catalona)
- Sweden (Stockholm, Växjö)
- ...

## Rest of the World

- India (ex. State of Odisha)
- Bangladesh
- Nepal
- Indonesia
- Philippines
- South Africa
- Kenya
- Guinea
- ...

- Several **Asia-Pacific countries** (e.g. Cambodia, Indonesia, Bangladesh, Nepal), were early **adopters of budget tagging** focusing on climate change adaptation and mitigation objectives at national level
- **Subnational practices may develop:**
  - Following the implementation of a green budgeting methodology at the national level (e.g. Indonesia pilot project in 2020, Philippines since 2015)
  - On their own, without a practice at national level (e.g. State of Odisha, in India)



## Green budgeting: **opportunities** and **challenges**

### Benefits

- **Better alignment of** subnational budgets with environmental and climate objectives
- **Prioritisation of** low carbon investment / green projects
- **Identification of funding gaps**
- Helps mobilise **additional sources** of public and private finance.
- Promotion of **transparency and accountability**

### Challenges

- **Methodological challenges:** e.g., transparent and robust to changing evidence
- **Resource challenges:** e.g., personnel training.
- **Operational challenges:** e.g. horizontal coordination.
- **Political challenges:** e.g., involving local stakeholders and communicating widely

- Green budgeting is *not* a silver bullet... most effective when combined with other government action (ex. regulation, environmental planning) and aligned with a regional/local climate strategy.



# Subnational green budgeting guidelines



## 6 main guidelines with concrete recommendations for supranational bodies, national governments and subnational governments

1

Conduct a diagnostic of local environmental and climate challenges as a pre-requisite to launching a green budgeting practice

2

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

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

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

5

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

6

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



# Self-Assessment Tool: putting the guidelines into practice



- Assists any region or city in **identifying their strengths and their potential gaps** for starting a green budgeting practice or improving an existing one.
- Enables users to evaluate where they stand across **seven green budgeting dimensions**, each divided into a series of sub-criteria, against which they can rank their level of experience (or “**maturity level**”).

The screenshot displays two Microsoft Excel worksheets. The left worksheet, titled 'GREEN BUDGETING SELF-ASSESSMENT TOOL SYNTHESIS', contains a form for user information and a 'Maturity level' table. The right worksheet, titled 'DIAGNOSTIC TOOLS & INDICATORS', contains a table with columns for 'DOMAIN', 'EVIDENCE OF GOOD PRACTICES', 'REFERENCES', 'LEVEL', and 'COMMENTS'. A radar chart titled 'Global green budgeting approach positioning' is also visible, showing scores for various dimensions: Context (1.9), Diagnostic tools & indicators (2.3), Political & administrative commitment (2.5), Budgeting practices (1.6), Organisation (2.0), Scientific approach (1.0), and Revenue approach (1.8).

Dimension	Maturity level
Context	1.9
Diagnostic tools & indicators	2.3
Political & administrative commitment	2.5
Budgeting practices	1.6
Organisation	2.0
Scientific approach	1.0
Revenue approach	1.8

DOMAIN	EVIDENCE OF GOOD PRACTICES	REFERENCES	LEVEL	COMMENTS
Receiving national methodological support	Does the State provide <b>methodological support</b> to subnational governments for the definition of territorial climate and environmental diagnosis? N/A None: no support is available Low: such support is probably available but the SNG has not yet identified the right resources Moderate: such support is being available and the SNG is in the process of setting up a collaboration Advanced: methodological support is available and a collaboration is in place		Advanced	
Receiving national methodological support	Is territorialized <b>climate and environmental data</b> easily available and updated at local level? N/A None: no information is available at subnational level or the SNG has not identified the adequate information providers Low: fragmented information or information whose updates are rare is available at subnational level Moderate: information is available and updated but not covering all the parameters monitored by the SNG Advanced: all necessary territorial information is available and regularly updated		N/A	
Developing subnational climate and environmental diagnosis and plans	Does the SNG regularly produce a territorial <b>climate and/or environmental diagnosis</b> assorted with quantified territorial indicators and adapted to its own challenges? N/A None: the SNG does not produce any territorial climate and / or environmental diagnosis Low: the framework of the diagnosis is under development Moderate: the production of a diagnosis assorted with quantified territorial indicators is under development Advanced: there is an internal process including a methodology to produce the diagnosis and its regular updating		N/A	
Developing subnational climate and environmental diagnosis and plans	Does the SNG provide a territorial <b>climate and/or environmental plan</b> linked to the diagnosis? N/A None: the SNG has no climate or environmental plan Low: the framework of a climate or environmental plan is under construction Moderate: a climate or environmental plan is under construction Advanced: a plan has been constructed, including quantified climate and environmental targets, a trajectory and milestones to be reached during the electoral mandate; actions to be implemented during the electoral mandate and the corresponding financing, and an identification of responsibilities within the SNG	Oso climate budget goal	N/A	
Developing subnational climate and environmental diagnosis and plans	Is there <b>coordination between all levels of government</b> to carry out the climate and environmental diagnosis and subsequently prepare an action plan? N/A None: the subnational government has conducted its diagnosis and developed its action plan without coordination or support from higher levels of government Low: work has started with other levels of government to identify possible areas of collaboration in the production of climate and environmental diagnosis and action plan		Moderate	



# WHAT is the



# Subnational Government Climate Finance Hub



A **one-stop shop** to explore and navigate OECD subnational climate finance work

<https://www.oecd.org/regional/sngclimatefinancehub.htm>



**What's the issue?**

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**Climate Expenditure Tracking**  
(Subnational Government Climate Finance Database & Methodology)



**Climate Revenue Tracking**  
(Compendium of Financial Instruments that Support Subnational Government Climate Action)



**Subnational Green Budgeting**  
(Guidelines, case studies, and self-assessment tool)



**Subnational Government Climate Finance Hub**

**What's the issue?**

Supporting subnational government climate action requires having a better understanding of the way they are funded, from both public and private sources. Public sources of revenue include grants, subsidies, user charges and fees, and tax revenues, and private sources include loans, guarantees, and bonds, among others. The combination of these revenue sources available to subnational governments influences their room for manoeuvre in implementing their climate plans.

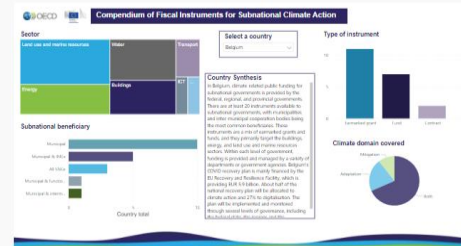
The OECD's Centre for Entrepreneurship, SMEs, Regions and Cities launched a joint project with the European Commission to build a Compendium of Fiscal Instruments for Subnational Climate Action in OECD and EU countries, in order to provide an overview and analysis of the climate-related public revenue sources available to subnational governments. The Compendium is a non-exhaustive list of funding sources provided to subnational governments by national governments, and state governments in federal countries. It focuses on grants, climate funds, loans, and also includes information on contractual arrangements as an innovative way to link funding to climate action.

The Compendium is a critical tool for subnational governments to identify sources of funding for their climate action. It is also useful for policymakers to learn more about what other jurisdictions are doing and get inspired to fund subnational climate action. Finally, it is also a tool for the international community to better understand the specificity and the diversity of climate revenue streams available to subnational governments, and initiate dialogue on the topic between levels of governments and between countries.

On this page, you will find our latest research on subnational climate-revenue tracking, our Compendium, and links to other key resources on the topic.

To stay up to date on our all our subnational public climate finance work, subscribe to the bi-weekly CFE newsletter:

Our Compendium





# Subnational Government Climate Finance Hub

<https://www.oecd.org/regional/sngclimatefinancehub.htm>



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[Watch the VIDEO](#)

