



Workshop on IPCC Inventory Software: Andorra's experience

Baku, Azerbaijan - 4th September 2024



Govern d'Andorra



National circumstances



AREA:
468 KM²



POPULATION:
81.057 (YEAR 2022)



GOVERNMENT:
PARLIAMENTARY COPRINCIPALITY



LIFE EXPECTANCY:
87 YEARS OLD



FLAG



FOREST AREA: 40%
PROTECTED NATURAL
AREA: 14%
AVERAGE ALTITUDE:
2,044 MLS



CURRENCY:
EURO



4 EDUCATION SYSTEM



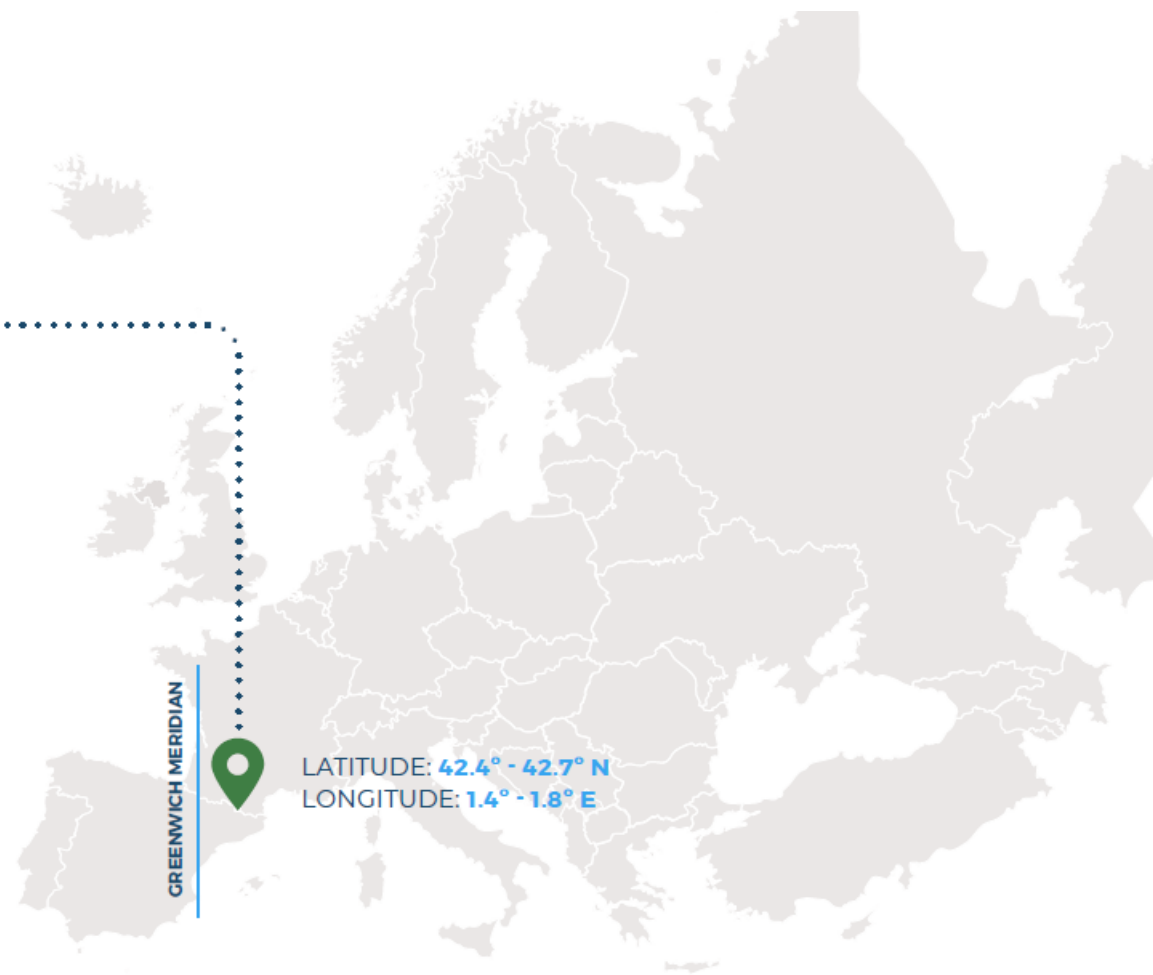
GDP PER CAPITA:
AND 36,346€
EU 34,990€
WORLDS 27th
(2021)



OFFICIAL LANGUAGE:
CATALAN



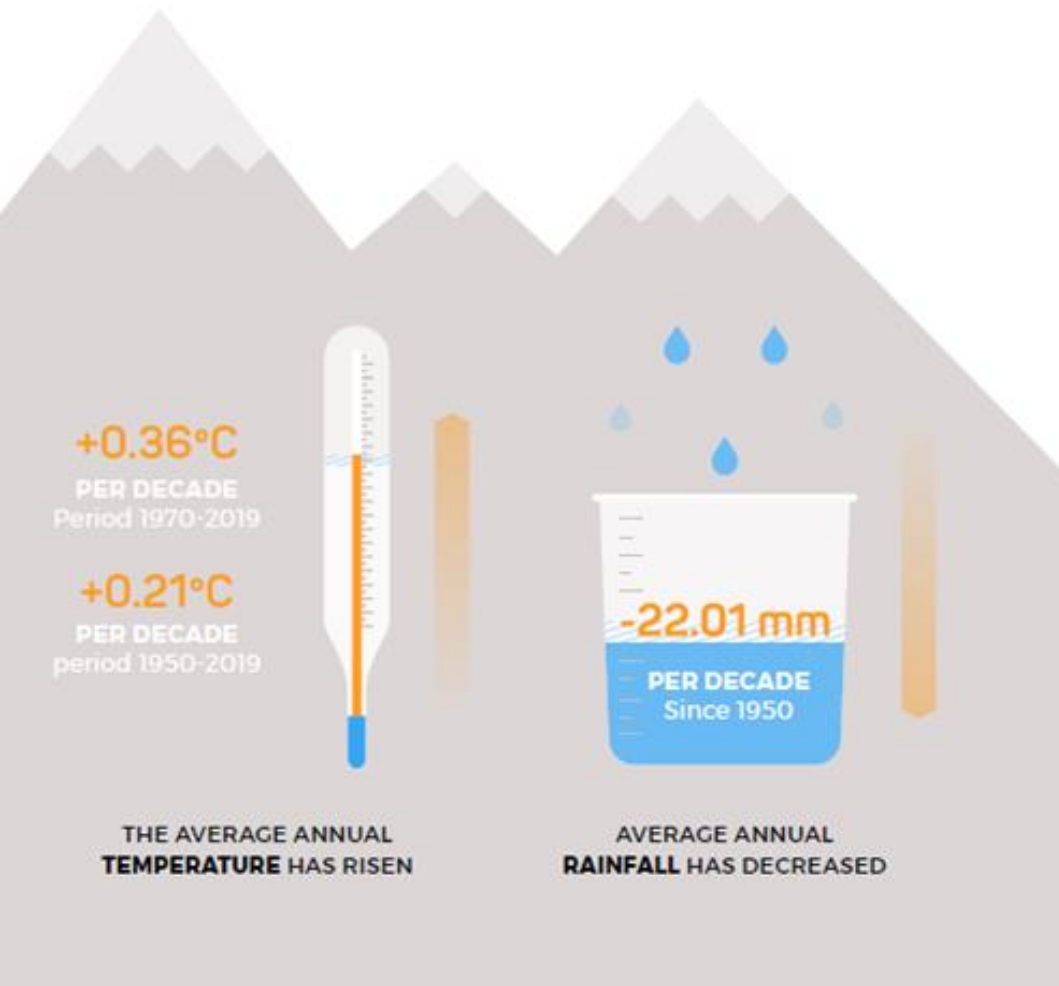
1st COUNTRY WITH
100% FIBER OPTIC COVERAGE



GREENWICH MERIDIAN

LATITUDE: 42.4° - 42.7° N
LONGITUDE: 1.4° - 1.8° E

National circumstances



According to the 6th IPCC report (2023), mountainous territories such as Andorra are among the **most vulnerable** to the effects of climate change.

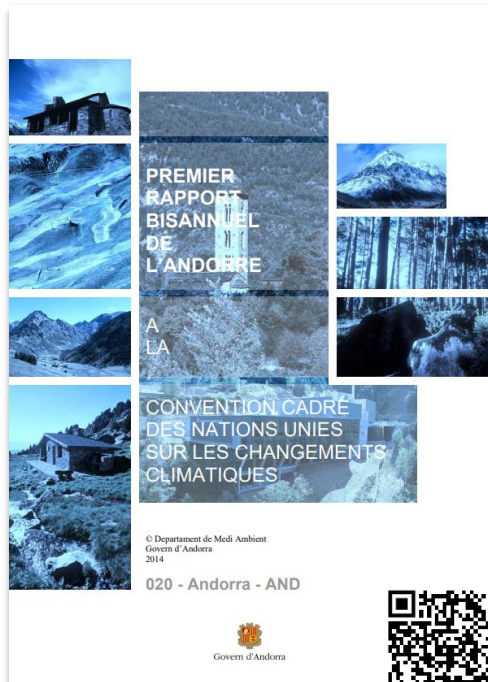
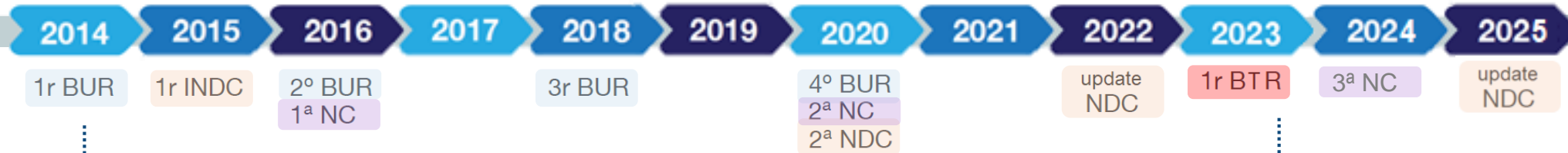
These climatic variations have **severe consequences** on socioeconomic activities, especially those closely linked to biodiversity, landscape and nature, therefore, putting mountain peoples and their livelihoods in an extremely vulnerable position.

Being a small country, with few emissions and little global impact, we can only rely on international mechanisms such as the Paris Agreement within the UNFCCC and **be exemplary** in complying with all the obligations arising from it.

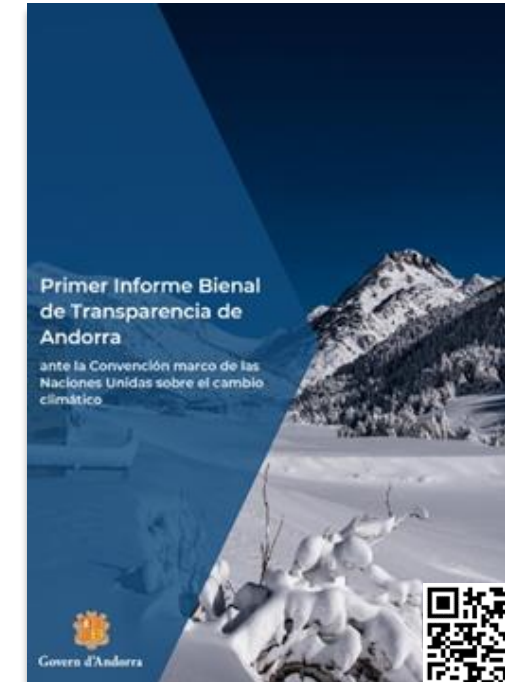
That is why we put strong efforts in GHG inventory compiling and we were the **first country to present a Biannual Transparency Report**.



Experience of Andorra

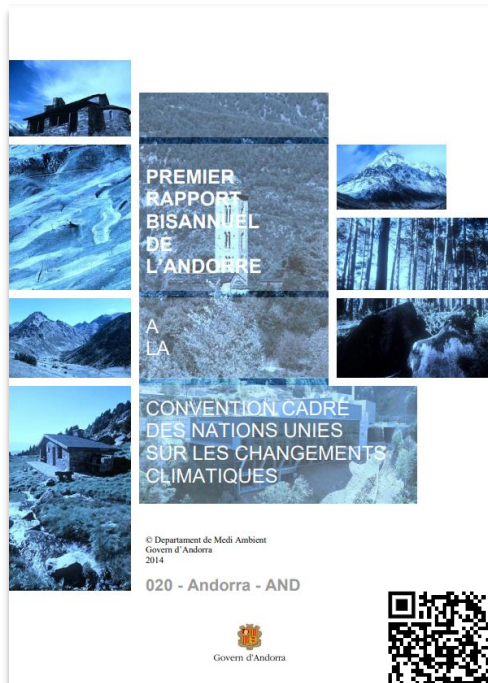
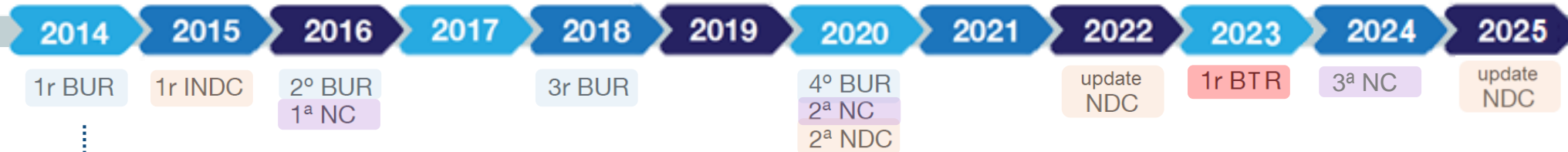


10 years using the IPCC software
for all the IPCC Guidelines categories and
sectors occurring in Andorra





Experience of Andorra



GHG inventory elaboration tasks externalised

- Inventory time frame: 1990, 1995, 2000, 2005, 2010 and 2011
 - ✓ Up-to-date expertise – including IPCC software
 - ✓ Capacity building (short term)
 - ✓ Resource optimization
 - × Dependency
 - × Loss of institutional knowledge (long term)
 - × Potential misalignment



Experience of Andorra



Internalization of GHG inventory elaboration tasks with national experts

- Inventory time frame: 1990, 1995, 2000, 2005, 2010 - 2021
 - ✓ Builds national expertise and ownership among stakeholders
 - ✓ Enhanced transparency
 - ✓ Alignment with other actions
- Same experts working in GHG inventory and projections of emissions reduction by mitigation actions reduces inconsistencies (highlighted by the TERT)
- × Resource intensive and expertise challenges (both IPCC software and guidelines refinements)
- × Risk of errors
- × Sustainability of permanent work team



Mutual learning



Mutual learning opportunity for all parties involved, open exchange

- Close contact with IPCC software developers
- Improvements identification by users (bugs identified in version update 2.54 to 2.69)
- Doubts resolution: Land manager for LULUCF calculations (entry and annual tables)
- Commitment and continuous improvement



Areas of improvement

Continuous improvement of the software - new versions

Challenge	Aol
<ul style="list-style-type: none">• Difficult to follow up with all the new versions and guidebooks	<ul style="list-style-type: none">• User notification / direct communication when new version is released.• Continue with change logs.
<ul style="list-style-type: none">• Incompatibility between versions 2.69 and 2.83 resulted in entire sectors / categories lost	
<ul style="list-style-type: none">• New version of the software does not recover data from some tier 1 categories (Road transportation)	<ul style="list-style-type: none">• When substantial changes are added to a new software versions, consider an importation tool from excel to fill the gaps, specially for LULUCF sector.

Tables export

Challenge	Aol
<ul style="list-style-type: none">• Summary tables do not calculate CO_{2eq}	<ul style="list-style-type: none">• Include CO_{2eq} in summary, short summary and sectoral export tables (CO_{2eq} already calculated for CTF)
<ul style="list-style-type: none">• Exports sector by sector, year by year	<ul style="list-style-type: none">• Include functionality to export emissions by sector for an entire year.
<ul style="list-style-type: none">• No multiyear export	<ul style="list-style-type: none">• Even if not included in the CTF, it is necessary for BTR reporting
<ul style="list-style-type: none">• Notation keys not visible in the export tables (2.69 version)	<ul style="list-style-type: none">• Notation keys should be visible in export tables



Areas of improvement

Other improvements

Hybrid system – allow to enter CO_{2eq} totals for entire categories (without AD) calculated outside the software but allowing to keep using it for exporting tables and representing the entire time-series emissions.

The IPCC software as a **QC/QA tool**

Calculation of category-insignificance

Splicing techniques – for inventory categories or total sectors, according to IPCC techniques



Govern d'Andorra

Energy and Climate Change Agency

Towards carbon neutrality

