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First Biennial Update report (BUR1) from Andorra

International Consultation and Analysis

Step 2. Facilitative Sharing of Views (FSV)

Ministry of Environment, Agriculture and Sustainability
Marrakech, november 10, 2016

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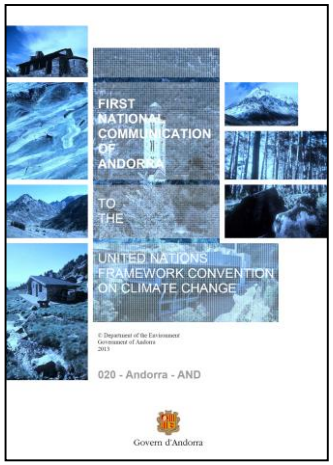
Submission BUR1

In accordance with decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention (non-Annex I Parties), consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report (BUR) by December 2014.



Andorra submitted its first BUR on
19 December 2014

- Introduction
- National circumstances
- GHG Inventory
- Projections of greenhouse gas emissions
- Mitigation actions and their effects
- Information on constraints and gaps, finance, technology, capacity building needs and support received

- **Annexes**
- Short summary tables and summary tables
- KCA tables
- Data used and information sources identified
- Calculation methods and assumptions made in the inventory and in the projections

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Submission BUR1. Introduction

Although the purpose of these reports is to provide updated information regarding the information already submitted to the Secretariat by means of national communications (NC), **Andorra opted for submitting the first BUR within the time limit for the Parties Non-Annex I**, and to present in a second stage at the end of 2016, the first national communication report.

Functional structure created (oct. and dec. 2013)

Initial briefing (Feb. 2014)

Andorra used the 2006 IPCC Guidelines

The first BUR of Andorra covers inventories for the time series 1990–2011 (years 1990, 1995, 2000, 2005, 2010 and 2011)

Andorra reported emissions of CO_2, CH_4, N_2O, $SF_{6.}$ Other gases not controlled by the Montreal Protocol, such as SO_x, included in the Revised 1996 IPCC Guidelines, may be included at the discretion of the Parties: SO_2 emissions are reported.

This first BUR constitutes not only the first exercise for all the Non-Annex I Parties, but also the first statement of Andorra in the UNFCCC.

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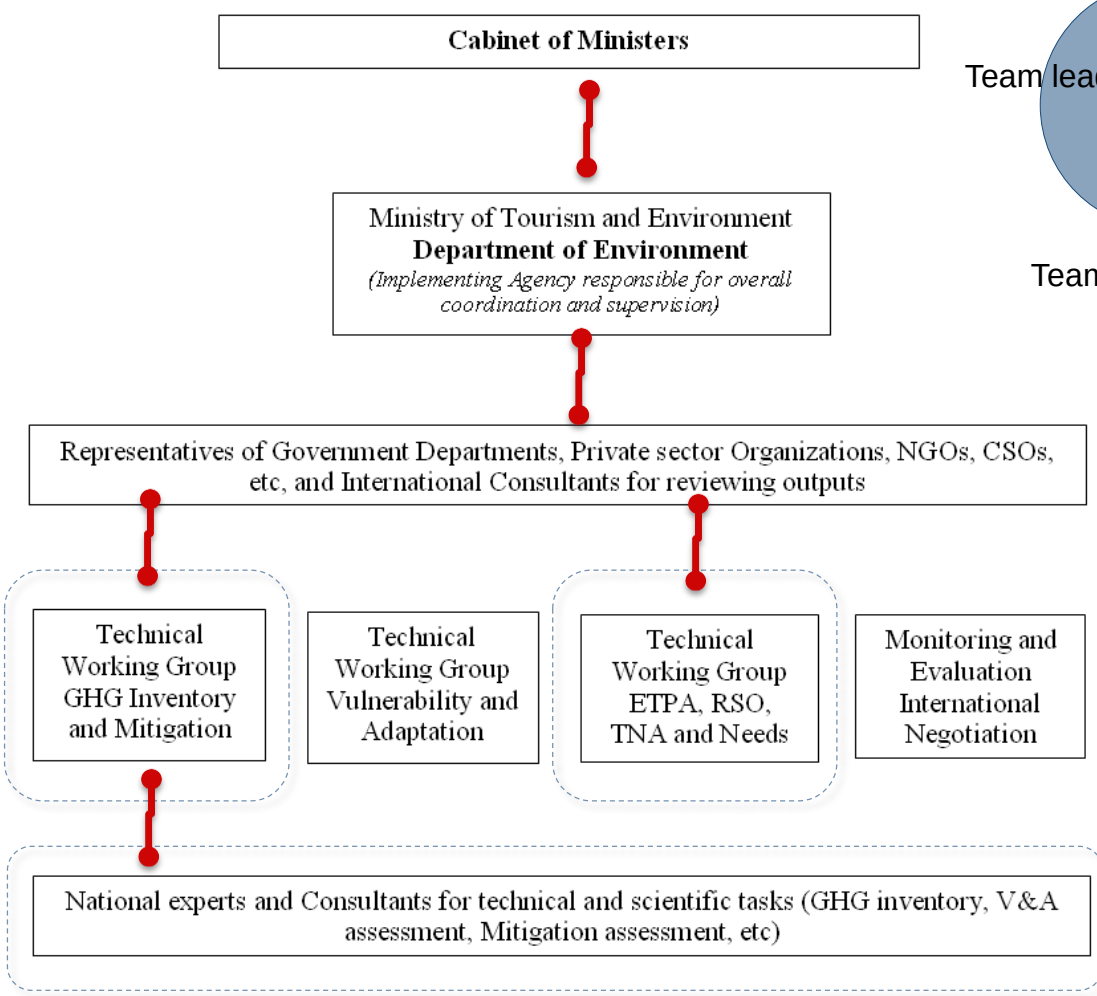
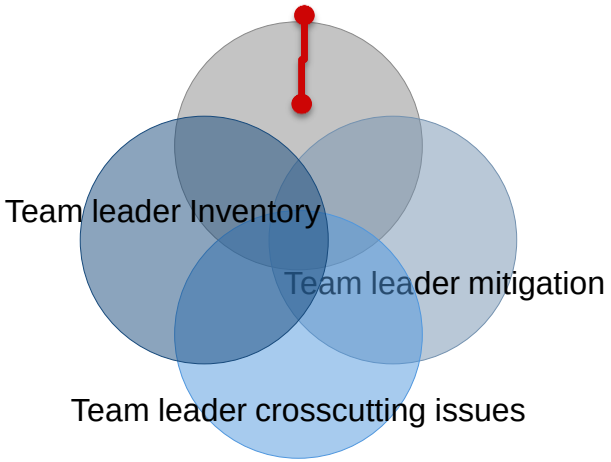
Submission BUR1. Introduction

Functional structure created



Biennial Update Report
BUR1



- AD: **Activity data**
- BUR: **Biennial Update Report**
- CSO: **Central Statistics Office**
- EF: **Emissions factors**
- ETPA: **Education, training and public awareness**
- GEFTF: **GEF Trust Fund**
- GHG: **greenhouse gases**
- GHG-IMS: **greenhouse gases inventory management system**
- INC: **Initial national communication**
- LDCF: **Least Developed Countries Trust Fund**
- NC: **National circumstances**
- NPIF: **Nagoya Protocol Implementation Fund**
- RSO: **Research and Systematic Observation**
- SCCF: **Special Climate Change Trust Fund**
- TNA: **Technology Needs Assessment**
- UNFCCC: **United Nations framework convention on climate change**

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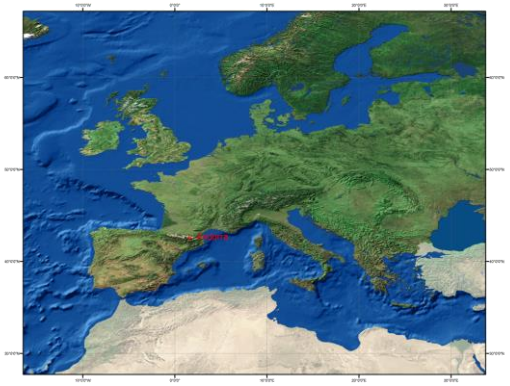
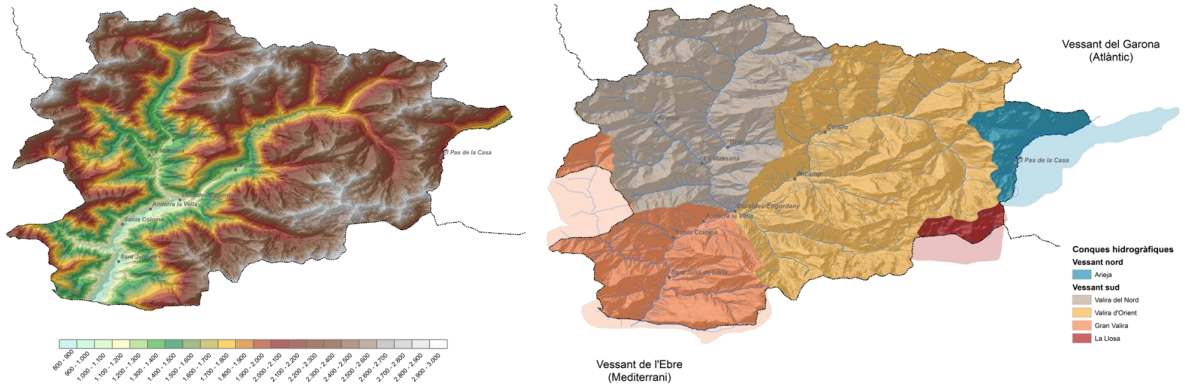
Submission BUR1. National circumstances



Andorra is a mountainous country

enclosed in the Pyrenees Mountains between France and Spain, it has an area of 468 Km^2, rugged terrain, an average height of 2.044 meters and its highest point is the peak of Coma Pedrosa (2.942 m). The waters of the country cross-border with France and Spain and feed two major European drainage basins: the Ebro, in the South, and the Garonne, in the North.



Forests recovered land from the heaths and meadows (approximately a 39% of the territory of the country)

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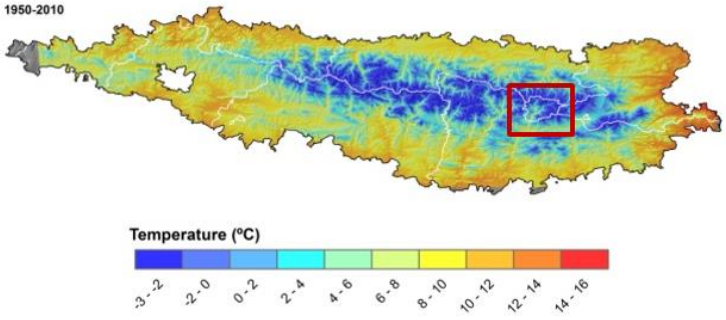
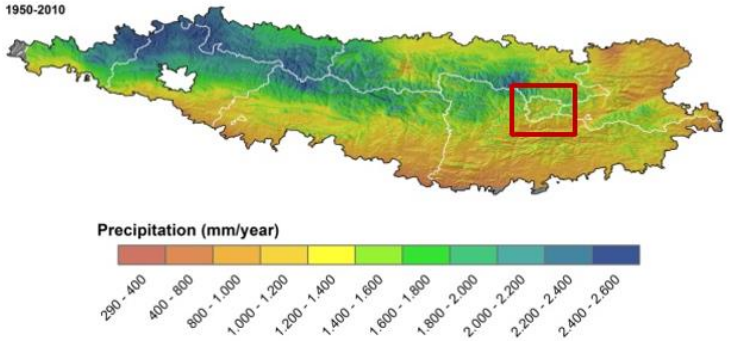
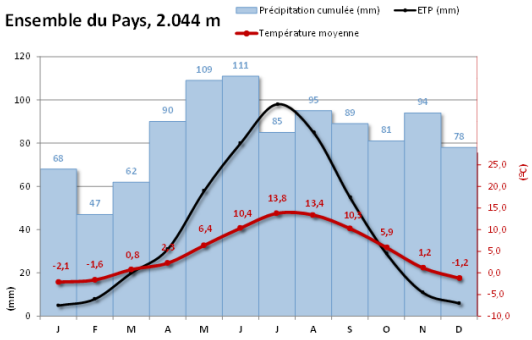
Submission BUR1. National circumstances

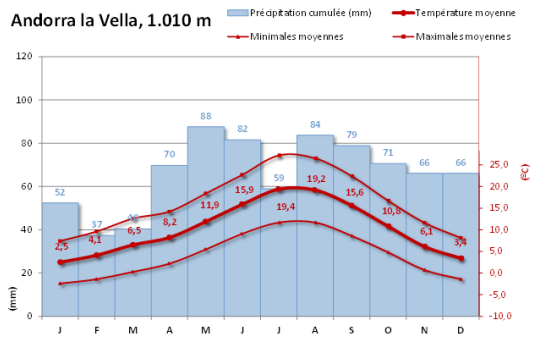
The climate of Andorra is a wet mountain climate of mid-latitude with a Mediterranean influence in the southern area, which is characterized by a continental Mediterranean climate (rich biodiversity, with unique or even endemic species)





The temperatures evolve according to the temperature charts of the north hemisphere zones, with an annual average of 4,9ºC. The average rainfall is around 1.000 mm/year (1950-2010).





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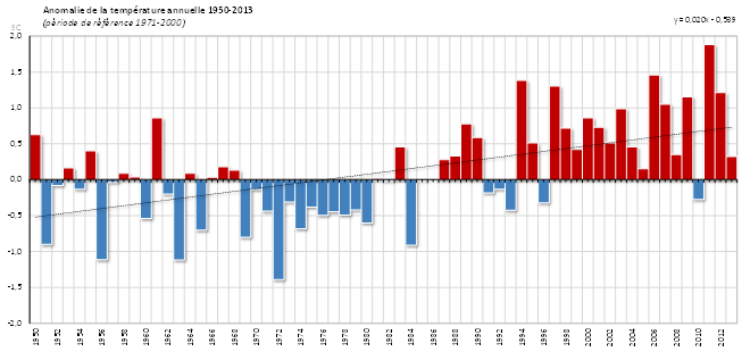
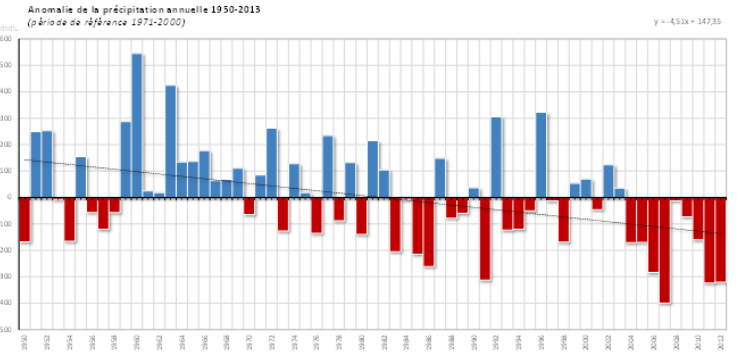
Submission BUR1. National circumstances

In 2007, the Intergovernmental Panel on Climate Change (IPCC) identified the mountainous areas as particularly sensitive to climate change. And indeed, the climate has already evolved, with an **increasing tendency of approximately +0,20ºC/decade in average temperatures and a reduction of at least 45 mm/decade (1950-2012) in annual rainfalls**.

For the end of the 21st century, the country can expect a rise of 3,6ºC in temperatures and a decrease of 16,8% in rainfall.

The water resources of Andorra will also be affected, estimated at 282 Hm^3/year on average for period 1961-1990, the expected future trends based on this period are -42 Hm^3 for 2021-2050 (-14,9%) and -106 Hm^3 for 2071-2100 (-37,6%).





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Submission BUR1. National circumstances

76.098 inhabitants (2013)

The **agriculture** sector, based on a traditional farming management system insuring a sustainable balance between livestock and agriculture land-coverage, only represents **a 0,6% of the country's GDP** (2013) but plays an important role providing a large number of environmental services

Andorra is heavily dependent on fossil fuels and importing electrical energy. 74% of the total consumed energy depends on petrol (totally imported). Electricity consumed in Andorra (around 600 GWh/year) is primarily imported from France and Spain. Domestic production only attained a 16,7% in 2010 and 13,7% in 2011.

Services are the most important sector of the Principality's economy regarding 90,2% of the countries businesses and 83,1% of the employees.

Tourism is one of the fundamental pillars of the Andorran economy, directly or indirectly responsible of 60% of GDP with about 8 million visitors per year. In **winter, products related to skiing are predominant, but very vulnerable** to climate changes.

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Submission BUR1. GHG Inventory

Unabsorbed emissions **394 Gg CO_2 eq.**

Emissions: **522 Gg CO_2 eq.**

(2011)

Absorbed emissions
128 Gg CO_2 eq.
24,5 %.

Over **95%** of the equivalent emissions from Andorra, are **CO_2.**

Over **95%** of the equivalent emissions from Andorra, come from the **Energy** inventory's category.

A special national feature on the transport needs to be made clear**. The inventory made on the basis of hydrocarbon imports** does not reflect the reality of consumption and domestic emissions because the **"fuel tourism".**

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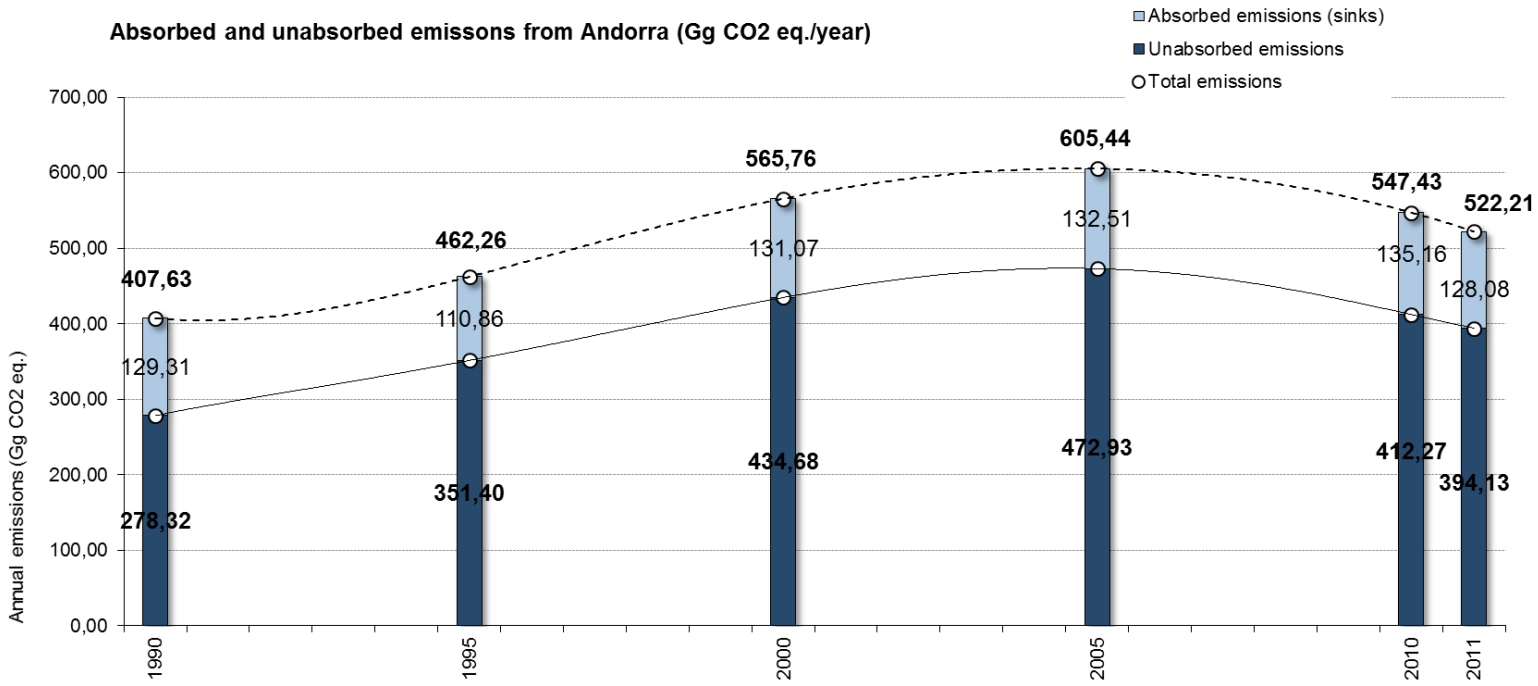
Submission BUR1. GHG Inventory



National balance sheet (Gg CO_2 eq.)	1990	1995	2000	2005	2010	2011
1 - Energy	393,03	446,77	551,42	596,90	534,07	506,75
2 - Industrial processes and product use	0,11	0,26	0,18	0,09	0,16	2,79
3 - Agriculture; land use, land-use change and forestry	-124,78	-106,76	-127,07	-128,15	-129,86	-122,83
Agriculture and forestry	*-129,31*	*-110,86*	*-131,07*	*-132,51*	*-135,16*	*-128,08*
Livestock and manure management	*4,53*	*4,11*	*4,01*	*4,36*	*5,30*	*5,25*
4 -Waste	9,97	11,12	10,15	4,10	7,91	7,43
5 - Other	0,00	0,00	0,00	0,00	0,00	0,00
Total unabsorbed emissions	**278,32**	**351,40**	**434,68**	**472,93**	**412,27**	**394,13**
Total emissions	**407,63**	**462,26**	**565,76**	**605,44**	**547,43**	**522,21**
Total absorbed emissions (sinks)	**-129,31**	**-110,86**	**-131,07**	**-132,51**	**-135,16**	**-128,08**

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Submission BUR1. NAMAs and Projections of GHG emissions

The document gathers all the actions that Andorra is currently conducting as well as the short, medium and long-term plans and strategies in the energy and waste management sectors, among others. These actions have enabled the country to generate predictions of greenhouse gas emissions until 2050, for *business as usual* scenarios with existing and supplementary measures

The Nationally Appropriate Mitigation Actions (NAMA) which were considered cover the domains of **energy** (97% of GHG emissions in 2011) and **waste** (1,4% of GHG emissions in 2011).

For the energy sector, the planned additional actions come from the Andorran *White Book of Energy (2012)*. This document promoted and adopted by the Andorran Government, defines the energy policy of the country for 2030 and 2050. The considered actions are diverse and aim to **reduce energy dependency, to increase national electricity production, to promote and support the implementation of new sources of renewable energies, to improve thermal conditions and building isolation especially following severe technical requirements and energy labelling, and to favour the penetration of electrical vehicles in the market**, among others.

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Energy sector

- Category "energy industries" (which provides emissions from the 2016 inventory year, with the commissioning of the combined first cogeneration plant -Heat and electricity-, and 2 others in 2018 and 2020);

- "Other sectors" with the energy consumption of the residential, institutional and commercial (which will consider the impact of the commissioning of heating networks and the increase in electricity consumption for heating, all two in detriment of heating diesel consumption, and reducing the building's energy needs);

- And finally the "transportation" category (which considers the effect of the penetration into the electric vehicle market).

Waste sector

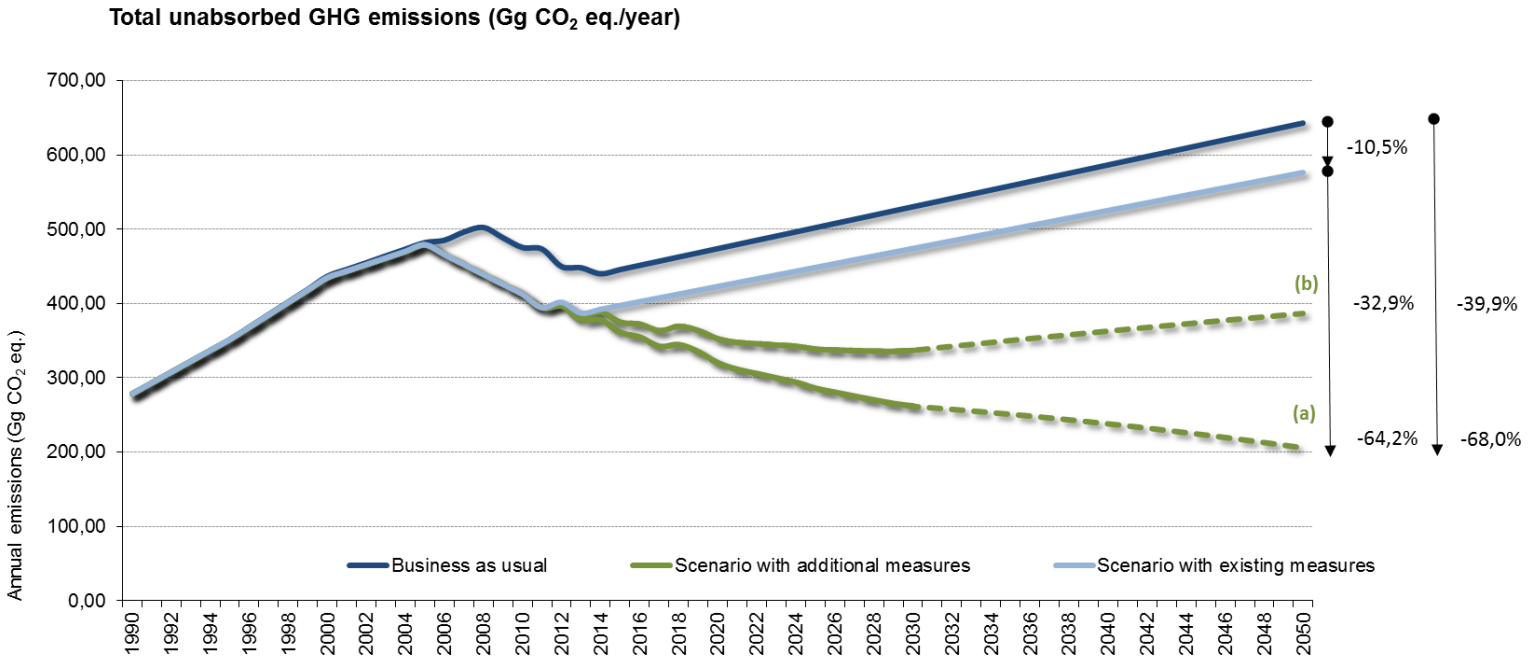
- The scenario with additional measures considering the objectives of 45% in terms of the preparation for reuse and recycling (2015), with 5% of specific value for the recovery of organic matter.

Submission BUR1. NAMAs and Projections of GHG emissions

(1) the scenario *business as usual* or BAU, which considers an opposition to change in the sense of attenuation,

(2) a scenario with existing measures defined on the basis of actions of mitigation already underway and,

(3) a scenario with additional measures on the basis of planned actions of mitigation.



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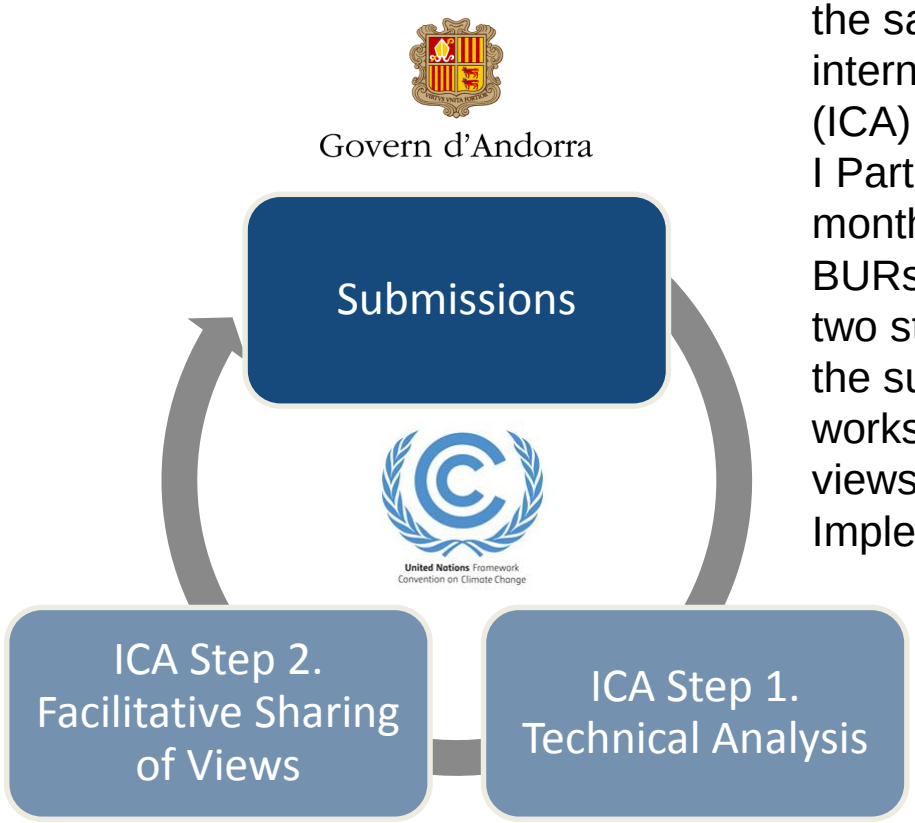
ICA - Technical Analysis



In accordance with paragraph 58(a) of the same decision, the first round of international consultation and analysis (ICA) will be conducted for non-Annex I Parties commencing within six months of the submission of their first BURs. The process of ICA includes two steps: the technical analysis of the submitted BURs, followed by a workshop on the facilitative sharing of views under the Subsidiary Body for Implementation.

ICA process: *conducted in a manner that is non-intrusive, non-punitive and respectful of national sovereignty. Discussion on the appropriateness of domestic policies and measures is not part of the process.*

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ICA - Technical Analysis. Team of technical Experts (TTE)

Mr. Rodrigue Abourou Otogo (Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention (CGE) member from Gabon)

Mr. Menouer Boughedaoui (Algeria)

Ms. Patricia Grobben (CGE member from Belgium)

Mr. Ghislain Hippolyte Sabin Guendehou (Benin)

Mr. Ayité-Lô Ajavon (Togo)

Ms. Silke Christina (Sina) Wartmann (Germany)

Ms. Sylvie Marchand and Ms. Victoria Novikova (secretariat) provided administrative support to the TTE

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ICA - Technical Analysis

Results of the technical analysis of the first BUR of Andorra undertaken by a team of technical experts in accordance with the modalities and procedures contained in the annex to decision 20/CP.19.

a) **Most of the elements of information listed in paragraph 3(a) of the ICA guidelines are included** in the first BUR of Andorra;

b) The provision of more detailed sectorial information, for example, on **sectorial GHG emission drivers**, could have enhanced the information reported on mitigation measures and the national GHG inventory data presented in the BUR (see para. 22 above);

c) The **GHG inventory of Andorra covers the majority of categories and subcategories**. The additional and supporting material provided by Andorra during the technical analysis facilitated the technical analysis of the GHG emissions and removals calculations (see paras. 27 and 28 above);

d) The **improvement of inventory data for the AFOLU and transport sectors** will greatly contribute to improving the quality of information on the GHG inventory of Andorra;

e) The transparency of information on **the approach used to derive uncertainties of activity data and emission factors** needs to be further enhanced;

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ICA - Technical Analysis

f) In general, **Andorra reported in a transparent way on the four mitigation actions included in the BUR**. The transparency of the reporting on the nature of the actions, methodologies to estimate the effects of the mitigation actions and the links to GHG reduction effects could be enhanced (see para. 42 above);

g) Andorra reported **information on financial, technical and capacity-building needs in a transparent manner**.

United Nations

Framework Convention on Climate Change

FCCC/SBI/ICA/2015/TASR.1/AND

Distr.: General
24 June 2016

English only

Summary report on the technical analysis of the first biennial update report of Andorra submitted on 19 December 2014

In accordance with decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention (non-Annex I Parties), consistent with their capabilities and the level of support provided for reporting, should submit their first biennial update report (BUR) by December 2014. The least developed country Parties and small island developing States may submit BURs at their discretion.

Further, in accordance with paragraph 58(a) of the same decision, the first round of international consultation and analysis (ICA) will be conducted for non-Annex I Parties commencing within six months of the submission of their first BURs. The process of ICA includes two steps: the technical analysis of the submitted BURs, followed by a workshop on the facilitative sharing of views under the Subsidiary Body for Implementation.

This summary report presents the results of the technical analysis of the first BUR of Andorra undertaken by a team of technical experts in accordance with the modalities and procedures contained in the annex to decision 20/CP.19

GE.16-10732(E)

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ICA - Technical Analysis

The TTE, in consultation with Andorra, identified nine capacity-building needs related to the facilitation of reporting in accordance with annex III to decision 2/CP.17 and to the participation in ICA in accordance with annex IV to decision 2/CP.17, taking into account Article 4, paragraph 3, of the Convention. **Key capacity-building needs prioritized by Andorra are summarized** in chapter II.D of the report.

a) Further **understanding the UNFCCC reporting guidelines on BURs**, the specific reporting requirements and the level of detail expected with respect to reporting information on mitigation actions and their effects, and identifying mitigation actions and how to group them in a coherent manner;

b) **Establishing methodologies to estimate the GHG emission reduction effects of mitigation actions**;

c) Developing a domestic **MRV system** that is able to generate the required information in a **more automated way**;

d) **Enhancing the technical capacity to collect historical data** in order to improve the time-series consistency in the AFOLU sector and to improve the data quality in the transport sector;

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ICA - Technical Analysis

e) **Improving** institutional arrangements for GHG inventories, in particular, **the archiving system**;

f) **Improving the transparency on uncertainties** associated with activity data and emission factors;

g) Capacity-building to **reinforce local expertise on QA/QC**;

h) **Training national experts** on the use of techniques for using a proxy to fill in gaps or lack of **data to estimate emissions of F-gases**;

i) Capacity-building to reinforce the understanding and the **importance of the reporting of constraints and gaps** in the BUR.

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ICA - Facilitative Sharing of Views

Paragraph 6 of annex IV to decision 2/CP17, Parties are allowed to submit written questions in advance of the workshop for the facilitative sharing of views to those Parties undergoing FSV

The period to submit written questions in advance is open to all Parties from **01 to 31 October 2016**

France has submitted 2 written questions to **Andorra**

31/10/2016 10:04

New Zealand has submitted 1 written questions to **Andorra**

31/10/2016 12:54

Peru has submitted 2 written questions to **Andorra**

03/11/2016 15:41

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ICA - Facilitative Sharing of Views

France has submitted written questions to Andorra

d) mitigation actions and their effects

Drivers in the reduction of total emissions between 2005 and 2011

What have been the main drivers in the reduction in total emissions observed between 2005 and 2011?

The scenario with existing measures reduces these emissions in 67,37 Gg CO2 eq. (a reduction of 10,5% compared with the BAU scenario) and its measures already contribute to reduce a 16,7% (2011).

-39,4%/BAU

PnR

-57,7%/BAU

Pla de Sanejament

Waste sector

The subcategory «Waste Water Treatment and Discharge» has decreased with the introduction of wastewater treatment plants (WWTPs) included in the sanitation plan of Andorra (1998-2010) and the selective sorting that reduced waste incineration (1995) and waste to power plant (2006).

The combination of emissions and GHG projections in categories C and D of Chapter 4 of the inventory allows to estimate a 44.6% reduction (-8.0 Gg CO2 eq.) In terms of emissions dioxide carbon equivalent, between the scenario with existing measures and the business as usual scenario, by 2050.

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ICA - Facilitative Sharing of Views

France has submitted written questions to Andorra

d) mitigation actions and their effects

Drivers in the reduction of total emissions between 2005 and 2011

What have been the main drivers in the reduction in total emissions observed between 2005 and 2011?

Energy sector

- Implementation of stringent technical requirements for energy efficiency in buildings (2010)
- Opening of the photovoltaic power generation from small producers (less than or equal power to 500 kW) (2010)
- Economic and preferential loans and aids for the rehabilitation of the building, by rewarding energy efficiency, improving heat producing elements (2011)

Engega program, which provides a help line for the purchase of low-emission vehicles (below 120 g CO2 / km).

Transport: 387 to 351 Gg CO_2 eq.
Commerce / Institutional / Residenial: 194 to 144 Gg CO_2 eq.

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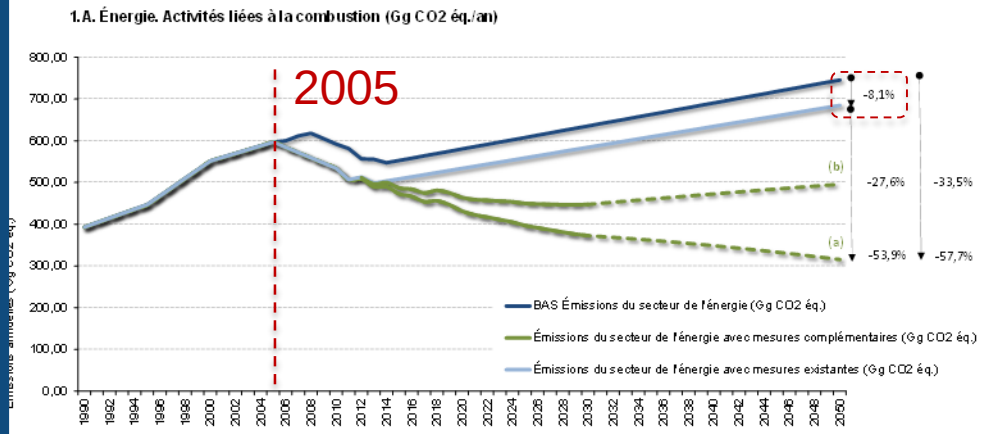
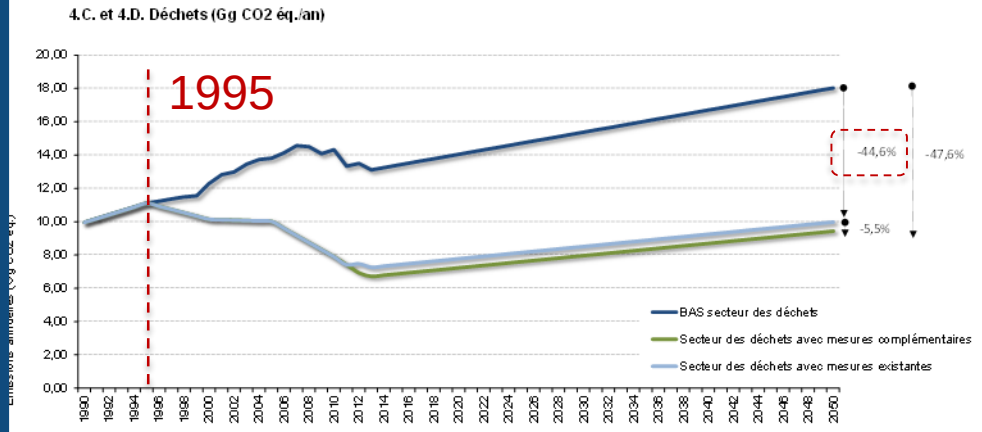
ICA - Facilitative Sharing of Views

Energy sector



Waste sector



Other sectors

Stabilization or increase in emissions or removals

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ICA - Facilitative Sharing of Views

France has submitted written questions to Andorra

d) mitigation actions and their effects

Impacting actions contributing to the reduction expected in the with additional measures projection

The with additional measures projection shows a significant reduction of emissions compared to the business as usual projection. What are the most impacting actions contributing to this reduction?

Assumptions presented in Annexe VI

Energy efficiency in the building: Values from the White Paper on Energy. Target of reducing 20% of heating diesel consumption for 2020.

Energy consumption: Values from the White Paper on Energy. Increasing of 1,5% annually until 2014, 15% in 2020 compared to 2009 (savings), average percent reduction declining between 2014 and 2020 and after 2020, gradual decline starting from -1.5%, - 1.4% -1.3%, etc.

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ICA - Facilitative Sharing of Views

France has submitted written questions to Andorra

d) mitigation actions and their effects

Impacting actions contributing to the reduction expected in the with additional measures projection

The with additional measures projection shows a significant reduction of emissions compared to the business as usual projection. What are the most impacting actions contributing to this reduction?

Power consumption: Adapted values from the White Paper on Energy, based on population projections and population equivalent used for BUR1 of Andorra, and in the same ratio between energy sources of the White Paper 'energy. Increased consumption until 8 MW.h / pers. in 2016, and gradual reduction until 2030 with 6.6 MW.h / pers.

Photovoltaic electricity: Values from the White Paper on Energy. annual increase of 15% from 2014, to 5.693 MW.h estimated in 2030.

Production of wind power: Values from the White Paper on Energy.

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ICA - Facilitative Sharing of Views

France has submitted written questions to Andorra

d) mitigation actions and their effects

Impacting actions contributing to the reduction expected in the with additional measures projection

The with additional measures projection shows a significant reduction of emissions compared to the business as usual projection. What are the most impacting actions contributing to this reduction?

Cogeneration systems: Adapted from the values of the White Energy, according commissioning (1) of the Soldeu cogeneration plant in 2016 (15,000 MW.hélec 20,000 MW.htherm, consumption 159 TJ.. LPG), (2) the central Comella in 2018 (25,000 MW.hélec. 30,000 MW.htherm., 270 LPG consumption TJ) and (3) of the center of Pas de la Casa in 2020 (MW.hélec 15,000. 20,000 MW.htherm., 161 LPG consumption TJ).

Heating: Suitable values from the White Paper on Energy, based on the assumptions below, and in detriment of heating diesel consumption.

Penetration of electric vehicles: Values from the White Paper on Energy. expected penetration for 2050 of 50% of electric vehicles compared to the national fleet, and constant linear projection between 2011 and 2050.

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ICA - Facilitative Sharing of Views

New Zealand has submitted written questions to Andorra

a) General

Preparations of second BUR

What specific findings from the technical analysis report is Andorra considering to prioritize for the preparation and publication of its second BUR?

It is important to note that Andorra has been working for months on drafting the BUR2. Taking into account that the ICA process of the BUR1 is not finished yet, it is difficult to consider certain aspects of the methodology or improving certain aspects of hypothesis or national emission factors.

Improvements can possibly be considered for incorporation of information about sectoral report tables in the inventory section of the BUR (Decision 2/CP.17, annex III, paragraph 6), even if Non-Annex I Parties are only encouraged to. Idem for information on international market mechanisms.

Note the 9 capacity-building topics identified

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ICA - Facilitative Sharing of Views

Peru has submitted written questions to Andorra

e) constraints and gaps, and related financial, technical and capacity building needs, included support needed and received , f) information on domestic measurement, reporting and verification

Methodology to define support need

Do you use any methodology to define support need for the preparation of your BUR?

No. The Principality of Andorra was new to this process as the country ratified the Convention on 2nd March 2011 and it came into force on 31st May of the same year. To fulfill its obligations, and as a non-Annex I, Andorra submitted a project to the GEF

The project proposal was also in accordance with Objective 6 of GEF-5's Climate Change Focal Area Strategy and Strategic Programming, which provides support for enabling activities and capacity building of Non-Annex I countries that is funding for the preparation of NCs in a timely manner at a full-agreed cost. The project was estimated to 852,000 $, and was worked in collaboration with the expert appointed by UNEP to assist Andorra in its beginning.

Presentació

Govern d'Andorra

1 2 3

ICA - Facilitative Sharing of Views

Peru has submitted written questions to Andorra

e) constraints and gaps, and related financial, technical and capacity building needs, included support needed and received , f) information on domestic measurement, reporting and verification

Main challenges on the gathering information process

What are the main challenges that you face on the gathering information process? And how do you address those challenges?

On one side, Andorra has a department of statistics with data in different sectors. On the other hand, data concerning the areas of energy and waste are relatively well known. Andorra has faced a lack of information regarding retail developments about land use and land use changes. In this sense, to remedy it, the use of "other uses" was needed in the inventory category “LULUCF”. This same lack of information is highlighted on the use of industrial products such as F-gases.

Presentació

Govern d'Andorra

Presentació

First Biennial Update report (BUR1) from Andorra

International Consultation and Analysis

Step 2. Facilitative Sharing of Views (FSV)

Andorra
Principat d'Andorra
Andorra la Vella

Bandera | *Escut*

Lema: Virtus Unita Fortior *(la unió fa la força)*

Himne nacional: el Gran Carlemany

Codi ISO: 020 / AND

0,00112%
global emissions

Thank you for your attention

Ministry of Environment, Agriculture and Sustainability
Marrakech, november 10, 2016

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