

**REPUBLIC OF TUNISIA**



***TUNISIA'S SUBMISSION TO SBSTA ON MATTERS  
RELATED TO METHODOLOGICAL ISSUES UNDER  
THE PARIS AGREEMENT***

*Ref : SBSTA/2019/2 (para. 115 à 125),  
SBSTA/2019/5 (para. 64) et SBSTA/2019/L.3*

## **OUTLINE:**

### **Introductory remark**

***a) The Tunisian experience of transition to the 2006 IPCC Guidelines for GHG inventory, the use of Common Reporting Format, and the development of country-specific tools for facilitating GHG inventory reporting***

- 1. Development of the GHG inventory of Tunisia**
- 2. Use and transition to the 2006 IPCC**
- 3. Development of a country-specific tool to facilitate the production, compilation and reporting of the GHG inventory**
- 4. The Tunisian experience in using the Common Reporting Format**
- 5. Feedback, key messages, and recommendations**

***b) Tabular format tables for tracking progress in implementing and achieving nationally determined contributions***

- 1. GHG Mitigation goals**
- 2. Adaptation goals**
- 3. Institutional framework**

## INTRODUCTORY REMARK

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The conclusions of the SBSTA 50,<sup>1</sup> in paragraph 125 (under point 10 of the agenda for “Methodological Issues related to the Paris Agreement”), invite the Parties to communicate their views on the issues related to the mandate contained in decision 18/CMA (*Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement*), and specifically on the following methodological issues:

- a) Experience with using the IPCC 2006 IPCC Guidelines for National Greenhouse Gas Inventories, the common reporting format, the transition to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and countries’ experience with that transition, and the development of country-specific tools for facilitating GHG inventory reporting;
- b) Common tabular format tables for tracking progress in implementing and achieving nationally determined contributions;
- c) Tables for reporting on support needed and received, and support mobilized;
- d) Approaches to operationalizing the flexibility for those developing country Parties that need it in the light of their capacities, as defined in decision 18/CMA.1.

Tunisia is pleased to submit its views on the two points (a) and (b).

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<sup>1</sup> Cf. [https://unfccc.int/sites/default/files/resource/sbsta2019\\_02E.pdf](https://unfccc.int/sites/default/files/resource/sbsta2019_02E.pdf)

*a) The Tunisian experience of transition to and the use of the 2006 IPCC Guidelines for GHG inventory, the Common Reporting Format, and the development of country-specific tools for facilitating GHG inventory reporting*

# 1

## DEVELOPMENT OF THE GHG INVENTORY OF TUNISIA

### History of the development of the full national GHG inventory in Tunisia

- ◆ Tunisia carried out five complete GHG emissions inventories:
- ◆ The **1994** GHG inventory in the framework of its Initial National Communication (1NC), published and submitted in 2001.
- ◆ The **2000** GHG inventory in the framework of its second National Communication (2NC), published and submitted in 2014.
- ◆ The **2010** GHG inventory in the framework of the preparation of the first biennial report (1BUR), submitted in December 2014.
- ◆ The **2011** and **2012** GHG inventories in the framework of the preparation of the second biennial report (2BUR), and its third national Communication (3NC).

### History of the development of partial GHG inventory in Tunisia

During the intermediate phases, Tunisia carried out successive series of **GHG inventories** for the **energy sector**, as well as for **industrial processes**

The early inventory operations targeting specifically the energy sector, started in 2000, at the initiative of the National Energy Conservation Agency (Agence Nationale de Maîtrise de l'Energie-ANME), relying on a taskforce that was created specifically for that purpose. This Task-force included Executives from ANME and various actors from the energy sector.

During this period, the GHG inventories of the energy sector had been undertaken for 1997, then for 2000, and then for the entire 1990-2000 period. Another project has initiated a full GHG inventory work for energy sector covering the entire 1980-2006 period. These latest projects were later completed for 2007-2008, and then lastly for 2009.

Later, the energy GHG inventory was covered in the framework of the production of the national GHG inventories for years 2010, 2011 and 2012 as mentioned above.

In addition, an **inventory operation** was also carried out for **industrial processes**, for the entire 2000-2009 period.

Thus, we can conclude that there is a historical series of GHG inventories for energy from 1980 to 2012, and for industrial processes from 2000 to 2012. Though complete, such time series for energy and industrial processes may probably not be totally coherent. In fact several methodological refinements and improvements in activity data & Emission factors had taken place during the preparation of 2010-2011-2012 GHG inventories. Such improvement could not be extended over the entire series.

These numerous inventory operations for energy and industrial processes made it possible to constitute stable teams (especially for energy) and create a permanent dynamic to improve the quality of GHG inventories.

This work approach was the prelude for the development of a more formal inventory framework, on the basis of which the latest complete inventories for 2010, 2011 and 2012 which covered all sectors, were carried out.

## 2

### USE AND TRANSITION TO THE 2006 IPCC

#### History of the transition to the 2006 IPCC

The first complete GHG inventory operation (1994) was carried out using the 1996 IPCC guidelines. In addition, the first inventory operations covering the energy sector carried out before 2006 (for 1997, 2000, then for the entire period 1990-2000) had obviously used the 1996 IPCC guidelines, while also building on the Good Practice Guidance for Inventory Preparation document.<sup>2</sup>

Transition to the 2006 IPCC methodology was automatic for all GHG inventory operations which took place after 2006.

Thus, the 2000 national inventory carried out in 2010 in the framework of the 2<sup>nd</sup> National Communication of Tunisia had automatically applied the 2006 IPCC. The same holds true for the national inventories covering: (i) 2010 in the framework of the preparation of the BUR1 and INDC, then (ii) 2011 and 2012 in the framework of the preparation of the BUR2 and 3<sup>rd</sup> National Communication.

In addition, the partial inventories covering energy for 1980-2006, and later industrial processes for 2000-2009, had also automatically applied the 2006 IPCC.

In summary, the complete GHG inventory (all sectors included) of Tunisia, based on the 2006 IPCC, is available for four years: 2000, 2010, 2011 and 2012.

A partial inventory for energy is also available based on the 2006 IPCC for the entire 1980-2012 period.

Lastly, partial inventories for industrial processes are also available based on the 2006 IPCC for the entire 2000-2012 period.

A summary overview of inventories carried out to this day is listed in table format, as follows:

**Summary Table of GHG inventories carried out in Tunisia**

Methodology used	1996 IPCC	2006 IPCC
<b>Complete National Inventory</b>	1994	2000-2010-2011-2012
<b>Energy Inventory</b>	1994-1997-2000	Whole period from 1980 to 2012
<b>Industrial processes Inventory</b>	1994	Whole period from 2000 to 2012

<sup>2</sup> Good Practice Guidance for Inventory Preparation. IPCC, 2000.

As shown, transition from the 1996 IPCC to the 2006 IPCC was not an issue, the Tunisian approach always supported the use of the latest methodological approaches.

To facilitate this transition, the supporting projects always focused on providing the necessary additional capacity building targeting the actors involved in GHG inventories to upgrade to the latest methodology.

Training programs executed after 2006 systematically focused on:

- ◆ New methodological recommendations and orientations of the 2006 IPCC,
- ◆ The recommendations of Good Practice Guidance for Inventory Preparation 2000,
- ◆ The differences between the new approaches of the 2006 IPCC compared to those of 1996

The training programs on new methodological recommendations focused especially on:

- ◆ The systematic use of decision trees to better map emission processes and match the best practices in choosing “Tiers”, emission factors and activity data.
- ◆ The use of basic rules for improving the quality of the inventory: -completeness (full coverage of the sectors studied), estimate of uncertainties (both for emission factors and activity data), quality assurance/ quality control (using ISO type international standards).
- ◆ Expanded lists default emission factors and activity data.
- ◆ The use of data interpolation methodologies/techniques when data were not available.
- ◆ Availability in the 2006 IPCC of practical examples of the implementation of recommendations, explanations, and scientific discussions namely through links to other documents and truly clear instructive diagrams.
- ◆ Cross-checking with international data held by IGES (IPCC Emission Factor Data Base), and the setup of links with CORINAIR data (e.g. NO<sub>x</sub>, CO, COVNM and SO<sub>2</sub>). It is especially on such data that there is also a real contribution, given the rigor with which CORINAIR databases are developed.
- ◆ The use of the “key –source categories” approach. This will allow us to better focus on the most significant emission sources/removals in order to apply as much as possible more elaborate methods to calculate emissions; e.g. Tier 3.
- ◆ Refining certain “Reporting” points, namely for emissions related to stationary sources of energy.
- ◆ Development of the form and content of reporting, documentation and worksheets drafted during the inventory.
- ◆ The methods for calculation of fugitive emissions linked to the various stages of transport all the way to the geological capture of CO<sub>2</sub>.
- ◆ Implementation of quality assurance and quality control recommendations.
- ◆ Integration of Good Practice Guidance for Inventory Preparation, 2000 “GPG 2000” and “GPG LULUF2”: Thanks to the 2006 IPCC, it was easier for users to refer and link among those references to estimate the GHG emissions of a given sector.

Transition from the 1996 IPCC to the 2006 IPCC was generally fluid, at least in terms of capacity building of the actors involved in GHG inventory. They were able, without any major difficulties, to assimilate and harness the methodological recommendations.

One should note that in the first post-2006 inventory operations, difficulties were mainly related to the implementation of the new methodological recommendations, which required more detailed approaches for assessing emissions. There were many obstacles to the availability of activity data and emission factors which had to be resolved in order to significantly improve emissions estimates. It was not always possible to strictly apply the recommendations of the 2006 IPCC due to these obstacles.

Furthermore, the very tight deadlines for submission of the inventory reports, and the absence of fully dedicated teams for inventory work, did not always allow to fully comply with the recommendations of the 2006 IPCC, and to go further into details in the calculation.

Obstacles have been mostly overcome during the preparation of the last inventory covering 2011 and 2012.

### State of the art of the use of the 2006 IPCC for the latest national inventory (2011 and 2012)

#### ➤ Documentation of methods and data

From one project to another, the modalities for documenting methods, activity data and emission factors improved substantially. The results of the 2010 national inventory were accompanied with detailed methodological annexes describing the methods and hypotheses used. For the 2011 and 2012 inventories, the annexes were even more detailed.

Finally, and at the initiative of the UNDP, in November 2017 a set of inventory guidelines, adapted to the Tunisian context, were added to the documentation on methods, activity data and emission factors for Tunisia's specific case.

These guidelines,<sup>3</sup> brought all the necessary clarifications for a better understanding of the Tunisian GHG inventory and a more user-friendly replication of GHG inventory in Tunisia. Obviously, the 2006 IPCC guidelines remain the ultimate reference guide, but the guidelines developed in Tunisia and adapted to the Tunisian context, allow a much more direct and easier access to the methods and assumptions, while at the same time referring to the relevant chapters of the IPCC when the reader wishes to look further into one issue or another.

These methodological guidelines are also intended as tools for transparency, since they will be updated according to the assumptions and data used from one inventory to another and will systemically accompany inventory reports.

The above-mentioned guidelines specify the Tier levels used for each relevant emission source and recall that the latest 2011-2012 inventory operations stressed the maximization of Tiers, for the choice of activity data and emission factors.

#### ➤ Completeness analysis

According to the recommendations of the 2006 IPCC guidelines, national GHG inventories must be subject to a detailed completeness analysis. Completeness of calculations involves covering all

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<sup>3</sup> Published in 6 separate volumes: **GUIDELINES for Green House Gas 'Inventory in Tunisia (December 2017) - Volume 1**: Introduction, General and technical Procedures, **Volume 2** : energy sector, **Volume 3** : Industrial processes sector, **Volume 4** : agriculture, Forestry and other land uses, **Volume 5** : Waste sector, **Volume 6** : Key-Sources and uncertainties.

categories and sub-categories of emission sources. Inventory reporting shall document gaps in terms of data and provide a qualitative assessment of the importance of the estimate in relation to total emissions.

Inventory best practices recommend completing information for all entries, and in case of absence or gap in data; to use qualitative notation keys. Even if the Tunisian inventory was carried out by maximizing completeness, it is likely that there are still some gaps in terms of use of qualitative notation keys, which may limit understanding for outside parties, and could thus weaken the transparency of the inventory.

It is clear that an additional effort will have to be made in this direction in order to correct this gap in the Tunisian GHG inventory.

➤ **Key categories analysis**

In accordance with IPCC 2006 recommendations, Tunisia's national GHG inventory included comprehensive key sources analysis.

In the 2010 inventory, the analysis of emission sources/removals went down to the disaggregation level of 23 key sources.

In the 2011 and 2012 inventories, the key-source analyses were carried out in much more detailed manner. Thereby, 54 key-emission sources/removals had formed the complete table of key sources.

➤ **Uncertainty analysis**

In accordance with the recommendations of the 2006 IPCC, Tunisia's national GHG inventory for 2010, 2011 and 2012 included an uncertainty analysis. This assessment was based on the so-called Tier 1 method, which was possible to apply in the Tunisian context.

In the 2010 inventory, uncertainty analyses were carried out for the first time in Tunisia. 34 emission sources had been included in these uncertainty analyses.

In the 2011 and 2012 inventories, uncertainty analyses were carried out in much more detailed manner. Thus, 129 different emission sources/removals had been included in the uncertainty analyses. In addition to the fact that the uncertainty analysis now covers nearly 100% of emissions/removals, the desegregation of emissions/removals substantially improves the uncertainty analyses, mainly thanks to the following factors:

- ◆ Assignment of the appropriate uncertainty directly to initial data, as upstream as possible of the calculations, which allows us to give much more reliable estimates in relation to the context
- ◆ Assignment of the appropriate uncertainty at the finest levels, even at a given fuel level
- ◆ Assignment of the appropriate weighted uncertainty according to the respective weights of each sub-source
- ◆ A better alignment with the uncertainty coefficients of the 2006 IPCC, which often suggests coefficients at the finest levels of default emission/absorption factors. This finer approach allowed to better comply with the IPCC recommendations, and to limit to the maximum the recourse to rough approximations and expert views in estimating uncertainties related to emission factors.



The calculation of uncertainties has proven to be an exercise of the utmost importance, since it is now on the basis of the uncertainties that the emission sources which require the most attention in the Tunisian context have been identified, for the improvement of calculation methods, as well as the determination of activity data and emission factors. Estimates of uncertainties lead to the establishment of in-depth consultations with specialized national experts in emission sources, which widens the expertise base of the inventory. In addition, uncertainties are a fundamental criterion justifying the identification and more accurate assessment of the necessary resources to initiate the works aimed at improving inventory calculations for the most relevant emission sources.

➤ **Quality Assurance (QA) and Quality Control (QC) of data and results**

Chapter 6 of the 2006 IPCC recalls all the practical considerations of the QA/QC system, by detailing level 1 and level 2 control lists, as well as verification methods. These recommendations were implemented in Tunisia, to the best of available human resources, in the framework of the preparation of the 2010, 2011 and 2012 inventories, through:

- ◆ A **direct** approach, where a member of a sectorial or source inventory team– always made up of pairs, reviews and eventually revises the data and the results of his/her colleague's work.
- ◆ A **joint** approach, where a colleague from the same sector, involved **in another inventory source**, reviews the work of his/her colleague.
- ◆ A **totally neutral level**, where the inventory is fully reviewed by outside independent experts (national or international).

Given the lack of resources, at national level of reviews, it is mostly the joint approach that was applied for the 2010, 2011 and 2012 inventories. However, due to the lack of personnel, the reviews of the inventory results were not always complete.

On the other side, inventory operations were, as a voluntary initiative, all systematically subject to an external review process. These reviews proved to be valuable, and allowed the teams to readjust inventory calculations, and also to understand the toughest extreme quality requirements as well as reporting and of methodological transparency rules.

## 3

### **DEVELOPMENT OF A COUNTRY-SPECIFIC TOOL TO FACILITATE THE PRODUCTION, COMPILATION AND REPORTING OF THE GHG INVENTORY**

Since the beginning of the development of the inventory in Tunisia, electronic systems have been developed as a support for data processing, as well as the compilation and automatic editing of results. At the early stage it was the EXCEL-based IPCC application which was used. Later, and for the 1980-2006 inventories for the energy sector, a personalized application was developed to systematize data collection and compilation.

Last, for the production of the 2010, 2011 and 2012 GHG inventories, an in-house EXCEL application was designed, based on the CITEPA model. This application gives the full measure of clarity and transparency, as it incorporates all calculations, reference sources, dates of adding and reviewing data, until the identification of the persons who made these additions and revisions.

In the last phase of the inventory, an automatic application extracts the necessary data and edits them into the “Common Reporting Format” as recommended by the COP.

In parallel, and in order to allow for a rapid editing of results, summary EXCEL spreadsheets also generate all the “Common Reporting Format” tables. Thereafter, the two results are crosschecked to detect potential errors or anomalies between the two CRF versions.

In that way, crosschecking CRF tables based on the two approaches was meant as an additional QA/QC tool.

Between 2017 and 2018, design efforts were made for a GHG inventory information system. This work was based on the approach used and developed for the 2010, 2011 and 2012 inventories, while automating and formalizing the links between files, internal reviews, as well as electronic exchanges between the members of the inventory teams. Fully based on the methodological recommendations of the 2006 IPCC, this information system works as a network between the inventory team-members. This brings better transparency to the national GHG inventory process.

## 4

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### **THE TUNISIAN EXPERIENCE IN USING THE COMMON REPORTING FORMAT**

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The use of output tables according to the Common Reporting Format has generally not been problematic during the implementation of the inventory work, and more specifically those for 2010, 2011 and 2012.

The development of dedicated electronic tools (ref. section 3 above), connected to the calculation sheets and which automatically compile data as well as the results in the CRF format, greatly facilitated the edition of results. Thus, tables in the finest CRF format have been included in the BUR1, INDC, BUR2, and the 3<sup>rd</sup> National Communication.

The level of detail of CRF tables is also relevant and responds in a very adequate manner to minimum transparency requirements.

## 5

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### **FEEDBACK, KEY MESSAGES, AND RECOMMENDATIONS**

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The lessons learnt from the Tunisian experience in terms of GHG inventory, can be synthesized through the major following recommendations:

- ◆ Develop a sound institutional framework/organization, based on official texts, in order to allow inventory teams to benefit from sufficient legal backing to strengthen their expertise on methodologies, and build their capacity. Thus, the teams will be able to better

comply with the increasingly strict and rigorous rules which will be developed in the framework of article 13 of the Paris Agreement.

- ◆ The 2006 IPCC guidelines are valuable, but they may sometimes seem complicated and difficult for inventory teams' members. It is thus essential, as it was done in Tunisia, to develop sectorial methodological guidelines, which describe in a direct manner, simple and concise methodological approaches which were specifically adopted by the country, as well as the hypotheses and parameters used. These guidelines will need to be updated for and accompany each inventory report and be designed in such a way to comply with transparency requirements, and thus be subject to the COP bodies and official reviews.
- ◆ Strengthen the uncertainty component of the inventories, notably by systematizing the training of inventory teams on this aspect. This aspect was often neglected in the past, but once experienced it revealed to be a vital tool for capacity building/skill improvement of national experts, and for identifying the most relevant niches for improving national inventories quality. Inventory teams should also benefit from more detailed indications on the methods for selecting the levels of uncertainty for each source and should have access to more precise default factors. Availability of benchmarks based on examples and experiences of other countries would also be highly useful for inventory teams.
- ◆ Put an emphasis on in-depth completeness analyses, by dedicating specific training to inventory teams on methods and modalities in using notation keys.
- ◆ Organize regular training courses on IPCC guidelines, and on the practical methods for carrying out GHG inventory. These trainings will, on one hand retrain the members of inventory teams and update their knowledge of the latest methodological developments and, on the other hand, mobilize new skills and inject new blood that can ensure a new generation and take on internal review tasks recommended in the framework of the QA/QC process.
- ◆ Mobilize financial resources and develop methodological guidelines for a reconstitution of complete/full historical series; year by year, of GHG inventories, at least since 1990, by using the 2006 IPCC. Technical analysis of biennial reports submitted by developing countries, in the framework of the "International Consultation and Analysis-(ICA)" process have always highlighted the absence of complete time series of inventories, and countries do not always have the financial resources and technical bases to meet the recommendations made by the reviews.
- ◆ Design and operationalize an online application-based information system for GHG inventories, which covers all inventory operations; from data processing, data compilation, editing results according to CRF models, checking and archiving all references and sources of information, until final archiving.
- ◆ Design a procedures manual which describes the organizational framework of inventory operations (rights and obligations of data holders, the designation of inventory teams' members; as well as their respective roles, the exchange links and modalities between them, the methodological and data processing procedures, quality assurance and quality control processes, and record keeping rules and procedures.

## ***b) Common tabular format tables for tracking progress in implementing and achieving nationally determined contributions***

In order to track progress in the implementation of the NDC and its goals, each country shall submit a report, including in the form of tables and in the most transparent way possible, the main information reflecting this progress.

This table can be split into three main themes:

- ◆ Monitoring progress in terms of GHG mitigation
- ◆ Monitoring progress in terms of adaptation
- ◆ Monitoring progress regarding the Institutional framework for monitoring NDC

Tunisia's point of view is that such a table should provide the information on an annual basis, and take the generic form presented below.

<b>1. GHG Mitigation goals</b>						
<b>Year:</b>	<b>Type, goals defined in the NDC, relevant indicators, and figures for the year and for previous years</b>	<b>Description of the reference level related the target</b>	<b>Rate of achievement of the objective and positioning of the indicator achieved in relation to the trajectory established in the NDC</b>	<b>Explanation of the gap between the objective and the outcomes (e.g. methodological variations, non-mobilized resources, etc.)</b>	<b>Implications on the achievement of the ultimate objective (Emissions, Adaptation)</b>	<b>Other comments and actions to be taken</b>
1.1. Target of the GHG mitigation objective (e.g. % of emissions reduction, etc.)						
1.2. Links with GHG inventory (recalculations, potential modifications of calculation methods or level of completeness, rate of uncertainties, etc.)						

## 1. GHG Mitigation goals

Year:	Type, goals defined in the NDC, relevant indicators, and figures for the year and for previous years	Description of the reference level related the target	Rate of achievement of the objective and positioning of the indicator achieved in relation to the trajectory established in the NDC	Explanation of the gap between the objective and the outcomes (e.g. methodological variations, non-mobilized resources, etc.)	Implications on the achievement of the ultimate objective (Emissions, Adaptation)	Other comments and actions to be taken
1.3. Cross-checking with data from biennial reports						
1.4. Induced effects (co-benefits) arising from the goal/objective						
1.5. Sectorial (or GHG-sources) coverage of the GHG mitigation						
1.6. Sectorial Objectives /by source of GHG mitigation and contribution to the national mitigation objective						
1.7. Actual figures on the use of the article 6.2 mechanism of the PA						
1.8. Actual figures on the use of the article 6.4 mechanism of the PA						
1.9. Actual figures on the use of the article 6.8 mechanism of the PA						

## 1. GHG Mitigation goals

Year:	Type, goals defined in the NDC, relevant indicators, and figures for the year and for previous years	Description of the reference level related the target	Rate of achievement of the objective and positioning of the indicator achieved in relation to the trajectory established in the NDC	Explanation of the gap between the objective and the outcomes (e.g. methodological variations, non-mobilized resources, etc.)	Implications on the achievement of the ultimate objective (Emissions, Adaptation)	Other comments and actions to be taken
1.10. Actual figures on the use of domestic carbon markets						
1.11. Monitoring method and modality for all information described above						
1.12. Description of measures implemented to avoid double counting						
1.13. <b>Financial resources</b> (national and international) used to achieve mitigation goals						
1.14. <b>Capacity building resources</b> (national and international) used to achieve mitigation goals						
1.15. <b>Technology transfer resources</b> (national and international) used to achieve mitigation goals						

## 2. Adaptation goals

Year:	Type, goals defined in the NDC, relevant indicators and figures for the year and previous years	Description of the reference level related the target	Rate of achievement of the objective and positioning of the indicator achieved in relation to the trajectory established in the NDC	Explanation of the gap between the objective and the outcomes (e.g. methodological variations, non-mobilized resources, etc.)	Implications on the achievement of the ultimate objective (Emissions, Adaptation)	Other comments and actions to be taken
2.1. Target of adaptation objective (e.g. % of programme achievement, etc.)						
2.2. Links with vulnerability assessments and with adaptation programs						
2.3. Crosschecking with figures from biennial reports						
2.4. Induced effects (co-benefits) arising from the goals						
2.5. Sectorial adaptation fields						
2.6. Sectorial objectives/by adaptation theme and contribution to the national objective						
2.7. Actual figures on the integration of adaptation in the article 6.8 mechanism of the PA						

## 2. Adaptation goals

Year:	Type, goals defined in the NDC, relevant indicators and figures for the year and previous years	Description of the reference level related the target	Rate of achievement of the objective and positioning of the indicator achieved in relation to the trajectory established in the NDC	Explanation of the gap between the objective and the outcomes (e.g. methodological variations, non-mobilized resources, etc.)	Implications on the achievement of the ultimate objective (Emissions, Adaptation)	Other comments and actions to be taken
2.8. Method and modalities for monitoring all information described above						
2.9. Financial resources (national and international) used to reach Adaptation goals						
2.10. Capacity building resources (national and international) used to reach adaptation goals						
2.11. Technology transfer resources (national and international) used to reach adaptation goals						



### 3. Institutional framework

Year:	Type, goals defined in the NDC, relevant indicators, and figures for the year and for previous years	Description of the reference level related the target	Rate of achievement of the objective and positioning of the indicator achieved in relation to the trajectory established in the NDC	Explanation of the gap between the objective and the outcomes (e.g. methodological variations, non-mobilized resources, etc.)	Implications on the achievement of the ultimate objective (Emissions, Adaptation)	Other comments and actions to be taken
Institutional structure in charge of NDC tracking	<p>The columns above can be completed in a quantitative, but also qualitative manner. Some illustrative examples are shown below for clarification purposes:</p> <ul style="list-style-type: none"> <li>• Type and goals defined in the NDC (e.g. a dedicated monitoring team, made up of 4 persons),</li> <li>• Base level: absence of a dedicated team</li> <li>• Implantation rate: 50% → a team made up of 2 people dedicated to monitoring the NDC</li> <li>• Explanations: lack of resources for mobilizing personnel</li> <li>• Contribution to the NDC objective → None, but more (or less) reliable monitoring of results</li> </ul>					