

# THE UNECE CONVENTION ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS (AARHUS CONVENTION)

## TASK FORCE ON ACCESS TO INFORMATION

### ELECTRONIC INFORMATION TOOLS: CASE STUDY BY SPAIN

*[CLIMATE CHANGE SCENARIOS VIEWER WITHIN ADAPTECCA PLATFORM]*

[\[http://escenarios.adaptecca.es/\]](http://escenarios.adaptecca.es/)

## I. Description

- **1. Brief description:** As part of the AdapteCCa platform (<https://www.adaptecca.es/>), a visualization tool for climate change scenarios over Spain, has been developed. This viewer allows to visualize and download data of the last generation of regional climate change projections over Spain.
- **2. Type:** [governmental]
- **3. Scope:** [national, local]
- **4. Working language(s):** Spanish
- **5. Target users:** experts, organizations, institutions and active agents in the adaptation community and the general public
- **6. Starting year:** 2018
- **7. Budget and funding source:** The viewer has been developed with the support of the LIFE Shara project (<http://www.lifeshara.com/en>) “Sharing awareness and governance of adaptation to climate change”, coordinated by the Ministry for the Ecological Transition through the Biodiversity Foundation
- **8. Contact:**  
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## II. Implementation

- **9. Policy, legal and institutional context:**

AdapteCCa is an initiative of the Spanish Climate Change Office and the Biodiversity Foundation, which identified the need for a tool for information exchange and communication among all experts, organizations, institutions and active agents in this field, at all levels. The AdapteCCa platform for exchange of information on impacts, vulnerability and adaptation to climate change facilitates coordination and transfer of information, knowledge and experiences in this field between the different Spanish administrations and the scientific community, planners and managers, both public and private, and other agents, allowing a multi-directional communication channel between them.

The National Adaptation Plan to Climate Change (PNACC; <https://www.miteco.gob.es/es/cambio-climatico/temas/impactos-vulnerabilidad-y-adaptacion/plan-nacional-adaptacion-cambio-climatico/default.aspx>) is the general framework for the activities of assessing impacts, vulnerability and adaptation to climate change in our country. In this context, AdapteCCa contributes to reinforce the structure of the PNACC axis of mobilization of actors and the pillar coordination between administrations.

The compilation and production of Regional projections of climate change at the national level is also a basic task of the National Plan of Adaptation to Climate Change (PNACC), through Scenarios-PNACC. The first version (2012) was based on IPCC-AR3 information and two national strategic actions (ESCENA and ESTCENA). Recently, an update of these regional scenarios has been carried out from IPCC-AR5 and from the CORDEX and VALUE projects (with the participation of AEMET and CSIC-UC), providing daily gridded and point series of different variables and indices for multiple scenarios and models. This data is the base of the viewer of climate change scenarios developed within the framework of the AdapteCCa platform to provide users with interactive analysis and access to this information.

- **10. Partner organizations involved:** the climate change viewer is implemented in partnership with the Spanish Climate Change Office, the State Meteorological Agency (AEMET), the Spanish National Research Council (CSIC) and the Biodiversity Foundation

The development of this Viewer led in July 2018 to the creation of a new working group called “PNACC Scenario WG” where representatives from OECC, FB, AEMET and CSIC regularly meet to revise issues, work on new developments, etc.

- **11. Stakeholders involved, their expected benefits:** Climate change scenarios are the fundamental basis for identifying climate change impacts and proposing adaptation measures that respond to the effects of climate change at the regional or local level. To this end, it is essential to have regionalized information on climate change projections.

The objective of the AdapteCCa Scenario viewer is to provide this information in an affordable way that responds to the needs of the adaptation community in all sectors affected by climate change in Spain.

To this end, different strategies have been established to receive and assess the proposals and needs of the different sector stakeholders, allowing improvements to be included in the viewer according to their needs. The PNACC Scenario Working Group is responsible for evaluating these proposals and approving new developments that allow the viewer to respond more and more completely to adaptation needs.

**12. User needs and methods of their assessment:** A set of informative and useful documents is included and often updated: a user guide, data description handbook, terms of use regarding data and the new “Scenarios PNACC 2017”.

The Viewer is an open tool on continuous improvement where anyone can send proposals, suggestions, etc. In this sense, up to now, several proposals and questions have been received through the contact forms included in the viewer since its launch. The PNACC Scenario Working Group is responsible for evaluating these proposals and approving new developments, taking into account that the objective of this tool is to work on a continuous improvement basis with the idea of gradually making this tool even more useful and more user oriented.

In order to train on the use of the Viewer at a technical level (it is important for experts to know its limitations together with good practices and recommendations) we are developing courses and workshops for researchers and technicians that are an opportunity to exchange the needs identified by the adaptation community.

**13. Technology choice:** This viewer allows to visualize and download data of the last generation of regional climate change projections over Spain. Two kinds of projections are available: those produced with statistical methods, which are part of the Spanish PNACC, as well as projections produced with regional models of the atmosphere inside the European branch of the international meta-project CORDEX (Euro-CORDEX).

The objective of the Viewer is to facilitate the consultation of the regional climate change projections by allowing consultations according to different geographical regions (administrative regions, protected areas, river basins, etc.), together with different climate variables and in relation to the different climate change Scenarios. The results are visualized through maps and graphs and raw data is available for downloading also.

### III. Evaluation

- **14. Results:** Regional projections of climate change are key information to carry out impact and adaptation studies in different socio-economic sectors. The Climate Change Scenario Viewer is highly valued by users and the adaptation community. Visits and surveys regarding these websites present very positive results (website visits have increased by 260%) which are positioning them as reference adaptation knowledge and data sites.

We have used the surveys and interviews carried out within the evaluation of the Spanish PNACC to include and gather information on opinions, needs and proposals of AdapteCCa and the Viewer from the adaptation community. The Viewer is highly valued as a very up-to-date tool, rigorous tool that is catalysing research, and it is one of the resources more used within AdapteCCa

**15. Efficiency gains:** The goal of the viewer is to easily provide access to the last generation of regional climate change projections over Spain. In order to achieve this, the user is kept unaware of the specific data formats used by the models. In addition, some of the transformation operations most demanded by

the final users are offered: spatial filtering, temporal aggregation, computation of specific indexes or anomaly computation.

- **16. Risks:** The updating of global climate change scenarios and the improvements in regionalization techniques require periodic updating of the information contained in the viewer so that it responds to the best available science. In this way, it is foreseen that the viewer will have to be updated in the coming years based on the global scenarios of the models used in the IPCC Sixth Assessment Report (AR6).
- **17. Challenges encountered (please indicate resolved or not):** The AdapteCCa scenario viewer is being updated periodically to incorporate data and functionalities that provide a better response to the needs of its users. However, the adaptation community is very diverse and needs very varied data on climate variables and their projections in the future. The AdapteCCa scenario viewer aims to be a versatile and intuitive tool that can be used by all types of users, so the PNACC Scenario Working Group has to assess on a case-by-case basis all requests made by users and select those that really respond to a general interest.

Moreover, it is important for experts to know the limitations, good practices and recommendations for a proper use of the viewer from a technical point of view. In order to respond to this need, courses and workshops adapted to each type of user are being organised.

**18. Lessons learned:** The development of a dynamic tool that responds to user needs and incorporates up-to-date data such as AdapteCCa's Climate Change Scenario viewer requires highly structured governance. The PNACC scenario Working Group plays a fundamental role in planning new viewer developments, responding to user queries and requests, and providing the training needed to use the viewer properly, among other functions.

- **19. Conditions for successful replication:** The fundamental basis for the development of the AdapteCCa scenario viewer has been the generation of regionalized climate change projections (Scenarios-PNACC). The availability of this data has allowed the generation of a tool to access this information in a simple way.

In addition, the collaboration between different institutions in a stable way allows the tool to have a very user-oriented approach while taking advantage of the best available knowledge on climate and technology.

- **20. Overall assessment of the tool:** The AdapteCCa Scenario Viewer is a very useful tool for the adaptation community in Spain. Its user-oriented approach and user-friendliness allow it to be consulted by a wide variety of actors involved in adaptation to climate change. Access data to the viewer and user assessments show that it is responding to a need for important information, as climate change projections serve as a basis for assessing the possible impacts of climate change in Spain.