

EVALUATION REPORT OF THE SPANISH NATIONAL CLIMATE CHANGE ADAPTATION PLAN



EXECUTIVE SUMMARY

The Spanish National Climate Change Adaptation Plan (PNACC in Spanish) has been, since 2006, the reference framework for public efforts to generate knowledge and build adaptive responses to climate change in Spain. In 2018, the Ministry for the Ecological Transition set itself two objectives:

- ✎ To evaluate in depth the current PNACC in order to assess the progress achieved, the pending challenges and the lessons learned. This process took place in recent months and its results are described in the present document.
- ✎ To formulate an updated PNACC for the 2021-2030 period, which should incorporate new international commitments and the most recent knowledge about the risks arising from climate change, drawing from the experience gained during the implementation of the current PNACC.

This evaluation process has been carried out within the framework of the [LIFE SHARA project](#) 'Sharing Awareness and Governance of Adaptation to Climate Change', which aims to collaborate in the construction of a society better adapted to climate change, cooperating with all actors involved, generating knowledge and increasing social awareness. This initiative began in September 2016 and will run until February 2021. The partners in this venture are the Spanish Office for Climate Change, Fundación Biodiversidad (Biodiversity Foundation), the National Parks Autonomous Agency, the Spanish Meteorological Agency (AEMET), and the Portuguese Environmental Agency.

This evaluation process is fully in line with the requirements of the different international agreements signed by Spain, in particular the obligations established under the [United Nations Framework Convention on Climate Change \(UNFCCC\)](#), the [Cancun Adaptation Framework](#) and the [Paris Agreement](#).

Furthermore, it is consistent with the guidelines defined in the [European Union's Climate Change Adaptation Strategy](#) and [its evaluation](#), and takes into account communication needs concerning adaptation, as determined both by [Regulation 525/2013 of the European Parliament and of the Council of 21 May 2013](#)¹, and by the new regulation on [Governance of the Union for Energy and Climate Action \(EU Regulation 2018/1999\)](#).

The process collected the necessary information for completing both the European system of adaptation markers (the *adaptation preparedness scoreboard*), for which Spain sent its [first report in June 2018](#), and the [country profile](#) on the European Climate Adaptation Platform ([Climate-ADAPT](#)).

Additionally, this evaluation process has taken into account the relevant indications set forth in the [Better Regulation Guidelines \(SWD \(2017\) 350\)](#), in particular those regarding the principles and key questions that an evaluation should be answering. It has also implemented the recommendations set forth in the document ["Environment and climate policy evaluation" \(EEA](#)

¹ MMR Regulation, concerning a mechanism for monitoring and reporting greenhouse gas emissions, and for reporting (at the national or Union level) other information that is relevant to climate change.

Report No 18/2016, which identifies the following criteria for evaluating environmental policies at the European level: relevance, effectiveness, efficiency, coherence and added value.

The in-depth evaluation of the current PNACC was planned and executed around four main lines of work, which were carried out in parallel starting at the beginning of 2018 up until mid-2019. These are specifically:

- E1 | The setting up of an advisory group that included experts from European, national, regional and local institutions, academia and NGOs. It has accompanied the whole process, proposing orientation and approaches for the process.
- E2 | A synthesis of the documents derived from the PNACC: the document of the Plan itself, the three Work Programmes and the four Monitoring Reports.
- E3 | A detailed analysis of the state of execution of the measures included in the PNACC and its Work Programmes, both sectoral and transversal, looking into the implementation of actions related to the four axes and two pillars around which the Plan is articulated.
- E4 | A consultation was made to a large number of institutions and individuals (more than 300) that have been participating in the implementation of the current PNACC.

Five global evaluation criteria were defined – the same as those used in **the evaluation of the European Strategy on Adaptation**, which, in turn, were defined by the European Commission in 2017 in the **Better Regulation Guidelines** (SWD (2017) 350): relevance, effectiveness, efficiency, coherence and added value. These five evaluation criteria are articulated around 11 key questions:

- ❏ To what extent have the objectives and actions contained in the PNACC and its Work Programmes corresponded with the identified adaptation needs?
- ❏ Has the PNACC been relevant to key stakeholders in the field of adaptation in Spain (the central government, regional governments, municipalities, private sector, etc.)?
- ❏ To what extent have the objectives set out in the PNACC and its work plans been achieved?
- ❏ To what extent has progress been made, specifically, in the four key axes set out in the Third Work Programme of the PNACC?
- ❏ What issues have favoured or hindered the pursued objectives?
- ❏ What is the opinion of key stakeholders on the progress made and the remaining challenges?
- ❏ Have the appropriate resources been used in the implementation of the PNACC?
- ❏ Have they been used properly?
- ❏ Is the PNACC consistent with the commitments and directives undertaken at the global level and at the level of the European Union?
- ❏ Is the PNACC consistent with other national policies?
- ❏ What does the PNACC contribute to in comparison to other planning instruments?

As a synthesis of the evaluation process, the following sections provide details of the main achievements and lessons learned during the implementation of the Plan, together with a set of recommendations to be taken into account in the future Plan. This also includes remaining challenges and a summary of emerging issues to be included in the new PNACC.

MAIN ACHIEVEMENTS OF THE PNACC

1. The PNACC has made it possible **to place adaptation on the agendas of institutions**, both at the state level and at the regional and local levels. Today, adaptation occupies its own space in different public policies, plans and strategies implemented in almost all the autonomous territories (regions) and in many town councils (municipalities). The PNACC has become a reference for incipient public policies on adaptation, for which it has also represented a relevant formal backing.
2. The PNACC has enabled **the channelling of economic and technical resources towards adaptation**, making it possible to advance in the generation of knowledge, the mobilization of actors, raising awareness in society, and the progressive consciousness that there is a need to adapt sectors and territories to the climate crisis. The different calls for grants have proved to be useful instruments for providing resources for research regarding impacts, risks and vulnerability. In addition, existing resources have been complemented with European funding, as in the case of LIFE SHARA, which has represented an extra injection of resources into the last phase of the PNACC implementation.
3. The PNACC has effectively contributed to providing us with rigorous, exhaustive and public information on **regionalized projections of climate change** for the 21st century. It is accessible to any interested person through the **scenario viewer**², where it is presented according to the different emissions scenarios. This information is essential for research on impacts and vulnerability, and for designing adaptation measures.
4. The PNACC has enabled adaptation to make its way into research, generating **high quality knowledge on the impacts and risks of climate change, as well as on the resulting vulnerability** in different sectors and work areas. Also, although to a lesser extent, it has shined light on the relevance and suitability of certain adaptation responses. The reports elaborated within the framework of the PNACC have become a reference on the matter within the various sectors in which it has been implemented. These reports are valued positively in terms of the quality of the information, its usefulness, and the presentation of results. In addition, the calls for research grants – launched by Fundación Biodiversidad and the National Parks Autonomous Agency – are producing a data bank that is useful for advancing in the generation of knowledge.
5. The PNACC has made it possible for adaptation to enter, to a greater or lesser extent, **the agenda of relevant organizations in most sectors**, especially in those most affected by the climate crisis: water resources, agriculture and livestock, biodiversity, coasts, etc. Additionally, a growing number of third sector organizations are including climate change adaptation issues among their lines of work. All of this, to a large extent, is due to the direct and indirect influence created by the progressive implementation of the PNACC and its different measures and actions.
6. The PNACC has enabled the creation of a **web-based platform on impacts and adaptation, AdapteCCa**³, a useful tool for dissemination, consultation and work that gathers and makes available all relevant information on adaptation to climate change (*Clearing House Mechanism*), in line with the European platform Climate-ADAPT.

² <http://escenarios.adaptecca.es/>

³ <https://www.adaptecca.es/>

7. The PNACC has **raised awareness and increased consciousness among the scientific and technical sector** about the impacts and risks arising from climate change. It has also motivated this sector to research, learn and start implementing adaptation measures. Its existence and execution has served to educate about a subject that until only a few years ago was completely unknown.
8. The PNACC has made progress in **mobilizing the most relevant actors** on the subject of adaptation, incorporating them into the public debate on the subject, and opening up spaces for reflection, exchange, mutual learning and collaboration. The work developed in the framework of the PNACC thematic seminars has been pertinent in this sense.
9. The PNACC has been implemented with a **flexible approach**, open to new adaptation needs that have come up along the way. The different Work Programmes have made it possible to deploy new lines of work and to rethink measures and actions according to the demands and windows of opportunity that have appeared during their implementation. The Monitoring Reports have made it possible to reflect on and account for the progress made and the lines of work that were not being sufficiently addressed.
10. The PNACC has contributed towards **greater administrative coordination on adaptation**, especially through the work carried out by the Working Group on Impacts and Adaptation (GTIA in Spanish) – with representatives of the Central Administration and the Autonomous Regions – which has made it possible to coordinate the different strategies and plans for climate change adaptation that have been drawn up and are being implemented throughout Spain. In addition, the work of the GTIA has allowed discussion, participation and guidance regarding the main instruments and activities developed by the PNACC.
11. The PNACC has enabled significant progress in **aligning Spain in terms of adaptation, both at the international level** (particularly in relation to the United Nations Framework Convention on Climate Change and the IPCC assessments) and at the European level (specifically in relation to the European Union Strategy on Adaptation to Climate Change and its evaluation).
12. The **Spanish Office for Climate Change** has played an essential role as a national hub on adaptation, and as the body in charge of coordinating and implementing the PNACC. Its fluid relationship with the various actors has fostered an atmosphere of collaboration and mutual trust that has been basic to approach such a complex and multidimensional subject. Coordination with the technical, economic and human resources provided by Fundación Biodiversidad, the National Parks Autonomous Agency, the National Centre for Environmental Education (CENEAM), and AEMET has been important in carrying out many of the lines of work of the PNACC.

LESSONS LEARNED

1. It is essential to endow the climate change adaptation with **good strategic planning** and **sufficient human, financial and technical resources** for its implementation. The relevance and urgency of the problem requires adaptation public policies to be as resilient as possible to political changes. An interesting option is to appeal, as far as possible, to European funding sources able to complement the resources available at the state level.
2. It is essential to **be aligned with European policies on adaptation and to comply with the international commitments** that Spain has subscribed to. It is also paramount to acquire as

much knowledge as possible and at the same time contribute to global knowledge, to awareness-building, to the exchange of experiences and reflection, and to strive to ensure that adaptation has a relevant specific weight in all international forums.

3. The multidimensional nature (in sectoral, thematic and geographic terms) of the impacts, vulnerability and needs for adaptation requires that the PNACC **work jointly and in coordination with other administrative bodies (regional and local), and with the various sectors**. Stakeholder mobilization, reflection, exchange and debate, mutual learning, coordination, and collaboration are essential elements of good planning. They are key success factors in the execution of the envisaged measures and actions.
4. It is very important, when working on adaptation, to set out a plan that allows a **flexible and open approach**. Research and adaptation needs change very rapidly. The elaboration of a strategic document as a central axis or backbone, together with its progressive deployment in Work Programmes, flexible to new approaches and measures, is a good decision and a worthwhile endeavour. Continuous monitoring and evaluation, and its translation into Monitoring Reports, are essential for accountability and for reflecting upon the work done and the needs of the next planning period.
5. It is essential to **be open to innovative approaches and perspectives** that emerge as progress is made, and thus planning must incorporate mechanisms aimed at identifying these emerging approaches and gradually incorporating them into the Plan.
6. It has been essential to generate **rigorous and high quality knowledge** on climate scenarios, impacts, risks, and vulnerability to climate change in the various sectors and geographic areas. This has proved to be an indispensable instrument for advancing in adaptation. Likewise, having an efficient repository for all the information produced – such as the AdapteCCa platform – is an essential tool for disseminating this information and facilitating the work of all the organizations and people involved in the subject.
7. It is important to plan with a **defined budget allocation**, especially at the level of the Work Programmes. One of the shortcomings of the first PNACC was that it was planned without a specific budget, although resources were made available as the implementation of the Plan progressed. The lack of a detailed description of the budget allocations makes it somewhat difficult to implement the measures and actions described. It also complicates subsequent reporting back and accountability.
8. It is important to **channel economic resources effectively and efficiently** so that the different sectors and organizations involved in adaptation can carry out their work more adequately. The various calls for public funding have proved to be useful instruments for providing resources for research into impacts, risks and vulnerability, as well as for the mobilization of actors, raising social awareness and designing plans and strategies for adaptation to the climate crisis at regional, local and sectoral levels.
9. It is important to have a **system of indicators** to identify both the degree of execution/implementation of public policies and their impact on reality. This was deficient in this first PNACC but is currently on its way to being resolved for the second Plan – an improvement that will ease its monitoring and evaluation.
10. The role that the **Spanish Office for Climate Change** has played as a national hub on adaptation has been fundamental in implementing the PNACC. Its fluid relationship with the various actors has allowed it to foster an environment of trust, reflection and collaboration

that has been vital in dealing with such a new, diffuse, complex and transversal strategic subject area as the one here concerned. The technical, economic and human resources provided by Fundación Biodiversidad, the National Parks Autonomous Agency, CENEAM and AEMET have also been key in carrying out many of PNACC's lines of work.

PENDING CHALLENGES, RECOMMENDATIONS AND PROPOSALS FOR THE FUTURE PNACC

General considerations

1. The second PNACC must **reinforce its key role as a framework for the coordination and integration of public policies** on adaptation, strengthening the positive aspects of the first PNACC and improving aspects where gaps or deficiencies have been identified.
2. The second PNACC must be planned with an **open and flexible approach** that allows new adaptation needs that may arise over time to be incorporated into its different Work Programmes. Thus, it must set objectives and strategic lines of work, remaining open to rethinking measures and actions in accordance with the demands and windows of opportunity that may appear during its implementation. Monitoring Reports should evaluate the level of progress reached in the execution of the various measures, and help to reflect upon the most suitable ways forward.

Resources

3. The second PNACC must identify the needs and be sufficiently endowed with **economic and human resources** for its implementation, thus making it possible to advance in the generation of knowledge, the mobilization of actors, the raising of awareness in society, and the adoption of effective measures to adapt the various sectors and territories to climate change.
4. The Work Programmes must **detail the financial resources** foreseen to be necessary for the implementation of the proposed measures and actions. The Monitoring Reports must **account for the advances made and the level of progress reached in the implementation of the Work Programmes – including in economic terms**.
5. The second PNACC must be capable of **mobilizing the necessary mechanisms and financial resources for adaptation**. It should disseminate information about the cost of inaction.
6. The **Spanish Office for Climate Change** should continue to act as a national hub on adaptation – and this essential role should even be reinforced. It must also continue to be the body in charge of coordinating and implementing the PNACC. It must maintain a fluid relationship with the various actors and continue to foster an environment of collaboration and mutual trust, which is essential for dealing with adaptation from a multidimensional perspective. It must have the support of the various areas of government and of agencies with sectoral competences that include adaptation as a relevant component. In particular, apart from reinforcing its own resources (both human and economic), it must continue to count on the technical, economic and human resources supported by AEMET, Fundación Biodiversidad, the National Parks Autonomous Agency and CENEAM.

Plan Structure

7. The planning of the second PNACC must be articulated around **work axes, areas of intervention, general objectives, specific objectives, measures and actions**, and incorporate some multidimensional focus across its design. As far as possible, it should include the prioritization of the measures and actions to be implemented in each phase of execution. This would improve the clarity of the structure, thus facilitating both the planning of subsequent work programmes and the implementation, monitoring and evaluation of the Plan.
8. It is important to re-examine the **organization of the Plan into axes and pillars**, so as to decide whether it is appropriate to maintain the current structure. The Evaluation Report includes some recommendations in this regard.
9. With regard to the **articulation into sectoral and geographic areas**, the first PNACC has only used the sectoral division in relation to the generation of knowledge, while this approach can be applied to all the strategic axes (and pillars) of intervention. Furthermore, some overlaps and duplications occur in the classification used in the first PNACC. This has made it harder to locate and evaluate the measures and actions.

Therefore, a new mixed classification is proposed, uniting sectors and territorial areas into a mixed perspective that takes both into account and, furthermore, incorporates an intra-sectoral and/or systemic approach.

10. The second PNACC should include some basic criteria or principles that inspire and cut across all planning and implementation, in a multidimensional approach. These should include some of the emerging perspectives detailed in the following section:
 - ✎ Human rights perspective
 - ✎ Reporting and monitoring obligations
 - ✎ Equity and social vulnerability
 - ✎ Gender mainstreaming
 - ✎ Prevention of negative side effects and maladaptation
 - ✎ The interrelationship between adaptation and mitigation
 - ✎ Lifestyle approach
 - ✎ Systemic approach

Emerging perspectives⁴

11. The second PNACC should **include a human rights perspective in its design and implementation**, in accordance with the recommendations and key messages put forward by the United Nations High Commissioner for Human Rights (OHCHR) at COP21, held in Paris in 2015. In particular, it should ensure that adequate adaptation measures are taken so as to protect and respect the rights of all people, in particular those most threatened by the negative impacts of climate change, ensuring equity, equality and non-discrimination, and fostering meaningful and informed participation.

⁴ These issues are discussed in greater detail in Chapter 10 of this document.

12. The second PNACC should incorporate in its design and execution all **reporting, communication and monitoring obligations** derived from the international commitments signed by Spain and from its membership to the European Union.
13. The second PNACC should contemplate actions focused on better understanding **differences in vulnerability, taking into account socio-economic, personal and environmental factors**, and propose measures to address and reduce these differences.
14. The second PNACC should **incorporate a gender perspective**, both in terms of vulnerability and in terms of participation and decision-making with regard to measures for adaptation⁵.
15. The second PNACC should articulate measures to **understand better the nature of climate change impacts occurring outside Spain that may have indirect effects in our country**. It should also identify possible lines of work in international cooperation towards adaptation, in order to move towards societies that are globally more resilient regarding climate change.
16. The second PNACC should help to **identify and avoid the risks of maladaptation**, including actions that increase vulnerability to climate change, significantly weaken present or future adaptive capacity, or foster unsustainable patterns of development. Useful instruments should be enabled to prevent public policies from fostering or encouraging measures of maladaptation.
17. The second PNACC should help identify **close relationships that often exist between mitigation and adaptation measures**, demonstrating the synergies that occur between the two and thus helping to identify best practices capable of meeting both objectives simultaneously. In the same vein, it should **highlight collateral benefits (environmental, economic or social)** that result from certain adaptation measures, and underline the suitability of these measures.
18. The second PNACC should incorporate some of the key recommendations provided by the **lifestyle approach**, generating knowledge and successful experiences on the type of public policies, measures and actions that can effectively contribute to the adoption of more sustainable, resilient and adaptive lifestyles by the entire population, without forgetting the most vulnerable groups.
19. The second PNACC should advance in the **incorporation of a systemic approach**, transcending unidimensional points of view. This would make it possible to design more comprehensive adaptation measures and strategies, paying attention to potential synergies and joint efforts that could lead to better adaptation. The example of **food** could be taken as the first area in which to start advancing in this sense, transcending an approach centred exclusively on agricultural and livestock production so as to also incorporate distribution and consumption in the design of measures and actions for the adaptation of the entire food system⁶.

Regulations and public policies

⁵ This recommendation is also included in the Report of the Adaptation Committee of the Framework Convention on Climate Change, of December 2018, which in item 7 “urges Parties and non-Party stakeholders to mainstream gender considerations in all stages of their adaptation planning processes, including national adaptation plans and the implementation of adaptation action, taking into account available guidance”. More information at: <https://unfccc.int/sites/default/files/resource/l05e.pdf>

⁶ This issue is discussed in greater detail in Section 10.G of this document.

20. The second PNACC should strengthen the **integration of adaptation into sectoral regulations**. Considerable work has been carried out in this regard, but it is necessary for substantial progress to be made in the coming years. Along the same line, the preparation of **sectoral adaptation plans** should be promoted, together with the strengthening of the adaptation perspective within plans and strategies for climate change at the regional and local levels.
21. The second PNACC should include measures aimed at ensuring that existing knowledge (and knowledge that is generated) concerning impacts, vulnerability and adaptation adequately reaches the sectors directly involved or affected in each case. It should strive to make adaptation an **essential component of public policies and sectoral regulations, the agendas of the key actors, the most significant events and the relevant media**.
22. The second PNACC should maintain its **alignment both at the international level** (in particular, with the United Nations Framework Convention on Climate Change and the IPCC assessments) **and at the European level** (interweaving with its strategic planning as it advances). It must articulate the necessary mechanisms to adequately **respond to requests for information and follow-ups** that may arise from the international agreements signed by Spain on climate change and from its participation in the European Union.

Knowledge generation and reinforcement of research, development and innovation

23. The second PNACC should maintain the objective of producing and disseminating rigorous and comprehensive information on **regionalized projections of climate change** for the 21st century. It should incorporate all new knowledge in this field, this being essential for research into impacts and vulnerability, and for designing adaptation measures.
24. The second PNACC must continue to generate **high quality knowledge on the impacts and risks of climate change and on the resulting vulnerability and to provide access to this knowledge**. This should be done in the various sectors and spheres of work, especially in the most relevant sectors and in those least covered during the first PNACC.

Stakeholder mobilization

25. The second PNACC should **maintain and reinforce its educational character**, encouraging better narratives and enhancing and extending knowledge about adaptation. It must continue to be an effective instrument for informing about our need to adapt to climate change, as well as about our need to adopt public and private measures aimed at increasing our resilience to the climate crisis.
26. The second PNACC should **continue to incorporate instruments for joint reflection, training and shared learning** at both sectoral and inter-sectoral levels. It should encourage the celebration of **seminars, conferences and workshops** useful to share knowledge and best practices. Experiences, debates and reflections generated in these meetings should be adequately disseminated so that the work done reaches the greatest possible number of potentially interested people and organizations.
27. The second PNACC should work with a **high diversity of actors**, including those apparently furthest from a conventional sectoral approach. Good adaptation often requires a work approach that integrates a **multiplicity of actors, perspectives, approaches and knowledge**.

28. The second PNACC should **reinforce networking and consolidate strategic networks** (both formal and informal) that have been woven around adaptation in Spain, both in terms of the generation of knowledge and the implementation of adaptation measures.
29. The second PNACC should integrate sufficient information and communication tools to further contribute to **society's awareness** of the impacts and risks of climate change and of the need and urgency of adaptation. It should help to generate trends of opinion in favour of the adoption of the best adaptation measures in all sectors and geographic areas.
30. The second PNACC should reinforce the role played by the **AdapteCCa platform** as a tool for dissemination, consultation and work. This tool gathers and makes available to interested people all relevant information on adaptation to climate change, constantly updating its content and improving the way in which it is made available to users.
31. The second PNACC should **strengthen support** for research, pilot experiences, the adoption of adaptation measures, and the appropriate dissemination of information concerning all these experiences. In addition, ways must be found to complement available resources, for example by seeking European funding.

Definition and implementation of adaptation measures

32. The second PNACC should make **progress in the design and implementation of effective, efficient and recognizable adaptation measures in all sectors and geographic areas**, especially in those where the response is most necessary and urgent. It is necessary to strengthen the financial and support mechanisms that allow research to advance in this field; to create tools that **encourage the adoption of suitable adaptation measures** by the public and private sectors; and to provide the means for **the exchange of experiences, the recognition of best practices, and the dissemination of this information in every sector and geographic area**.
33. The second PNACC should adopt **diverse approaches to adaptation planning**, including community-based and ecosystem-based approaches to adaptation, approaches focusing on the diversification of the economy and of livelihoods, and risk-based approaches. It should ensure that these approaches are not mutually exclusive but complementary, generating synergies that foster resilience⁷.

Participation and governance

34. The second PNACC should be **developed and implemented in a participatory manner**, taking into account the views, approaches and perspectives of all key public, private and third sector stakeholders⁸.

⁷ This recommendation is also included in the Report of the Adaptation Committee of the Framework Convention on Climate Change, of December 2018. Document available at:

<https://unfccc.int/sites/default/files/resource/l05e.pdf>

⁸ This recommendation is also included in the Report of the Adaptation Committee of the Framework Convention on Climate Change, of December 2018, which in item 8 "encourages Parties to apply a participatory approach to adaptation planning and implementation so as to make use of stakeholder input, including from the private sector, civil society, indigenous peoples, local communities, migrants, children and youth, persons with disabilities and people in vulnerable situations in general". Document available at:

<https://unfccc.int/sites/default/files/resource/l05e.pdf>

35. It is essential to **strengthen inter-administrative coordination** so that efforts at European, national, regional and local levels can be integrated. This would help create synergies and establish stable and effective mechanisms for cooperation, joint reflection, and the exchange of information and experiences.
36. The new PNACC should **define its governance framework**, in which it should try to efficiently incorporate the various agents and stakeholders into the implementation, monitoring and evaluation of the Plan, and should also be perfectly integrated into the global climate change governance framework.

Evaluation and monitoring

37. The second PNACC should, in its planning, include the **necessary mechanisms for its own evaluation and monitoring**. This includes enabling useful tools for identifying successes and failures, for introducing improvements on an ongoing basis, as well as for ensuring accountability in relation to its implementation and its impacts.
38. The second PNACC should make progress in **developing an effective and efficient system of adaptation indicators**. This includes regularly updating the data for these indicators so that valid and reliable information is available concerning the evolution of the main trends in terms of impacts, vulnerability and adaptation⁹.

⁹ This recommendation is also included in the Report of the Adaptation Committee of the Framework Convention on Climate Change, of December 2018, which in item 14 "invites Parties and relevant entities working on national adaptation goals and indicators to strengthen linkages with the monitoring systems of the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction 2015-2030, taking into account the importance of designing adaptation monitoring and evaluation systems according to countries' overall objectives for adaptation, and of considering the benefits and drawbacks of quantitative and qualitative indicators when developing methodologies (...)". More information at: <https://unfccc.int/sites/default/files/resource/l05e.pdf>



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