



# Rio Grande do Sul & RegionsAdapt 2016-2017 Report

Working Group: Water resources and management



GOVERNO DO ESTADO  
RIO GRANDE DO SUL  
SECRETARIA DO AMBIENTE E  
DESENVOLVIMENTO SUSTENTÁVEL

**nrg4SD**  
Network of Regional Governments  
for Sustainable Development



Rio Grande do Sul & RegionsAdapt – 2016-2017 Report



GOVERNO DO ESTADO  
**RIO GRANDE DO SUL**  
SECRETARIA DO AMBIENTE E  
DESENVOLVIMENTO SUSTENTÁVEL

**Secretariat for the Environment and Sustainable Development of Rio Grande do Sul State Government**

Ana Maria Pellini  
Secretary

Maria Patrícia Mollmann  
Assistant Secretary

**Water Resources and Management Department of the Rio Grande do Sul State Government**

Fernando Setembrino Cruz Meirelles  
Head of the Department

**Professionals involved**

Marcela Nectoux – Environmental Engineer at Southern Marine Weather Services

Cátia Valente – Meteorologist at Southern Marine Weather Services

Joan França- RegionsAdapt Project Manager

Raíza Cristóvão Schuster - Environmental Engineer at SEMA

Cláudia Bos Wolff – Agriculture Engineer at SEMA

Karolina Turcato – Geographer at SEMA

Amanda Fadel - Hydrologist at SEMA

Fernando Mainardi Fan - Professor at the Federal University of Rio Grande do Sul

Flávio Varone – Meteorologist at the Secretariat for Agriculture

**Layout**

Zíngara Cristóvão Schuster  
Thais de Araújo Ferraz

**Partners**



Network of Regional Governments  
for Sustainable Development

# Index

Foreword .....	3
Introduction .....	5
<b>Rio Grande do Sul and RegionsAdapt</b> .....	5
<b>Rio Grande do Sul &amp; Climate Change</b> .....	5
<b>Secretariat for the Environment and Sustainable Development of Rio Grande do Sul State</b> .....	6
Extreme Events Management State Program.....	7
Program Components : 7 Projects.....	7
<b>Monitoring and hydro meteorological modeling</b> .....	7
<b>Expansion of the hydro meteorological gauge network</b> .....	8
<b>Situation Room</b> .....	8
<b>Disaster Risk Management Program</b> .....	8
<b>Building of a state meteorological radar network</b> .....	9
<b>Incorporation of the concept of building resilience to climate change in Watershed Management Plans</b> .....	9
<b>Establishing of criteria and indexes for climate change adaptation</b> .....	10
Other Projets .....	12
<b>I International Conference: Water Resources and RegionsAdapt: integrating multistakeholder action to improve climate adaptation</b> .....	12
<b>8º World Water Forum</b> .....	14
<b>Participation at COP21, COP22 and COP23</b> .....	15
Conclusion .....	16



# Foreword

Rio Grande do Sul is not only a founding member of RegionsAdapt but also one of its most active participants. Since we started implementing the initiative, this regional government has been co-coordinating the Water Resources and Management Working Group. Thanks to Rio Grande do Sul's outstanding leadership, it certainly became one of our most dynamic and fruitful WGs. To date, this group has already organized seven online meetings and is now focusing on an innovative project: establishing criteria and indexes for climate change adaptation in the field of water resources management. Under Rio Grande do Sul's guidance, this project consists of creating a tailor-made methodology that can enhance the ability of regional governments to include the variable of climate change adaptation in their watershed management plans.

At the same time, I believe this Brazilian regional government is one of RegionsAdapt's members that is benefitting the most from the initiative. Last June, we have jointly organized, in the region's capital, Porto Alegre, the International Conference "Water Resources and RegionsAdapt – Integrating multi-stakeholder action to improve climate adaptation." This event has simultaneously enriched the discussions of the referred WG – as a result, Brazil's National Water Agency became one of our technical partners – and opened new opportunities for the regional government itself, such as building a more synergic relationship with the academia. Therefore, Rio Grande do Sul constitutes a perfect example that the more a member gets involved in the initiative, the more this regional government will benefit from it. Congratulations to all those underpinning this successful partnership: RegionsAdapt only exists thanks to engaged and leading regional governments like Rio Grande do Sul.

**Joan França**

**RegionsAdapt Project Manager**

Climate change is a global reality. Decisions made at Conferences of the Parties and the commitments undertaken by all countries should result in a positive shift in the human activities interference on climate. However, it is the subnational governments the ones that will be in charge of much of the actions necessary to achieve the proposed goals, as well as climate change impacts mitigation strategies.

Rio Grande do Sul promptly accepted the call for coordinating the RegionsAdapt Water Resources and Management Working Group considering we found ourselves at a crucial moment in formulating public policies and a new framework for waterwise management. We saw it as an opportunity to incorporate the outcomes of the debate with other subnational governments set up by the initiative.

The discussion on the indicators for adaptation and the International Conference on Water Resources & RegionsAdapt were the most concrete results of the Working Group coordination. Nevertheless, Rio Grande do Sul's achievements and the exchange with other partners proved to be much more significant. In the extent of two years since COP21, many meetings were held, new governments were invited to participate on the initiative and it was possible to incorporate, in a definitive and consistent form, the topic of climate change on all initiatives related to water resources in our state.

From our state's perspective, the engagement on a global initiative such as this has been a great channel for new ideas and intentions to become proposals, projects and actions supported by a growing number of regional and national institutional actors.

**Fernando Meirelles**

**Head of the Water Resources  
and Management Department of the  
Rio Grande do Sul State Government**



# Introduction

## Rio Grande do Sul and RegionsAdapt

Rio Grande do Sul's involvement in RegionsAdapt began at UNFCCC COP21 in Paris where the commitment text of the initiative was signed on December 3rd, 2015. Since then, Rio Grande do Sul has joined four different Working Groups as a participant: "Resilience and Disaster Risk Reduction"; "Agriculture and Zootechnics"; "Forestry, Protected Areas and Biodiversity" as well the "Water Resources and Management" working group as a coordinator.

In the context of the Water Resources and Management working group, Rio Grande do Sul has brought to the fellow participants an Extreme Events Management Program that is being developed in the Secretariat. This Program encompasses 7 Projects, which will be further presented in the following chapters of this Report.

The aim of this Report is to serve as a summary of the efforts Rio Grande do Sul has made in the last two years towards fulfilling the three commitments established by the RegionsAdapt initiative:

- Commitment 1 - Adopt a strategic approach to adaptation and prioritize adaptation actions within two years of joining the initiative;
- Commitment 2 - Take concrete action on adaptation in at least one of the seven key priority areas identified by the founding members;
- Commitment 3 - Report data on the progress of the adaptation actions on an annual basis through the risk and adaptation section of CDP's states and regions platform.

## Rio Grande do Sul & Climate Change

Rio Grande do Sul State is located in the south of Brazil, having its climate classified as Cfa and Cfb according to Koeppen climate classification. This condition results in considerable climate variation through the year, despite the mean value of the main climate normals indicating a stable precipitation regime and positive water balance in annual terms once the hydric excess is recorded between winter and spring and droughts occur between summer and autumn. There is not a defined dry season, and climate anomalies greatly influence the state's weather.

Water resources management in this context is evidently difficult since the lack of a defined dry season and the possibility of great variations on the rainfall regime result in a water conflict of use whenever there is a considerable reduction of the precipitation amounts.

According to the IPCC reports, the expected impacts due to climate change will be an increase in total yearly rainfall and average temperatures, which will potentially lead to the increase in frequency of floods and droughts as well as the damage caused by these types of extreme events.

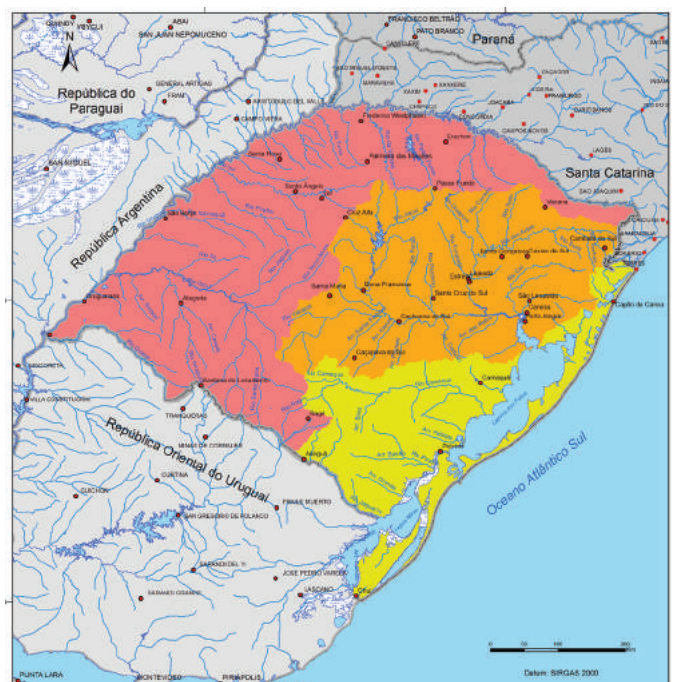


Figure 1 – Rio Grande do Sul State: there are three major watershed regions in the State which are highlighted in red, orange and yellow.

# Secretariat for the Environment and Sustainable Development of Rio Grande do Sul State

Water resources management in Rio Grande do Sul is a responsibility of the WRD (Water Resources Department), a division of the Sustainable Development and Environment Secretariat (SEMA). This department is further divided in two separate divisions: one responsible for water use granting and the other responsible for planning and water management, which includes the watershed plans being developed for each one of the 25 watersheds within the state of Rio Grande do Sul.

Once committing to the RegionsAdapt initiative, Rio Grande do Sul has assigned the task of running the RegionsAdapt related Projects to a team of professionals from the Secretary and also from the academia and the private sector.

In addition to the civil servants from the Sustainable Development and Environment Secretariat, the list of professionals involved in the RegionsAdapt initiative, also includes employees from the Agriculture Secretariat, the Federal University of Rio Grande do Sul and from Southern Marine Weather Services, the company responsible for the operation of Rio Grande do Sul's Situation Room.

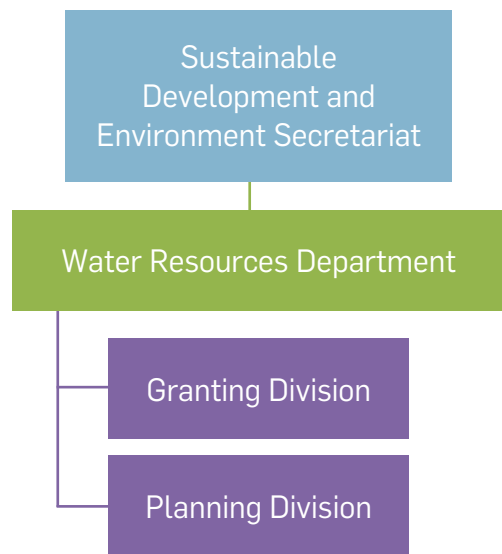


Figure 2 - Sustainable Development and Environment Secretary organization chart



Foto: Catarina Gomes

Figure 3 – RegionsAdapt in Rio Grande do Sul's team of professionals.



# Extreme Events Management State Program

The Program presented by Rio Grande do Sul within the Water Resources and Management working group was focused on extreme events risk management. In fact, since 2001, the Brazilian federal government has heavily invested in disaster prevention, in response to several extreme events that have impacted the country in the early 2000's, including Rio Grande do Sul.

On a policy perspective, the Protection and Civil Defense National Act (PNPDEC, Act 12.608/2012), which passed in 2012, gave the subnational governments duties and capabilities in disaster risk management. Meanwhile, it created the challenge that sub national governments must propose the establishments, goals and processes

necessary for the various actors to act properly coordinated and in a systematic way within disaster risk management, helping to reduce the impacts of natural disasters in the state. In a nutshell, it generated an issue on how states can take ownership of their rights and responsibilities for dealing with critical events.

Within that context, the goal of this program is to establish a management structure able to predict, monitor, alert and mitigate extreme weather events, as well as to promote the resilience and adaptation of the population and economic activities facing climate change in Rio Grande do Sul state.

## Program Components: 7 projects

### Monitoring and hydro meteorological modeling

This project focuses on establishing climate conditions and water level regimes modeling with different prediction horizons. The modeling allows for the adoption of preventive measures, warning issues, management of conflicts related to surface water uses and preventive actions in case of droughts and floods.

This project is run by the Situation Room and currently comprises a meteorological model at the regional scale, which runs in two customized sub-scales, and a distributed hydrological model being adjusted for the state's watersheds.

The goal for the future is to increase modelling efficiency in order to issue more reliable and precise warnings by the Situation Room, especially regarding water level rise in the watersheds.

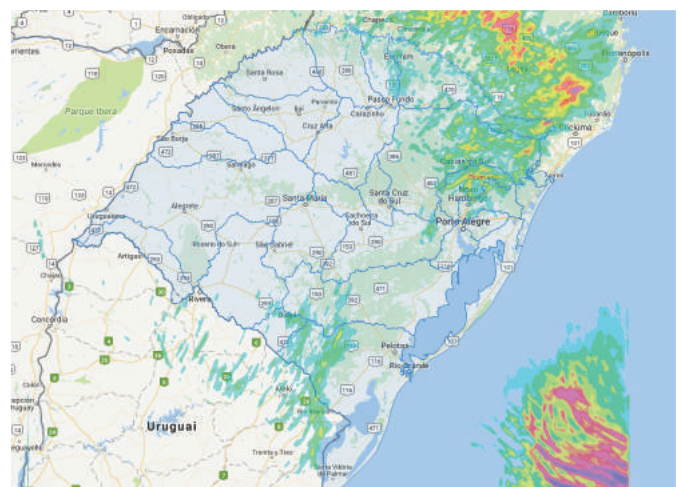


Figure 4 – The Situation Room's online platform runs meteorological hydrological modeling

## Expansion of the hydro meteorological gauge network

This Project aims to expand and update the state's hydro meteorological gauge network in articulation with Uruguay, Argentina, Santa Catarina State and the Brazilian National Water Agency.

The location of the new water level gauges is subjected to technical criteria and to the decision from Watershed Committees based on their Watershed Management Plans.

In addition to that, in 2017 SEMA and the Secretariat of Agriculture are carrying out the installation of 20 complete automatic meteorological gauges which aims to improve the data collection for agricultural purposes.

SEMA continues the installation of telemetric water level and rain gauges across the State and in 2018 160 telemetric gauges are scheduled to be purchased: 60 for water level and rainfall monitoring and 100 for rainfall monitoring only.

## Situation Room

The Situation Room for the monitoring of extreme weather events is a project supported by the National Water Agency which focuses on preventing extreme hydrological events. Since 2016, when the Project was remodeled, it became responsible for monitoring current climatic conditions observed in the telemetric water level and rain gauges and, also, the predicted future conditions estimated through hydro meteorological modeling.

As a main purpose, the Situation Room issues reports on weather conditions as well as warnings for other institutional actors. This Project serves as a center piece for the State's disaster risk management structure being implemented.

Furthermore, the Situation Room has the capability to serve as a Climatic Monitoring Center for Rio Grande do Sul, assisting the Water Resources Department with

valuable information regarding Climatic risk and Climatic forecast.

In addition to that, since Rio Grande do Sul has joined the RegionsAdapt initiative, the Situation Room has been involved in climate change adaptation projects.

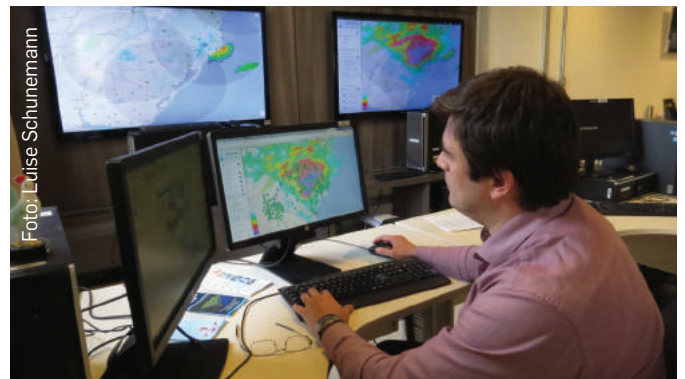


Figure 5 – The Situation Room monitors extreme hydro meteorological events in Rio Grande do Sul.

## Disaster Risk Management Program

The State Government has been increasingly concerned not only with responding to disasters, but also with actions to prevent, mitigate, prepare, respond and recover, seeking to reduce the impact of these adverse events. However, since the actions of state agencies that operate in these areas are not yet articulated and integrated, the State has developed an updated Policy for Disaster Risk Management in line with the guidelines and standards established by national legislation, and with the

attributions conferred on the State as part of the National System of Civil Protection and Defense.

The Disaster Risk Management Program also includes the conception of the State Disaster Risk System, involving the management of droughts, floods, windstorms, hailstorms, landslides and water contamination, the purchase of telemetric water level and rain gauges, acquisition of equipment for the Civil Defense and complementary structuring of the Situation Room.

## Building of a state meteorological radar network

This project aims to cover the whole state with meteorological radars capable of performing real time monitoring of the meteorological conditions. The radars generate data that will be used as inputs for hydro meteorological modeling.

The building up of this network is being discussed with Argentina, Uruguay, Santa Catarina and the Brazilian National Air Space Control Department, in order to join the radar networks of these actors, widening the monitoring area and sharing radar data.

In 2018, 7 meteorological radars are expected to be purchased and to be installed in the cities of: São Francisco de Paula, Silveira Martins, Santa Vitória do Palmar, Santa Rosa, Uruguaiana, Santana do Livramento and Capão da Canoa.

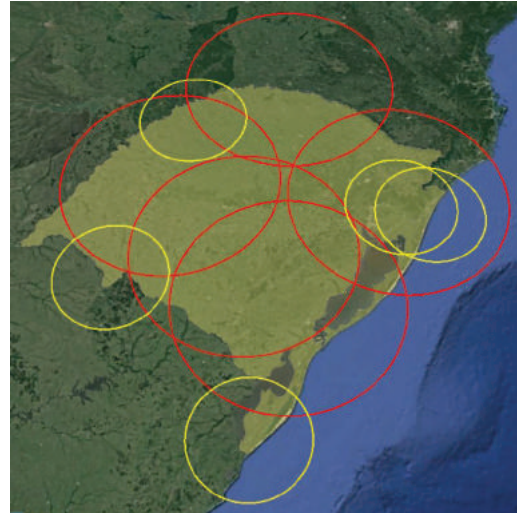


Figure 6 – Meteorological radar network expected to Rio Grande do Sul

## Incorporation of the concept of building resilience to climate change in Watershed Management Plans

Watershed Management Plans are the main tools for medium and long term management in river basins in Rio Grande do Sul. This project proposes that, upon the revision of Watershed Management Plans, concepts of climate change resilience will be incorporated into them, allowing for specific measures to be taken by the Watershed Steering Committees and other institutional actors in order to face changes on the water availability in the future.

With this inclusion, the Watershed Management Plans must allocate financial, material and human resources to specific actions related to climate change. In 2017, a diagnosis of the situation of the watershed management plans regarding climate change has begun. Flow series for climate change scenarios will be generated, and they will be compared to the flow data considered in watershed management plans.

This Project will allow Watershed Management Plans to be assessed regarding the need to adapt to climate change. From the total of 25 watersheds in Rio Grande do

Sul, eight have finalized Watershed Management Plans, six have partially concluded Plans and four have Plans in progress. In 2018, six Watershed Management Plans are scheduled to start, leaving only one watershed with no plan initiated.



Figure 7 – Watershed Management Plans's Status for each one of Rio Grande do Sul's 25 watersheds.

## Establishing of criteria and indexes for climate change adaptation

Once Rio Grande do Sul presented its program regarding the Regions Adapt Initiative, this project was consensually approved in 2016 as one of the key projects within the Water Resources and Management Working Group.

The project is now under development in Rio Grande do Sul's Secretariat with the support from the Academia and the Brazilian National Water Agency and consists of developing an index system to evaluate subnational government's actions towards adaptation to climate change in the field of water resources management.

A matrix proposal was elaborated in which seven dimensions (Policy, Infrastructure, Technical Training, Financial Resources, Impacts, Institutional Arrangement and Agriculture) relate to a list of matching indicators (Table 1). This system of indicators is clipped by either territory units or watershed (basic unit of water resources planning).

It is worth mentioning that the objective of the index is to be a replicable system, adaptable to the different realities of RegionsAdapt's members. Moreover, some indicators have an educational aspect, in order to incite the development of a culture of climate change adaptation. Once consolidated, the indicator system should also contain a column of "metrics" in order to assess the reality of each subnational government against the adaptation measures being adopted.

### Objectives

- Propose a replicable list of adaptation indicators regarding water resources
- Propose a metric system to measure adaptation
- Set common goals for adaptation
- Promote multi-institutional cooperation

### Scope

Create an evaluation system of indicators to measure and monitor adaptation at a regional government scale.

The consolidated list of indicator was presented on the last Working Group webinar, on October 26th 2017, when it received numerous feedbacks from other members.

The prospects for the next phase of the project are to include the metrics column, that is, the evaluation system that will be used as well as inviting all members to fill up the index in order to test the capacity of this system to contribute to establishing criteria for climate change adaptation.

In addition, the idea for the next year is to further discuss this Project in the academia, providing a solid science-based foundation for the Indicators matrix.



Figure 8 - RegionsAdapt in Rio Grande do Sul team discussing the Indicators Project during one of the meetings. Climate Change.

Dimension	Index	Index type	Verification
1. Policy	▶1.1 Existence of a sub-national or national Disaster Risk Management policy	Descriptive, yes or no	Legal or institutional document of policy creation
	▶1.2 Existence of a subnational or national policy on Adaptation to Climate Change	Descriptive, yes or no	Legal or institutional document of policy creation
	▶1.3 Existence of a sub-national or national Water Soil Retention Policy	Descriptive, yes or no	Legal or institutional document of policy creation
	▶1.4 Existence of a subnational or national policy on Payment for Environmental Services	Descriptive, yes or no	Legal or institutional document of policy creation
	▶1.5 Existence of a subnational or national Water Security Policy	Descriptive, yes or no	Legal or institutional document of policy creation
	▶1.6 Existence of a subnational or national policy of Increasing Efficiency in Water Supply Services	Descriptive, yes or no	Legal or institutional document of policy creation
	▶1.7 Existence of a subnational or national policy for the Universalization of Water Supply and Sewage Collection and Treatment	Descriptive, yes or no	Legal or institutional document of policy creation
2. Infraestructure	▶2.1. Existence of a national or subnational climate monitoring center	Descriptive, yes or no	Center creation act, service report
	▶2.2. Network of operational climatological installations in the last two years according to the standards and density recommended by WMO (World Meteorological Organization)	Descriptive, sufficient or insufficient	Technical report
	▶2.3. Existence of daily data collection on maximum temperature, minimum temperature, relative humidity and rainfall	Descriptive, sufficient or insufficient	Technical report
	▶2.4. Existence of a national or subnational service to analyze the meteorological data	Descriptive, sufficient or insufficient	Center creation act, service report
	▶2.5. Existence of a warning center or alert for extreme events	Descriptive, yes or no	Center creation act, service report
	▶2.6. Existence of communications network on extreme events and climate change	Descriptive, sufficient or insufficient	Technical report
3. Technical Training	▶3.1 Existence of technical standards or manual for preparedness, response, mitigation and positive reconstruction actions	Descriptive, sufficient or insufficient	Technical report
	▶3.2. Existence of technical standards or manual for preparedness, response, mitigation and positive reconstruction actions	Descriptive, yes or no	Technical report
4. Financial Resources	▶4.1. National or subnational specific budget for monitoring and climate change adaptation.	Descriptive, sufficient or insufficient	Technical report
	▶4.2. Extra budgetary sources for monitoring and climate change adaptation	Descriptive, sufficient or insufficient	Technical report
5. Institutional Framework	▶5.1. Existence of a national or subnational institutional framework formalized through decrees or laws to monitor and implement actions to adapt to climate change	Descriptive, yes or no	Reports of the actors involved
	▶5.2. Existence of bulletins or reports on the performance of the different actors of the institutional arrangement	Descriptive, yes or no	Reports of the actors involved
6. Agriculture	▶6.1 soil water maintenance and reduction of sediment water contamination	Descriptive, sufficient or insufficient	Technical report
	▶6.2 rural extension actions for covered soil maintenance	Descriptive, sufficient or insufficient	Technical report
	▶6.3 rural extension actions to control erosion	Descriptive, sufficient or insufficient	Technical report
	▶6.4. environmental education actions and / or rural extension for recovery and / or maintenance of native vegetation in critical areas	Descriptive, sufficient or insufficient	Technical report
	▶6.5 reduction of water courses and reservoirs sedimentation	Descriptive, sufficient or insufficient	Technical report
	▶6.6 Recovery / implantation of vegetation for protection in the surroundings of reservoirs	Descriptive, sufficient or insufficient	Technical report
	▶6.7 Recovery / implantation of riparian vegetation along watercourse banks (CH)	Descriptive, sufficient or insufficient	Technical report
	▶6.8 Recovery / maintenance of vegetation cover in critical areas	Descriptive, sufficient or insufficient	Technical report
7. Impacts	▶7.1 Existence of zoning of areas most vulnerable to drought / drought	Descriptive, yes or no	Reports of the actors involved
	▶7.2. Existence of zoning of areas most vulnerable to floods	Descriptive, yes or no	Reports of the actors involved
	▶7.3. Existence of restrictions on the occupation of areas most vulnerable to flooding in the Plans Local directors (municipal / state)	Descriptive, sufficient or insufficient	Reports of the actors involved
	▶7.4. Existence of restrictions on the occupation of areas most vulnerable to flooding in the Plans Local directors (municipal / state)	Descriptive, sufficient or insufficient	Reports of the actors involved

Table 1 - Matrix of indicators for climate change adaptation

## Other Projects

# I International Conference: Water Resources and RegionsAdapt: integrating multistakeholder action to improve climate adaptation

The Government of the State of Rio Grande do Sul, in partnership with nrg4SD – Network of Regional Governments for Sustainable Development – has promoted the International Conference Water Resources and RegionsAdapt – integrating multi-stakeholder action to improve climate adaptation, held in the city of Porto Alegre (Brazil), on June 27th and 28th 2017.

The Conference was proposed based on the involvement of the Government of Rio Grande do Sul in the

RegionsAdapt initiative and the common challenges related to the climate adaptation faced by the regions of the Southern Cone of South America. The Conference proposed to discuss and improve the management of water resources in face of climate change in this region, and aimed to increase the effectiveness of public policies in the field of adaptation, promoting better coordination among countries, different levels of government and the scientific community.



Figure 9 – The International Conference Water Resources and RegionsAdapt had the presence of the Governor of Rio Grande do Sul, the Secretariat of Sustainable Development and Environment Secretary and the RegionsAdapt Project Manager.

The Conference was organized in five blocks:

- In search of a shared hydro meteorological network - Discussion on the capacity of integration among different levels of government and the creation of a unified network between Brazil, Argentina and Uruguay.
- Disaster risk management in the face of climate change - A current overview of disaster risk management in Brazil, as well as the reflection on the extent to which climate change is being considered in this context.
- Building Bridges: the contributions of scientific research to climate change adaptation - In view of a complex theme such as adaptation to climate change, the need for an alignment between the public and scientific agenda is fundamental. The academic environment can contribute with scientific subsidies for the elaboration and

improvement of public policies related to climate change, but how to establish a permanent relation between the state, the university and society?

- Water Resources Management & Climate Change Adaptation: the case of Rio Grande do Sul - Presentation of Rio Grande do Sul's water resources management Projects related to adaptation to climate change.
- 8th World Water Forum: expectations regarding the thematic of Water Resources Management & Climate Change Adaptation - In 2018, Brazil will be the host country of the 8th World Water Forum. In view of this opportunity, this panel had the objective of presenting the expectations for the event as well as proposing a discussion about the themes that deserve to be highlighted and the possibilities for subnational governments' actions in the scope of the Forum.



Figure 10 – Speakers at one of the thematic panels.

# 8<sup>o</sup> World Water Forum

The involvement of Rio Grande do Sul in RegionsAdapt has opened up the possibility to engage in partnerships with other institutes, Regions and NGOs. Rio Grande do Sul, with the support of nrg4SD, has approached the National Water Agency (ANA) in order to invite this institution to become an advisor in the Indicators for adaptation Project. This partnership has not only been of great value for the Project but has earned Rio Grande do Sul an invitation to coordinate two thematic sessions at the 8th World Water Forum which will be held in Brasilia in March 2018 and is being organized by ANA.



Figure 11 – The 8th World Water will be held in March 2018 and Rio Grande do Sul will attend as a session coordinator as well as a speaker.

The two sessions were chosen in regards to the state's involvement in RegionsAdapt and the topics are detailed below:

## Local communities and hydro-climatic risks

“The lack of policies that promote the management of hydro-climatic risks is a reality. In this context, the role of local communities in the risk management process thus

becomes vital: they are the most interested in preparing against these extreme events. With this session, we intend to contribute to the discussion of hydro-climatic risk management models emphasizing the importance of local communities and participatory planning as tools for the prevention and coping of disaster scenarios and their integration into common security and civil protection policies.”

## Strengthening waterwise management and climate mitigation through integrated policies, regulation and financing

“There are strong synergies between climate and water action. Emissions from the water sector (especially drinking water and wastewater services) present new opportunities to contribute to Nationally Determined Contributions (NDCs) limiting global temperature rise. Holistic water management approaches guided by good policies and governance, require special emphasis, for example for using water to produce renewable energy. Integrating water and climate agendas, and promoting coherence between adaptation and mitigation approaches, and sound accounting methods for GHG emissions will improve access to financial mechanisms and drive the so-needed upscale of mitigation measures. How to create an environment enabling the mitigation in the water sector?”

## Partnership with the Shiga Province

In parallel of coordinating the sessions mentioned before, Rio Grande do Sul will also present its partnership experience with Shiga Province, Japan. Both regions have been developing Projects on Lake Depollution. With the objective of presenting its experience on Lagoa dos Patos, the Department of Lake Biwa and the Environment, together with the Sustainable Development and Environment Secretary of Rio Grande do Sul, will hold a session at the 8th World Water Forum.



# Participation at COP21, COP22 and COP23

Moving forward from the commitment assumed during COP21 in Paris with the signing of the RegionsAdapt, Rio Grande do Sul attended COP22 in Marrakesh, where the actions being taken by the state towards climate change adaptation were presented and publicized. Also, participating at these COPs represented an opportunity to interact with other regions and learn about their efforts towards adaptation.

This year, 2017, Rio Grande do Sul will once more bring a delegation to COP23 when the results achieved so far within RegionsAdapt initiative will be publicized and discussed in the Convention's program.



*Figure 12 – Ana Maria Pellini, Secretary for the Environment and Sustainable Development of Rio Grande do Sul State Government, signing the RegionsAdapt initiative commitment at COP21 in Paris.*

# Conclusion

The experience of participating in RegionsAdapt initiative in these first two years has proved to be quite fruitful for Rio Grande do Sul in terms of allowing an opportunity to combine a number of ongoing or planned Projects under a same initiative. This has helped move forward existing Projects such as the Joint Radar Network between Argentina, Uruguay and the Brazilian state of Santa Catarina. Through the incentive of participating in an international initiative, those projects gained momentum and visibility within the Secretariat.

Furthermore, the position of coordinator of the Water Resources and Management Working Group has put Rio Grande do Sul State on a leadership position, but also meant that more time and effort had to be put in the initiative. This responsibility undertaken and the appointment of professionals to coordinate RegionsAdapt in Rio Grande do Sul is believed to be one of the main reasons the Projects have moved forward in this period.

RegionsAdapt has also been a great opportunity to develop new innovative Projects alongside the other members from the Water Resources and Management Working Group. The Project on the Indicators for Adaptation was a great example of that since it was an

opportunity to engage very influential partners such as the National Water Agency and fellow Regions to provide insights which based the Indicators list consolidation.

Moreover, RegionsAdapt motivated the organization of the first International Conference on Climate Change Adaptation. This event was a major chance to not only publicize the efforts being made in Rio Grande do Sul but also to strengthen the partnership between the State and other Regions, such as Misiones (Argentina) and organizations like Ouranos (Quebec-Canada) that were invited to participate in the Conference's thematic sessions.

All in all, RegionsAdapt has been the top initiative on Adaptation undertaken by the Rio Grande do Sul State Government between 2016 and 2017 and the positive results assessed from these first two years has motivated the Secretariat to renew the commitment for the next phase. This means Rio Grande do Sul plans to expand and fortify its commitment towards Adaptation and strongly believes that initiatives such as RegionsAdapt are a very powerful tool for subnational governments to achieve greater, more impactful results.



Figure 13 – RegionsAdapt in Rio Grande do Sul's team at the International Conference on Adaptation and Climate Change.





GOVERNO DO ESTADO  
**RIO GRANDE DO SUL**  
SECRETARIA DO AMBIENTE E  
DESENVOLVIMENTO SUSTENTÁVEL

