

PROCLIMA 2050: STRATEGIES FOR ADDRESSING CLIMATE CHANGE IN RIO GRANDE DO SUL



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RIO GRANDE DO SUL

SECRETARIA DO MEIO
AMBIENTE E INFRAESTRUTURA

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Strategies for tackling climate change
is a document that describes the measures
to be taken to mitigate climate change
and adapt to its impacts.

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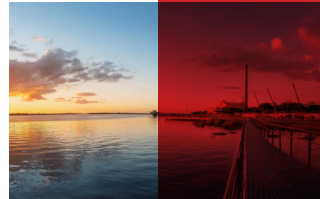
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ÍNDIX

Introduction and context 4



Legal Framework 6

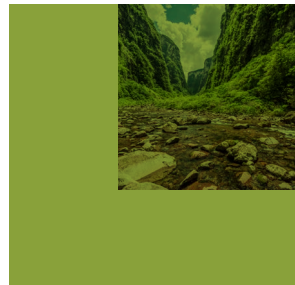


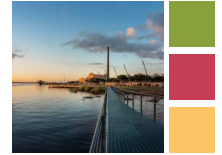
**Commitments signed
by the State of
Rio Grande do Sul** 7



**Strategy for Tackling
Climate Change** 10

Concluding Remarks 26





Introduction and Context

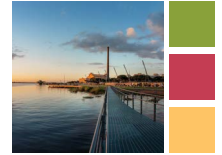
The Climate Advisory of the Secretariat for the Environment and Infrastructure (SEMA) of the State of Rio Grande do Sul (RS) was established in February 2023, amidst a historical context of growing global concern about climate change and the need for concrete actions to deal with its impacts. The State of RS, committed to global agreements related to these issues, has shown determination to achieve its goals of climate resilience, a fair energy transition, and reduction of greenhouse gas (GHG) emissions by 2050. .

Faced with this challenging scenario and in line with the vision of the **Strategic Map of the Government of the State of Rio Grande do Sul and ProClima2050**, we present the **Strategies for tackling climate change in the State of Rio Grande do Sul (RS)**. This strategy includes the following pillars:

1. Climate Resilience - Focus on strengthening the State's resilience to climate change. This includes the development of resilient infrastructure, risk management plans, and adaptation strategies to protect RS communities and resources from the impacts of climate dynamics.

2. Fair Energy Transition - Recognize the importance of a transition to clean and sustainable energy sources through initiatives to promote the production and use of renewable energy, energy efficiency, and the creation of green jobs, to ensure that this transition be done with social justice and in an inclusive manner.

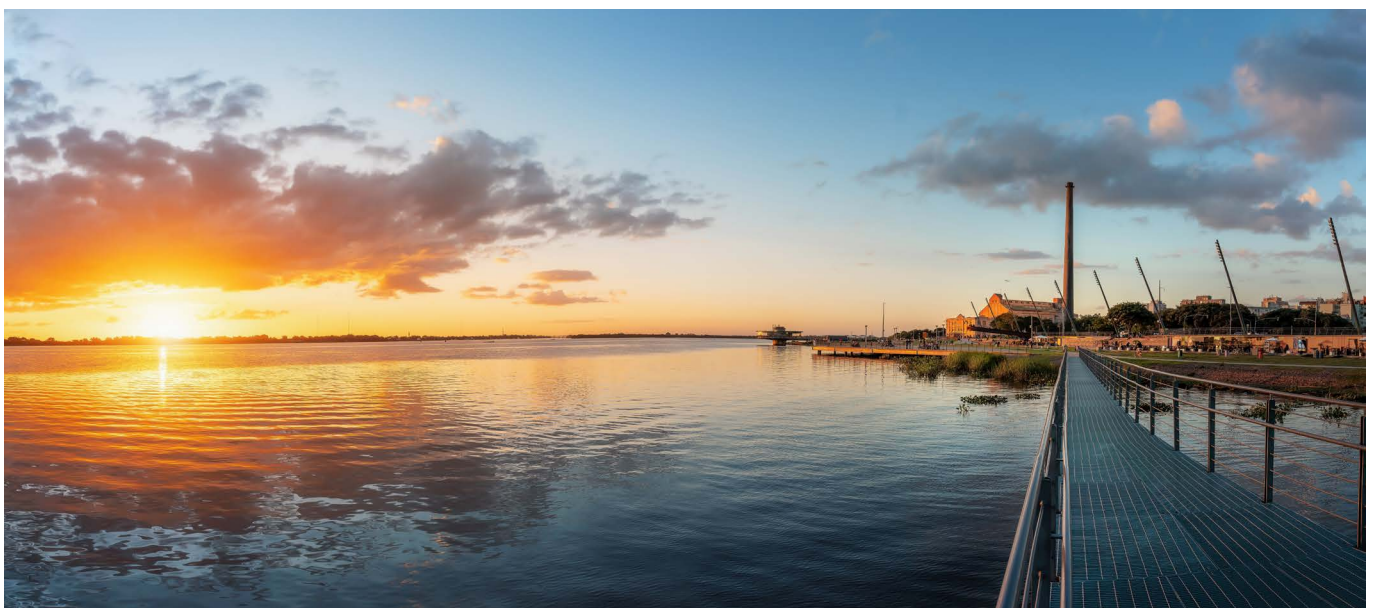
Based on coal mining and thermoelectric generation activities in the coal producing regions (Baixo Jacuí and Campanha) of the State, recognize the importance of a transition to clean and sustainable energy sources based on initiatives to promote the production and use of renewable energy, motivated by commitments to reduce greenhouse gases, in conjunction with federal entities, sector specific agents, and society at large.



3. Reducing Greenhouse Gas Emissions - Commitments have been established to significantly reduce greenhouse gas emissions. The implementation of concrete actions, such as the energy transition, the promotion of sustainable agricultural practices, fostering research, and the establishment of regulations to control industrial emissions are just some examples of measures taken to mitigate GHG emissions.

4. Environmental Education and Awareness - Recognize the importance of environmental education as a fundamental tool to inform and engage the population about climate change, environmental impacts, and the actions that each individual and community can take to contribute to mitigation and adaptation.

The integration of the Strategic Map of the Government of the State of Rio Grande do Sul and the development of **Strategies to tackle climate change** demonstrate the commitment of the RS State government in leading efforts to combat climate change and protect the environment for future generations. These strategies will serve as a solid basis for implementing the necessary actions, ensuring that the State achieves its objectives of climate resilience, energy transition and emissions reduction by the year 2050, and should be adopted as a State strategy.





Legal Framework

The set of laws and regulations that make up the legal framework of the State of Rio Grande do Sul covers several areas of importance, reflecting the State's commitment to environmental and climate issues. This base includes Law No. 13,594/2010, which establishes the Rio Grande do Sul Climate Change Policy; Law No. 14,864/2016, which deals with the State Biomethane Policy; State Decree No. 53,160/16, which deals with the state policy on renewable energy; SEMA Normative Instruction No. 01/2018, which defines procedures for forest replacement; SEMA Ordinance No. 162/22, which approves the matrix of actions for implementing the State Program for the Recovery of Native Vegetation - PROVEG/RS; Decree No. 54,946/2019, later modified by Decree No. 56,348/2022, which establishes the Incentive Program for the Use of Biogas for Electricity Generation; Decree No. 55,374, dated July 22, 2020; Decree No. 56,347/2022, adherence to the Race to Zero and Race to Resilience campaigns; Decree No. 56,437/2022, which regulates the Gaucho Climate Change Forum, with subsequent amendment by Decree No. 57,063/2023; and Decree No. 56,640/2022, which establishes the State Program for Payments for Environmental Services, also modified by Decree No. 57,063/2023, and SEAPI Resolution No. 001/2023, which establishes the State Plan for Adaptation to Climate Change and Low Carbon Emissions

in Agriculture in the State of Rio Grande do Sul (Plan ABC+ RS) for the period between 2020-2030.

A relevant highlight within this context is the drafting of a Letter of Agreement with the World Agenda for Decarbonization, which was signed by the government of Rio Grande do Sul and is aligned with the 2015 Paris Agreement, of which Brazil is a signatory. This letter represents the State's climate commitment and establishes that Rio Grande do Sul intends to reduce its net Greenhouse Gas (GHG) emissions by half by 2030, and over the long term, seeks to achieve carbon neutrality by 2050.

These legal initiatives demonstrate the State's commitment to proactively addressing environmental and climate issues and they reinforce the state government's engagement in this regard. The established legal instruments serve as a solid basis for the implementation of policies and actions aimed at protecting the environment, reducing greenhouse gas emissions, and the sustainable development of the State of Rio Grande do Sul.



Commitments signed by the State of Rio Grande do Sul



**COP28
UAE**



**Aliança pela
Ação Climática**

The State of Rio Grande do Sul reinforces its commitment to the climate agenda through a series of concrete agreements and initiatives:

- 1. Participation in the United Nations Conferences on Climate Change** - Rio Grande do Sul was present at COP26 in 2021 and COP27 in 2022, demonstrating its continued commitment to actively contributing to the global climate agenda. Participation in the next COP28 in Dubai is an additional opportunity to reinforce the State's efforts to neutralize carbon emissions by 2050 and promote climate action at an international level.
- 2. Financial Resources** - In 2022, the State launched a program with resources in the order of BRL 115.3 million, to be invested in environmental projects. Of this amount, BRL 65.3 million was directed to initiatives directly related to the climate agenda (Source: SEMA / Planning Advisory).
- 3. Alliance for Climate Action (ACA Brazil)** - As a signatory to ACA Brazil, Rio Grande do Sul is committed to cooperating with entities and organizations to strengthen initiatives related to climate action.
- 4. Under2 Coalition** - Rio Grande do Sul is part of this global coalition of subnational governments, all aligned with the common objective of reducing its Greenhouse Gas (GHG) emissions by 2050, in accordance with the goals of the Paris Agreement. This collaboration allows the sharing of best practices and experiences, as well as access to technical and financial resources to implement effective climate policies.



5. Brasil Verde Consortium - Governors for the Climate - Brazilian states and the Federal District joined forces in this consortium to reconcile economic-social development with the protection of the climate system and reduction of GHG emissions. This partnership, established through Law No. 15,992, on August 31, 2023, represents a collective effort to address climate issues in an integrated manner, aiming for a more sustainable future for Brazil.

6. Race to Zero and Race to Resilience Campaigns - The State formalized its adherence to these global campaigns through Decree No. 56,347, on January 26, 2022, ratifying its commitment to seek the neutralization of GHG emissions by 2050 and strengthen climate resilience.

7. ICLEI (Local Governments for Sustainability) Membership - Rio Grande do Sul's membership in this global network of local and regional governments marks an important step in its commitment to the climate agenda. This membership offers access to resources, knowledge and best practices shared by other regions committed to the climate cause, strengthening the State's capacity to implement effective climate policies.

8. Cooperation with Disclosure Insight Action (CDP) - This strategic partnership seeks to collect and disseminate data related to climate change, directly benefiting municipalities and the State. It empowers localities in Rio Grande do Sul to obtain, analyze and communicate essential information about

climate change, developing multi-level climate governance.

9. Edinburgh Declaration - Adherence to this declaration reflects the State's commitment to global development for biodiversity, aligning itself with international initiatives to protect ecosystems and environmentally responsible practices.

10. Participation in the Southern and Southeastern Integration Consortium of Brazil (COSUD) and in the Southern Development and Integration Council (CODESUL) - The State of Rio Grande do Sul plays an active and strategic role in the regional initiatives of COSUD and CODESUL, actively participating in cooperation and integration efforts with neighboring states in the South and Southeast regions of Brazil. This participation is essential to promote sustainable development, strengthen inter-governmental cooperation, face common regional challenges, and strengthen the influence and position of Rio Grande do Sul in the economic, social, and environmental agendas of these regions.

11. Brazilian Association of State Environmental Entities (Abema) - It is an entity that brings together the State Environmental Secretariats and environmental bodies of Brazilian states, including Rio Grande do Sul. Its main purpose is to encourage collaboration and exchange of information between state entities, with the aim of strengthening environmental management and creating aligned policies and strategies throughout Brazil. Abema plays



a fundamental role in coordinating environmental policies and promoting joint initiatives to face environmental challenges of national and global scope, which reinforces RS's active participation in the **Climate** Technical Chamber (CT Clima) and its commitment to environmental issues.

As can be seen, most of the climate agenda commitments were implemented during the period between 2019 onward. During this period, the State of Rio Grande do Sul has indisputably demonstrated its commitment to sustainability and climate change mitigation, through a series of initiatives and agreements. These efforts emphasize the State's continued commitment towards a more sustainable and resilient future.

It is important to highlight that, until March 2023, Rio Grande do Sul stood out among the 10 states that most effectively met climate related targets, as shown in a survey conducted by the Brazilian Association of State Environmental Entities (Abema).

Abema plays an essential role in coordinating and supporting the environmental actions of Brazilian states. Its positive assessment in relation to Rio Grande do Sul demonstrates recognition of the State's policies and efforts towards a more sustainable future.

Rio Grande do Sul's commitment to international agreements, such as the Paris Agreement, as well as its participation in global coalitions and initiatives show that the State is aligned with global efforts.

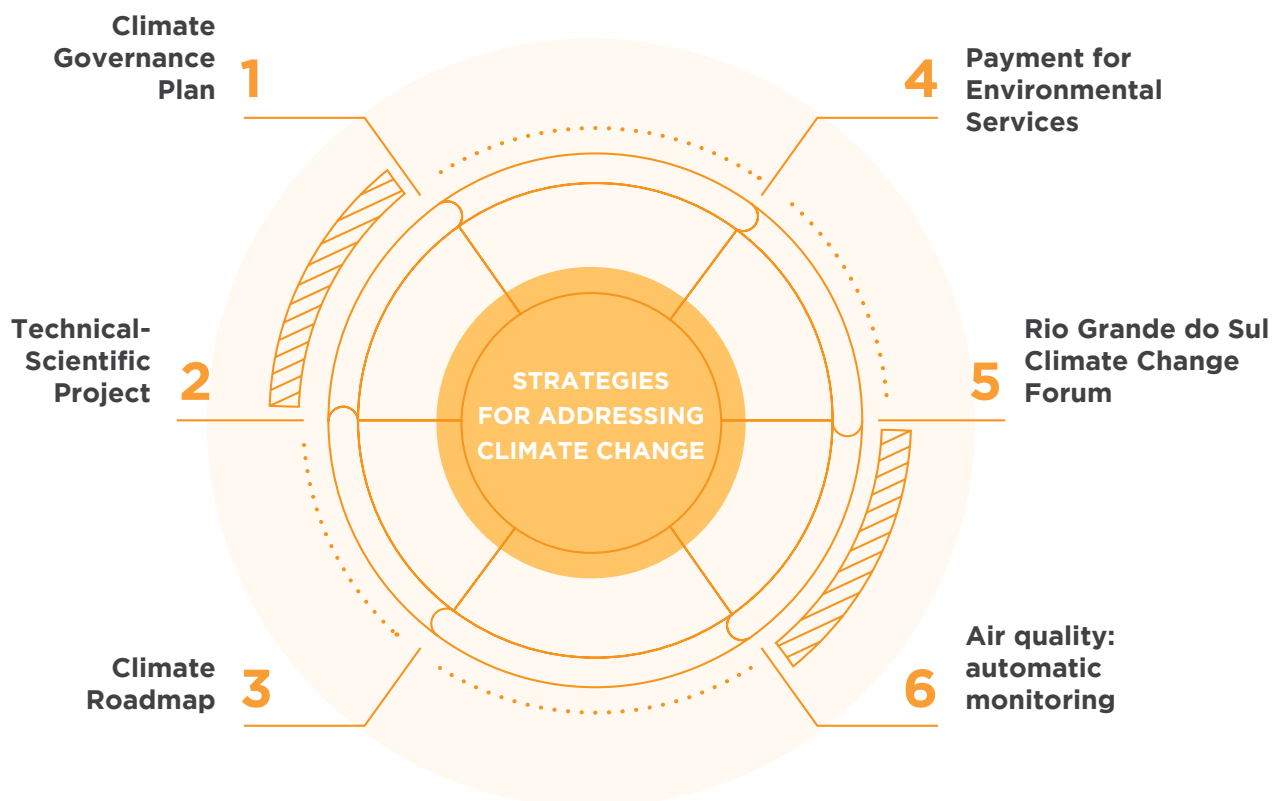


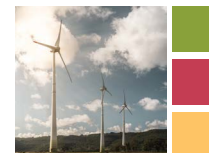


Strategy for Tackling Climate Change

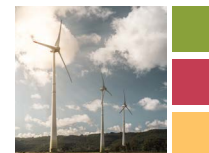
Strategies for tackling climate change play a primary role as a strategic guide for the Climate Advisory Office linked to the Secretariat for the Environment and Infrastructure. In addition to establishing goals and objectives, these strategies define deadlines for their execution, serving as a roadmap for the necessary mitigation and adaptation measures.

To provide a detailed view of the actions and their commitments, the Strategies for tackling climate change are presented in tables, which highlight their main action, their objectives, and the corresponding activities, along with the expected deadlines.





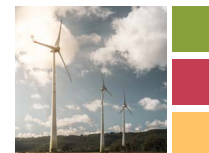
Strategies for Tackling Climate Change	Objective	Action/Activities	Scheduled Deadlines
<p>I - Climate Governance Plan</p> <p>Status: In final phase of contractual agreements</p> <p>Amount invested: BRL 2 million</p>	<p>Climate Compliance is the starting point for achieving sustainable development. It involves collaboration between various actors, such as governments, civil society, companies and non-governmental organizations. The objective is to carry out territorial diagnoses, define ambitious goals, and develop plans to reduce greenhouse gas (GHG) emissions and adapt to climate change.</p> <p>This process includes six stages:</p>	<p>1. Climate Governance</p> <p>Establish a multi-level governance structure that involves different areas of local or regional government, aligned with international commitments. This results in a Climate Governance Report, reinforcing the commitment to the climate agenda.</p>	<p>By the end of 2025</p>
		<p>2. GHG Emissions Inventory</p> <p>Carry out a detailed diagnosis of the sources and volume of GHG emissions in the territory, training the local government's technical team. The methodology will follow international standards, such as the IPCC (Intergovernmental Panel on Climate Change) and the GPC (Global Protocol for Community-Scale Greenhouse Gas Emission Inventories).</p>	<p>By the end of 2024</p>
		<p>3. Climate Risk and Vulnerability Analysis</p> <p>Collect, model and analyze data to identify current and future climate risks, impacts, and adaptation capabilities. This initiative guides decision-making and the implementation of long-term adaptation and mitigation measures.</p>	<p>By the end of 2025</p>
		<p>4. Climate Action Plan</p> <p>Develop a plan that aims to achieve carbon neutrality by 2050, including reducing GHG emissions and adapting to climate change. The process is participatory and includes the definition of goals and monitoring indicators.</p>	<p>By the end of 2025</p>
		<p>5. Production chain decarbonization</p> <p>Assess carbon emissions, set reduction targets, adopt clean energy sources, promote sustainable practices, improve energy efficiency, environmental regulations, education and incentives, and collaboration with business federations.</p>	<p>By the end of 2025</p>
		<p>6. Climate Regulations</p> <p>Update and organize legal principles with the RS Climate Change Policy, in accordance with national legislation and international agreements, as well as regulate collegiate bodies and spaces for social participation.</p>	<p>By the end of 2025</p>



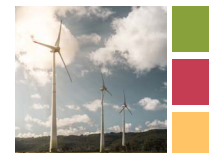
Strategies for Tackling Climate Change	Objective	Action/Activities	Scheduled Deadlines
<p>II - Technical-Scientific Research Project: Monitoring Greenhouse Gases in the Fields and Forrests</p> <p>Status: Public notice in partnership with Fapergs launched on September 14, 2023</p> <p>Amount invested: BRL 15 million</p>	<p>The main objective of this initiative is to generate technical subsidies to combat climate change in the State of Rio Grande do Sul. This includes validating greenhouse gas emissions data, creating an environmental monitoring system, entering into alignment with global emissions reduction targets, and committing to sustainable development, specifically combating climate change. The general objective is to promote sustainability and contribute to achieving global objectives against climate change.</p> <p>This process includes four stages:</p>	<p>1. Data Validation</p> <p>Ensure the accuracy and reliability of data related to greenhouse gas (GHG) emissions, through validation of data released in the 2023 Greenhouse Gas Emission Estimation System (SEEG). This is critical for an accurate understanding of emissions at the local level and for formulating effective reduction policies.</p>	<p>By the end of 2026</p>
		<p>2. Creation of Monitoring System</p> <p>Develop a greenhouse gas monitoring system in the various environments, which will allow obtaining primary and real-time data on GHG emissions. This action is essential for efficient management and for evaluating progress towards climate goals.</p>	<p>By the end of 2026</p>
		<p>3. Alignment with International Goals</p> <p>Actively contribute to meeting internationally established climate goals, such as reducing carbon dioxide (CO2) emissions by 2030 and neutralizing net GHG emissions by 2050. This initiative brings the State into compliance with global agreements and demonstrates its commitment to sustainability. It is important to highlight that, especially due to the uniqueness of the Pampa biome, local data need to be measured and considered in a unique manner, contributing to the definition of specific and effective methodologies in this context.</p>	<p>By the end of 2026</p>
		<p>4. Financing of Scientific Studies</p> <p>Support scientific research related to climate change through research funding notices. This allows technical and technological institutions to propose measures and actions to promote climate resilience. This initiative seeks to leverage local expertise to develop innovative solutions to the State's climate challenges. It is essential that these notices continue in the future to sustain this important research and climate action work.</p>	<p>Search for resources and hold more public tender notices within the scope of Fapergs 005/2023</p>



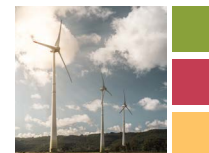
Strategies for Tackling Climate Change	Objective	Action/Activities	Scheduled Deadlines
<p>III - Climate Roadmap</p> <p>Status: In the process of receiving the contract with the international financier</p> <p>Amount invested: 25 thousand dollars, which will be received through international financing, and another BRL 2 million forecasted investment</p>	<p>The initiative seeks to carry out a diagnosis of climate actions in the 497 municipalities of Rio Grande do Sul. This will be done through the development of a technological tool called a “climate roadmap”, which will guide municipalities, consolidate local information and monitor the progress of ongoing actions. The main purpose is to allow municipalities’ actions to effectively contribute to the collective goal of zero GHG emissions by 2050.</p>	<p>1. Promotion of Multilevel Governance Actions and Creation of Municipal Commissions</p> <p>This stage includes the promotion of multi-level management actions, encouraging the creation of Municipal Commissions to deal with Climate Change and guidance on initiatives to be developed through the Climate Roadmap project.</p>	<p>By the end of 2023</p>
		<p>2. Sign a Contract with the International Financier</p> <p>This step involves signing the contract with the international financier, in this case the Future Fund, linked to the Under2 Initiative, in order to guarantee the necessary financing for the implementation of the Climate Roadmap project.</p>	<p>By the end of 2023</p>
		<p>3. Development of the Technological Tool</p> <p>Initially, a technological tool (software) called the “climate roadmap” will be developed to consolidate municipal information.</p>	<p>By March of 2024</p>
		<p>4. Mapping Mitigation Initiatives</p> <p>Identification and mapping of climate mitigation initiatives underway in municipalities.</p>	<p>By April of 2024</p>
		<p>5. Strategy Guidance and Definition</p> <p>Based on diagnoses, guidance and definition of specific strategies for each municipality, aiming to reduce GHG emissions.</p>	<p>By June of 2024</p>
		<p>6. Progress Monitoring</p> <p>The “climate roadmap” tool will be used to monitor the progress of implemented actions and ensure that they effectively contribute to the collective goal of zero GHG emissions by 2050.</p>	<p>Constant monitoring and improvement</p>



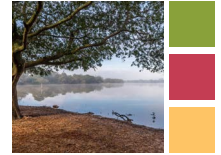
Strategies for Tackling Climate Change	Objective	Action/Activities	Scheduled Deadlines
<p>IV - Payment for Environmental Services</p> <p>Status: release of the public notice by December 2023 - Public Tender Notice for Private Natural Heritage Reserve (RPPN)</p> <p>Amount: BRL 3 million over 36 months of the notice</p> <p>Budget: BRL15 million for other public tender notices</p>	<p>The objective (of Decree No. 56,640, of September 2, 2022, amended by Decree No. 57,063/2023) is to regulate article 21 of State Law No. 15,434, of January 9, 2020, and establish the State Payment Program for Environmental Services (PEPSA) in the State of Rio Grande do Sul. Establishing this mechanism, encouraging and promoting environmental protection, aligns with the State Environmental Policy and establishes a payment system for environmental services.</p>	<p>1. Creation and Publication of the PSA Steering Committee</p> <p>At this stage, the first step was to create the PSA Management Committee, which will be responsible for coordinating and making decisions related to the payment program for environmental services. After the creation of the Committee, SEMA Ordinance No. 116, of August 16, 2023, was published.</p>	<p>By August of 2023</p>
		<p>2. PEPSA Steering Committee Meetings</p> <p>The PEPSA Steering Committee will hold ordinary and extraordinary meetings to discuss the program's strategic guidelines, as well as deliberations on the implementation of the PSA. In addition, the creation of a Working Group (GT) for each notice, if necessary.</p>	<p>Meetings every two months</p>
		<p>3. PSA/RPPN Notice</p> <p>The PEPSA Steering Committee approved the first PSA notice in Rio Grande do Sul for conservation units applied to the Private Natural Heritage Reserve (RPPN) modality. It also decided to create a PSA/RPPN Working Group (GT), responsible for: detailing the terms and conditions of participation in the notice; the eligibility criteria, and the definition of payment amounts.</p>	<p>By September of 2023</p>
		<p>4. Procedural Process</p> <p>Each thematic area will propose a notice, decided on by the PEPSA Steering Committee. The plan is for other notices to be made that meet each specificity, going through processing in sectors of the Secretariat and other government bodies, guaranteeing legitimacy and compliance, transparency and auditing with all applicable laws and regulations.</p>	<p>By October of 2023</p>
		<p>5. Publication of the Notice</p> <p>After all analyses, revisions and approvals, the PSA notice for RPPNs must be published in the Official State Gazette, making it accessible to the public and potential interested parties.</p>	<p>By November of 2023</p>
		<p>6. Strategy Definitions</p> <p>This stage comes after the publication of the PSA/RPPN Notice, where the scope of a new notice for PSA will be defined.</p>	<p>In 2024</p>



Strategies for Tackling Climate Change	Objective	Action/Activities	Scheduled Deadlines
<p>V - Rio Grande do Sul Climate Change Forum</p> <p>Status: Tri-annual meetings</p>	<p>The Rio Grande do Sul Climate Change Forum (FGMC) is an initiative of the government of Rio Grande do Sul, whose main objective is to promote the discussion and proposition of government actions with the participation of society, aimed at mitigating, minimizing and adapting to changes global climate. Decree No. 56,437/2022 created the Rio Grande do Sul Climate Change Forum, with subsequent amendment by Decree No. 57,063/2023.</p>	<p>1. Promote discussion and proposal of government actions to deal with climate change, including mitigation and adaptation Hold conferences, seminars and workshops to engage experts, academics and stakeholders in discussing climate strategies and solutions.</p> <p>2. Monitor and support the implementation of the Rio Grande do Sul Policy on Climate Change and the preparation of the State Plan for Climate Change Collaborate with research institutions and universities to collect data and information relevant to evidence-based policymaking.</p> <p>3. Support the State's adherence to the Race to Zero and Race to Resilience campaigns within the scope of the United Nations Framework Convention on Climate Change Integrate the goals and commitments of the Race to Zero and Race to Resilience campaigns into state climate change policies and establish partnerships with other regions and subnational governments that participate in the campaigns to exchange experiences and best practices.</p> <p>4. Foster activities and programs to reduce greenhouse gas (GHG) emissions and seek financing for initiatives related to climate change Develop carbon capture, reforestation and ecosystem restoration projects.</p> <p>5. Promote collaboration between the public and private sector to achieve meaningful environmental goals Establish public-private partnerships for the development of renewable energy and energy efficiency projects.</p> <p>6. Carry out education, training and dissemination actions to raise awareness in society and involve various sectors in the search for sustainable solutions Develop educational programs on climate change in schools and universities.</p>	<p>The plenary session chooses a specific theme during each edition of the FGMC held to debate and plan related actions.</p>



Strategies for Tackling Climate Change	Objective	Action/Activities	Scheduled Deadlines
<p>VI - Air Quality: Automatic Monitoring</p> <p>Status: Preparation of the bidding process</p> <p>Global Amount: BRL 12 million</p>	<p>The initiative seeks to monitor air quality in large cities in the State of Rio Grande do Sul. To this end, hiring a specialized service will allow the acquisition of hourly data on atmospheric pollutants and meteorological data, making it possible to understand the air quality scenario in the populous municipalities of Caxias do Sul, Porto Alegre and Santa Maria. The acquisition of data will strengthen public authorities in monitoring environmental licenses and controlling polluting enterprises.</p>	<p>1. Preparation of Terms of Reference and launch of public tender notice</p> <p>This stage includes processing in State Government bodies until the publication of the public tender notice in the State Gazette, by new Law No. 14,133/2021.</p>	<p>By November of 2023</p>
		<p>2. Company evaluation and contracting</p> <p>This stage involves evaluating the participants registered in the bidding and defining the contract that will meet the requirements and criteria set out in the bidding process. The deadline will be four years after signing the contract.</p>	<p>By February of 2024</p>
		<p>3. Acquisition of hourly data from monitoring stations</p> <p>After the installation of the stations within 90 days of contracting in locations defined by SEMA, hourly data on atmospheric pollutants and meteorological parameters will be obtained for validation and treatment by SEMA and FEPAM, as well as the availability of maintenance and calibration spreadsheets for consultation by the contractor.</p>	<p>By May of 2024</p>
		<p>4. Atmospheric modeling</p> <p>This project is parallel to the previously mentioned ongoing service. It seeks to plan, develop and provide platforms for atmospheric modeling systems (web and app) for air quality forecasts, with warnings for unfavorable indices.</p>	<p>By April of 2024</p>
		<p>5. Strategy Guidance and Definition</p> <p>Develop educational projects together with municipalities in the installation of an air quality monitoring station, seeking to promote environmental awareness, collect accurate data on air pollution, and contribute to improving public health and the quality of life of the local community.</p>	<p>By June of 2024</p>



In addition to presenting the main actions coordinated by the Climate Advisory of the Secretariat for the Environment and Infrastructure (SEMA), it is essential to highlight the complexity and scope of climate-related activities. The interdisciplinary nature of these initiatives encompasses not only direct actions under the responsibility of the Climate Advisory, but also a series of other activities that are being carried out simultaneously within the scope of SEMA, as well as other State Secretariats and Institutions, covering a diverse range of areas and themes related to climate change.

Below is a list of the main detailed actions that are also being developed within the scope of SEMA.

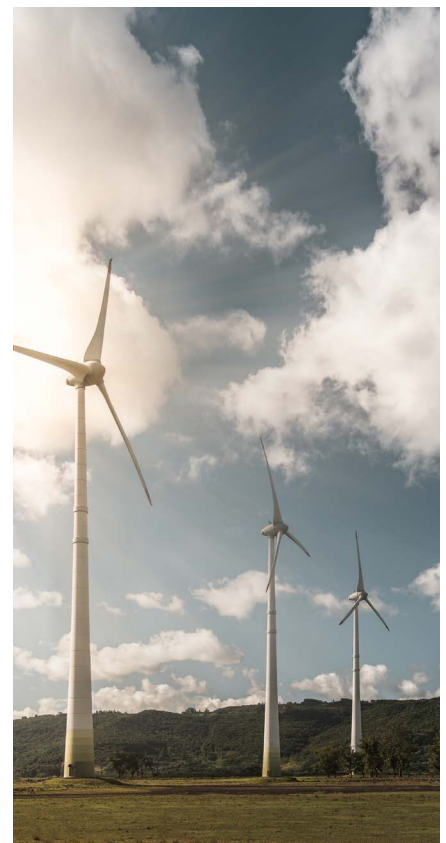
1) GREEN HYDROGEN PROGRAM

Description

Rio Grande do Sul is committed to carrying out a decarbonization transition through the use of green hydrogen, which represents a clean and sustainable energy source. This project involves the production of hydrogen from renewable energy sources, such as wind and solar energy, especially in periods of low demand, to be applied in several strategic sectors, including transport, industry and even energy generation.

Actions

- Studies and diagnoses of the feasibility of hydrogen production in the state of Rio Grande do Sul.
- Establishment of partnerships with companies specialized in the production of green hydrogen.
- Development of a new mode in the energy and economic matrix that enables energy decarbonization in Rio Grande do Sul.





- Fostering the creation of a new productive identity for the southern region of Brazil, based on high value added advanced technologies that are geared towards self-sustainability and environmental protection.

2) BIOGÁS-RS PROGRAM

Description

The Biogás-RS initiative is focused on the production and use of biogas, a renewable energy source, obtained through the decomposition of organic waste. The main objective of this project is to encourage the generation of clean energy from this waste, while simultaneously contributing to the reduction of associated environmental impacts.



Actions

- Promote the biodigester chain in the State of Rio Grande do Sul.
- Provide adequate treatment for organic waste, which, in large part, comes from agricultural production, one of the main economic activities in Rio Grande do Sul.
- Increase the share of renewable energy sources in the State's energy matrix.
- Attract new investments to the sector, boosting sustainable economic development.



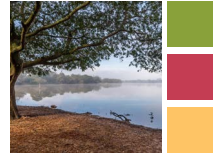
- Generate jobs and additional income for farmers, through the expansion of activities on rural properties.
- Reduce greenhouse gas emissions through efficient waste management.
- Offer adequate management of manure and agro-industrial residues, avoiding contamination of water and soil in producing regions, while simultaneously producing biogas and biofertilizers.
- Promote the sale of these fuels in the region where they are produced.
- Expand the internal supply of biogas and biomethane in different regions of the State, contributing to a more diversified, efficient and sustainable energy matrix.

3) CAMPOS DO SUL PROGRAM

Description

The Campos do Sul Program aims to guarantee the conservation of native fields in the Pampa and Atlantic Forest biomes. Based on the provision of specialized technical assistance, the program aims to encourage rural landowners to adopt good environmental and management practices, ensuring the protection of the functional and ecosystem services of rural environments and their biological diversity.





Participation in the program is voluntary, by filling out an online form. Upon joining, the producer will receive a certificate of membership and conformity issued by Sema. Properties may fall into basic, intermediate or advanced levels, depending on the management and conservation practices that are used.

Areas of natural countryside can be registered in the Campos do Sul Program, with a minimum continuous surface corresponding to 20% of the property area, for properties with a size equal to or smaller than the average COREDE rural module in which it is located, or 10 ha, for larger properties. For small rural properties, it is possible to certify a set of smaller areas, as long as they are contiguous, and when added together, reach the minimum area defined in the program (consortium modality). All properties must receive some type of technical extension or follow-up assistance.

Actions

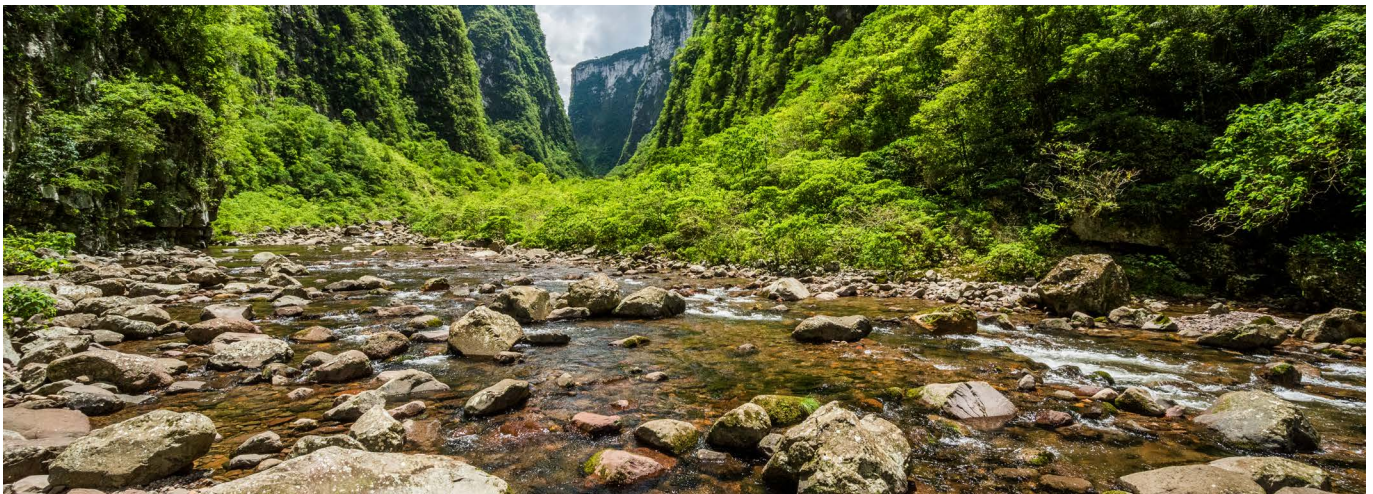
- Promote the application of good production practices in the primary production sector, seeking to achieve sustainability and environmental resilience in rural properties located in the Pampa and Atlantic Forest Biomes and which have their means of production developed on the rural formations that occur in these biomes.
- Give rural producers, through the State's approval, certification that the developed production system aligns with the best environmentally sustainable practices and techniques.
- Promote the identification and recognition of environmental regularity on properties, adding value to products and encouraging producers to follow technical recommendations that promote environmental resilience and contribute to achieving objectives related to climate issues.



4) WATERSHED REVITALIZATION PROGRAM

Description

Established through an agreement signed with the Ministry of Regional Development, the Watershed Revitalization Program seeks to identify and execute watershed revitalization actions, starting with the Gravataí and Sinos rivers. The program is structured around four goals. Goals 1 and 2 are linked to support for management, communication, social mobilization and construction of bases to guarantee continuity. Goals 3 and 4 will be developed as a pilot and will directly benefit the environment and the population of the two basins listed.



Actions

- Environmental revitalization of the river basins in the State of Rio Grande do Sul, starting with the Gravataí and Sinos rivers.
- Expansion of water security in the region covered by these two river basins, strategic for supplying the population of Rio Grande do Sul, and subsequently, in the other river basins in the State.
- Promotion of environmental, social and economic development in the regions that will be reached by the program, based on actions related to water availability and quality.



5) ABC+ PLAN

Description

The ABC+ Plan is a program dedicated to low-carbon agriculture. Its central objective is to promote sustainable agricultural practices, such as direct planting, crop-livestock-forest integration and adequate soil management, with the aim of reducing greenhouse gas emissions in the agricultural sector.



Context

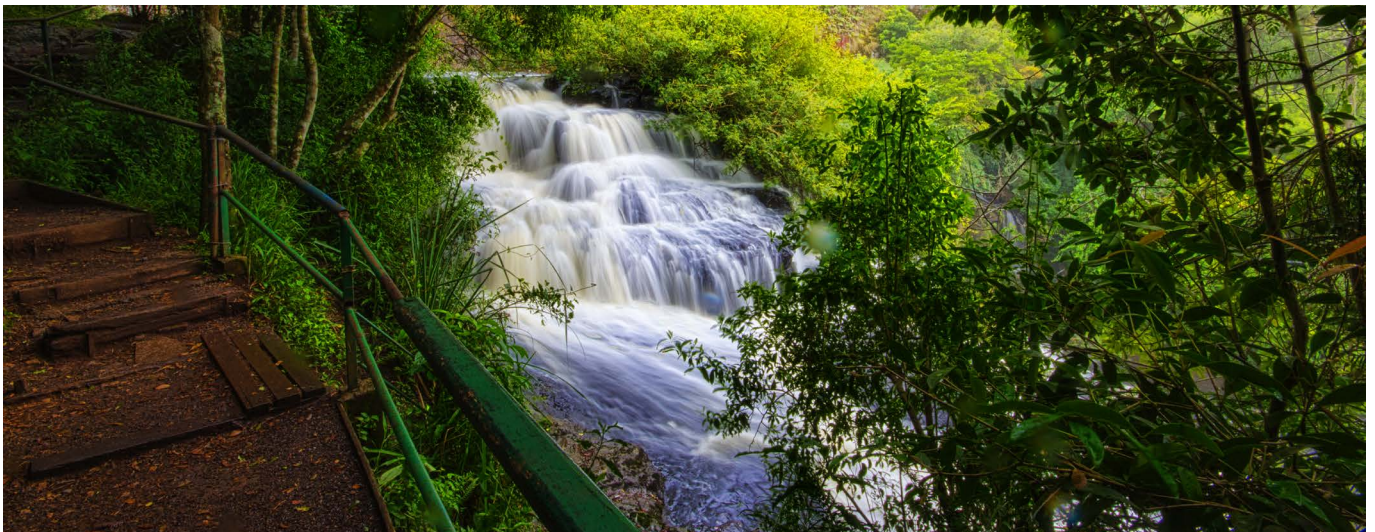
During the 4th Gaucho Climate Change Forum (FGMC), the Rio Grande do Sul Low Carbon Agriculture Plan, known as ABC+ RS, was launched. This initiative is of great importance, given that its central purpose is to promote adaptation to climate change and control greenhouse gas emissions in agriculture.

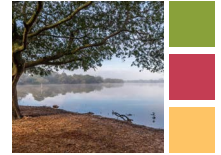
Agriculture plays a significant role in greenhouse gas emissions, and the adoption of low-carbon practices is essential to mitigate environmental impacts and effectively contribute to combating climate change. It is important to highlight that the institution of the ABC+ RS Plan for the period 2020-2030 was formalized through SEAPI Resolution No. 001/2023, which solidifies the commitment of the State of Rio Grande do Sul with the transition to a more sustainable and resilient agriculture in the face of climate change.



6) CARBON MARKET

The carbon market provides economic incentives that encourage companies and nations to reduce their greenhouse gas emissions, significantly contributing to the mitigation of climate change. Since this issue is of national relevance but still lacks a legal basis, the Consortium for the Integration of the South and Southeast of Brazil (COSUD) is currently organizing meetings to discuss the implementation of strategies and regulations related to the carbon market. Furthermore, COSUD has the potential to address challenges specific to the southern and southeastern regions of Brazil, such as the sustainable management of natural resources and the reduction of emissions in key sectors such as agriculture and industry. This highlights the region's joint commitment to facing the climate crisis in a coordinated and efficient manner, promoting collaborative actions in the carbon market and overcoming the challenges inherent to this issue. The State of RS is fully engaged in this initiative.





7) CLIMATE ADAPTATION AND RESILIENCY

Description

In view of scenarios at hand where the consequences of climate change are increasingly perceived in society's daily lives, as well as the entire framework of mitigation and control strategies for impacts and factors that interfere with climate dynamics, there is an increasingly present need to promote initiatives to achieve resilience and adaptation to the conditions expected in the future. The plan involves the effective diagnosis of scenarios and the development of strategies and practical actions aimed at the local reality, and taking into account the various factors that influence and determine the observed conditions, including the promotion of environmental education.

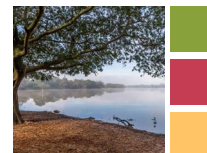
It is worth highlighting that, taking into account emergency scenarios, it is essential to methodologically structure the planning of short, medium and long-term actions, considering the possibilities and response capacity of local populations and the conditions available to society.

In this context, the creation of a Crisis Office dedicated to Prevention, Resilience and Coping with the Impacts of Climate Change is of vital importance. This body is responsible for establishing a Risk Management and Disaster Management Methodology.

Actions

The main actions for climate resilience and adaptation are structured around the following pillars:

- Carrying out a detailed diagnosis of local conditions in light of ongoing changes, through analysis of risks and climate vulnerabilities.
- Assessment of alternatives and opportunities based on the diagnosis carried out, composing resilience and adaptation action plans appropriate to the local reality.
- Proposing and implementing actions and initiatives at all levels of governance to achieve resilience and adaptation to extreme climate conditions, focused on the potential and particularities of each sector of society, but with an emphasis on the collective.



- Maintenance of the integrated monitoring network and Situation Room.
- Review of Civil Defense Alert Methods.
- Promotion of the Civil Defense Training Program.
- Preparation of a Protocol of Basic Guidelines for preventive action with communities in situations of vulnerability in the face of natural disasters in the socio-educational context.



Final considerations

Strategies for coping with changes play an extremely important role as a fundamental strategic guide for the Climate Advisory Office of the Secretariat for the Environment and Infrastructure. It not only sets concrete goals and objectives, but also sets deadlines for implementing the necessary measures for both mitigation and adaptation to climate change.

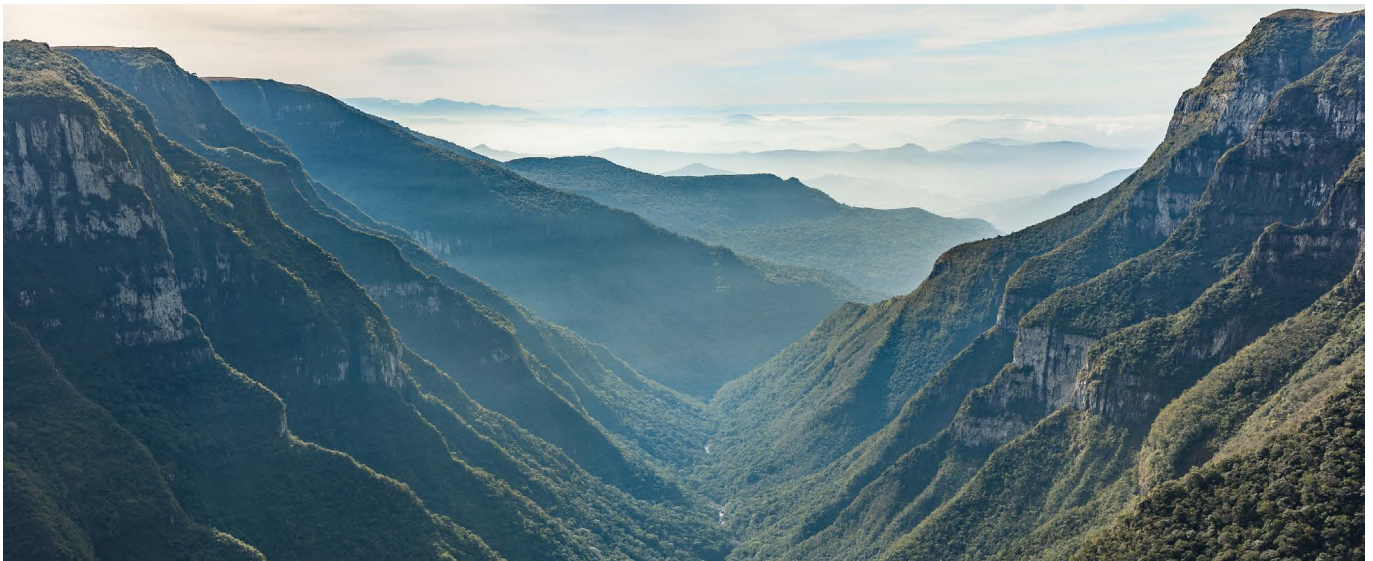
It is essential to emphasize the importance of institutionalizing the proposed actions contained in these strategies to face changes in the State of Rio Grande do Sul. The proposition goes beyond the simple implementation of these actions; it is about permanently incorporating them into the governmental structure and public policies of the State. Institutionalization will ensure that climate initiatives are not just temporary, but rather a structuring and lasting part of the state government's approach to climate change and sustainable development. This process involves several essential steps.





Finally, the institutionalization of climate actions is essential to ensure that the State of Rio Grande do Sul continues to lead effective efforts to combat climate change and build a sustainable and resilient future. This approach ensures that climate initiatives become an integral part of the State's culture and policies, resulting in sustained positive impacts over time. It should also be noted that Rio Grande do Sul's current position in the national ranking in relation to meeting climate goals is a direct reflection of this commitment and places the State as a benchmark for the Brazilian climate agenda.

- 1. State laws and regulations** - It is essential to continually reevaluate the laws and plans that will endorse the goals and actions established in the Climate Action Plan and make them mandatory, especially within the scope of Climate Governance, ensuring that future governments also continue to work to achieve these goals.



- 2. Sustainable allocation of financial resources** - Ensure the continuous and adequate allocation of financial resources for the implementation of climate actions, thus providing opportunities for the continuity and effectiveness of these actions over time.
- 3. Qualified human resources** - Establish teams of qualified professionals to manage and execute climate actions, ensuring expertise and dedication to this important topic.



- 4. Multisectoral collaboration and multilevel governance** - Foster collaboration between local governments, businesses, civil society organizations and other stakeholders, ensuring that climate actions are a shared responsibility and that everyone contributes to achieving established goals.

- 5. Participation in important events related to the climate agenda** - The future participation of the State of Rio Grande do Sul in the Conference of the Parties (COP 28) and in other climate bodies offers important opportunities to learn from experts, align local actions with international goals, and demonstrate an active commitment to the fight against climate change, attracting positive international attention and seeking resources to finance actions at the local level.

State Secretariat for the Environment and Infrastructure

Climate Advisory Office

PROCLIMA2050



October, 2023



GOVERNO DO ESTADO
RIO GRANDE DO SUL

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