

## Index

Background	3
2016 Achievements	
Visibility	4
Members	5
Webinars	6
Working Groups	6
Reporting	11
Next Steps	12
Annex	13

## Background

"In the early years of the Convention, adaptation received less attention than mitigation, as Parties wanted more certainty on impacts of and vulnerability to climate change. When IPCC's Third Assessment Report was released, adaptation gained traction, and Parties agreed on a process to address adverse effects and to establish funding arrangements for adaptation." <sup>1</sup>

The Third Assessment Report of the International Panel on Climate Change (IPCC) was published in 2001, seven years after the United Nations Framework Convention on Climate Change (UNFCCC) entered into force. Although adaptation became, nowadays, a mainstream topic within the global regime on climate change, this initial gap has never been fully surmounted. This is why the UNFCCC has continuously called for an enhanced action on adaptation, highlighting the fact that "adaptation must be addressed with the same level of priority as mitigation." <sup>2</sup>

In 2015, in the run-up to COP21, some regional governments shared the perception that, similarly to other levels of jurisdiction, they were somehow replicating an existing imbalance between adaptation and mitigation, by favoring the latter throughout their international climate actions. This finding was especially problematic, taking into account that regional governments are frequently assigned with legal responsibilities and policy tools that are pivotal to adaptation. Another common observation was that, although several treaties kept on reaffirming that adaptation is a global effort requiring the engagement of multi-stakeholders from all levels, the role of regional governments in this field seemed quite undervalued. Based on these realizations, a collective understanding emerged indicating that regional governments needed to take a global action specifically on climate adaptation.

In December 2015, through the initiation of the governments of Catalonia and Rio de Janeiro, RegionsAdapt was thus launched in Paris, alongside COP21, by 27 founding members, and with the Network of Regional Governments for Sustainable Development (nrg4SD) serving as its Secretariat.

By fulfilling the aforementioned gap, Regions Adapt probably became the first global initiative to inspire and support state, regional and provincial governments to take concrete action, collaborate and report efforts on climate change adaptation. This global partnership is open to all governments situated between the local and the national level from across the world, regardless of their size or stage of implementation of their climate policy. The literature has identified three ways in which regional partnerships catalyze innovations in climate adaptation policies. First, internally through collaboration among the partners in common projects and joint working groups. Second, through scaling up their activities, by diffusing knowledge and policy innovations externally to decision makers beyond the partnerships. Finally, through supporting national adaptation politics, by providing inputs to national adaptation policy formulation.<sup>3</sup> RegionsAdapt aims to serve as catalysis for all these objectives.

As an initiative of international cooperation, it encourages members to interact and exchange experiences and best practices, report efforts, and seek joint projects and new ways to foster concrete actions. By raising the visibility of regional governments on the international stage, RegionsAdapt can underscore their fundamental role in bridging gaps for the local implementation of national and global decisions. Moreover, taking into account the lessons of regional governments on the ground, initiatives such as RegionsAdapt can provide the Parties to the UNFCCC with thoughtful recommendations on innovative solutions for adaptation policy designing. Altogether, these potentials ultimately favor the ability of regional governments in delivering adaptation measures and also

enhance the adaptability of the communities existing in their jurisdictions.

Once joining RegionsAdapt, governments basically agree to accomplish three commitments:

- Commitment 1 To adopt (or review) a strategic approach to adaptation and prioritize adaptation actions within two years of joining the initiative;
- Commitment 2 To take a concrete action on adaptation in at least one of the seven key priority areas that the founding regional governments have mapped;
- Commitment 3 To report data on the progress of the adaptation actions on an annual basis through the risk and adaptation section of the states and regions platform of the Carbon Disclosure Project (CDP).

## The seven key priority areas of the initiative are the following:

- · Water resources and management;
- · Resilience and disaster risk reduction;
- · Agriculture and zootechnics;
- · Forestry, protected areas, and biodiversity;
- Infrastructure (including transport and the energy sectors) and territorial planning;
- · Economic impacts and opportunities;
- · Social adaptation and impacts.
- 1. United Nations Framework Convention On Climate Change. Status of Ratification of the Convention. Available at: <a href="http://unfccc.int/essential\_background/convention/status\_of\_ratification/items/2631.php">http://unfccc.int/essential\_background/convention/status\_of\_ratification/items/2631.php</a>. Accessed on: 3 May 2016.
- 2. United Nations Framework Convention On Climate Change. Cancun Adaptation Framework. Available at: <a href="http://unfccc.int/adaptation/items/5852.php">http://unfccc.int/adaptation/items/5852.php</a>. Accessed on: 3 May 2016.
- 3. BAUER, A.; STEURER, R. Innovation in climate adaptation policy: are regional partnerships catalysts or talking shops? In: Environmental Politics, vol. 23, No. 5, p.818–838, 2014.

### List of founding regions

Australian Capital Territory (Australia) Azuay (Ecuador) Basque Country (Spain) British Columbia (Canada) California (USA) Catalonia (Spain) Ceará (Brazil)
Fatick (Senegal)
Goiás (Brazil)
Gossas (Senegal)
Jalisco (Mexico)
KwaZulu-Natal (South Africa)
Lombardia (Italy)

Parana (Brazil)
Prince Edward Island (Canada)
Québec (Canada)
Rio de Janeiro (Brazil)
Rio Grande do Sul (Brazil)
Saint-Louis (Senegal)
São Paulo (Brazil)

South Australia (Australia) Sud-Comoé (Ivory Coast) Tocantins (Brazil) Tombouctou (Mali) Vermont (Canada) Wales (UK) Western Province (Sri Lanka)

## 2016 Achievements

## **Visibility**

Throughout the first year of its implementation, RegionsAdapt has raised a wide visibility, thanks to the promotional work of its Secretariat in several international meetings. In July, during the High Level Political Forum of the 2030 Sustainable Development Agenda, the initiative was included in the United Nations Global Innovation Exchange Platform for the Sustainable Development Goals, and presented at the launching of the Partnership Exchange, which took place in the United Nations Headquarters in New York City.

### **Fulfilments**

RegionsAdapt fulfilled the SMART criteria – Specific, Measurable, Achievable, Resource-based, with Time-bound deliverables – of the UN Partnerships for SDGs online platform, and you can find its profile at the following link: https://sustainabledevelopment.un.org/partnership/?p=11936

On August 31st and September 1st, the initiative was also presented at the Second Climate Summit of the Americas, hosted in Guadalajara by the Government of Jalisco. In this event, which gathered regional governments from the American continent to address the new challenges of the recently implemented Agenda 2030 and the Paris Agreement, RegionsAdapt was included among the potential commitments that the signatories of the final declaration – Jalisco Call for Action – could adhere to.

On September 5th, RegionsAdapt Project Manager, Joan França, was invited by the International Telecommunication Union (ITU) to present the initiative at the Second Meeting of Smart Cities for inclusion and Sustainability, held in Montevideo, Uruguay. Also in September, nrg4SD was invited to take part of the Climate Chance – Climate Actors World Summit, which took place in Nantes, France, between the 26th and 28th, where it presented, among others, its flagship initiative on climate adaptation. The workshop "Regions at the heart of adaptation strategies"

hosted by nrg4SD in cooperation with the Autonomous Region of Sardinia explored regional adaptation strategies, joint initiatives of adaptation and international cooperation, with a special focus on RegionsAdapt.

In October, during the Third United Nations Conference on Housing and Sustainable Urban Development (Habitat III), organized in Quito, Ecuador, the initiative was also featured in an official networking event entitled "Enhancing Urban Resilience through RegionsAdapt," which nrg4SD organized in partnership with the UN Economic Commission on Latin America and the Caribbean (ECLAC) and the UNDP World Centre for Sustainable Development (RIO+Centre), as well as in the First Meeting of Sub-national Governments of the Union of South America Nations (UNASUR).

In November, at the COP22, held in Marrakech, Morocco, RegionsAdapt and the actions of its members will be presented at several side-events that nrg4SD will organize, and on the Global Climate Action Champions Thematic Day on Cities and Human Settlement.

### Nrg4SD's side-events in COP22

Subject	Date	Time	Place
RegionsAdapt after one year: Sub-nationals leading climate adaptation	Saturday, 12 <sup>th</sup> November	16:00	Climate Change Studio (Blue Zone)
Sub-nationals leading climate adaptation: TheRegionsAdapt initiative	Saturday, 12 <sup>th</sup> November	13:00 – 14:30	Loukkos (Green Zone)
Subnational Governments and indigenous peoples: Successful stories of climate adaptation	Tuesday, 15 <sup>th</sup> November	17:30 – 18:30	Indigenous Peoples' & Communities' Pavilion (Green Zone)
Promotional meeting of RegionsAdapt	Wednesday, 16 <sup>th</sup> November	15:00 – 17:00	Agora, Cities and Regions Pavilion (Green Zone) (tbc)
Adaptation to Climate Change: National & Sub-National Coherence, Coordination and Cooperation at Regional Level (co-organised with SACEP)	Thursday, 17 <sup>th</sup> November	13:15 - 14:45	Austral (Blue Zone)

## **Members**

Thanks to the enhanced visibility that the Secretariat was able to raise for the initiative, the 27 founding members of RegionsAdapt have been joined by several other signatories who adhered to the initiative in different signing ceremonies organized throughout 2016. As a result, in less than one year since its launching, the initiative arrives at COP22

with 61 members from all continents, including 56 regional governments and 5 national associations of regional governments. In addition to these signatories, RegionsAdapt has also partnered with the following organizations:

· Capacity Development in Sustainable Water Management (UNDP Cap-Net);

- Carbon Disclosure Project (CDP);
- · Covenant of Mayors;
- · Regions United (ORU-Fogar);
- The Climate Group (TCG);
- · United Nations Economic Commission for Latin America and the Caribbean (ECLAC);
- · World Centre for Sustainable Development (UNDP RIO+Centre).

### List of members

AJUDEPA (Paraguay) Amambay (Paraguay) ANCORE (Chile) ANGR (Peru) Araucanía (Chile)

Australian Capital Territory

(Australia) Azuay (Ecuador) Basque Country (Spain) Bolivar (Ecuador) British Columbia (Canada)

Caldas (Colombia) California (USA) Canary Island (Spain) Catalonia (Spain) Ceará (Brazil)

Central Departament (Paraguay)

Cerro Largo (Uruguay) Chaco Tarijeño (Bolivia) CONGOPE (Ecuador) Cordillera (Paraguay)

Council of Governors of Kenya

Cusco (Peru)

Dakhla-Oued Ed Dahab (Morocco)

Esmeraldas (Ecuador) Fatick (Senegal) Fès-Meknès (Morocco) Goiás (Brazil)

Gossas (Senegal) Imbabura (Ecuador) Jalisco (Mexico) Kaffrine (Senegal),

KwaZulu-Natal (South Africa)

Lombardia (Italy) Manabí (Ecuador)

Morona Santiago (Ecuador)

Napo (Ecuador) O'Higgins (Chile) Orellana (Ecuador) Parana (Brazil) Pastaza (Ecuador) Pichincha (Ecuador)

Prince Edward Island (Canada)

Québec (Canada)

Rabat-Salé-Kénitra (Morocco) Reunion Island (France) Rio de Janeiro (Brazil) Rio Grande do Sul (Brazil)

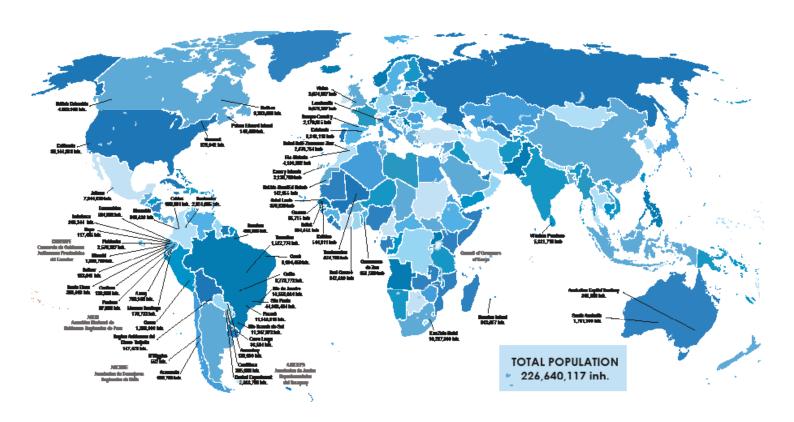
Risaralda (Colombia) Roraima (Brazil) Saint Louis (Senegal) Santa Elena (Ecuador) Santander (Colombia) São Paulo (Brazil) South Australia (Australia) Sud-Comoé (Ivory Coast) Tocantins (Brazil)

Tombouctou (Mali) Vermont (Canada)

Wales (UK)

Western Province (Sri Lanka)

Zou (Benin)



## **Webinars**

As one of the services offered to its members, the Secretariat of Regions Adapt organizes webinars open to participants of all members to discuss about transversal topics related to climate adaptation that are

pertinent to regional governments. All webinars are recorded and made available in the session "only for participants" of the initiative's website.

Apart from covering cross-cutting themes,

these webinars also aim to ensure coherence and coordination among the discussions carried out through the Working Groups being organized for each one of the initiative's key priority areas.

### In 2016, 3 webinars were offered, as follows:

- 1st Webinar on March 21st Overview of California's Adaptation Strategy;
- 2nd Webinar on May 9th Reporting through CDP's states and regions platform;
- 3<sup>rd</sup> Webinar on November 4th Climate Finance Mechanisms presented by Climatekos Organization.

## **Working Groups**

Between March 2016 – when the implementation of the initiative entered into force – and COP22, 4 Working Groups have been actively gathering technical representatives of regional governments to exchange information and best practices, define common standards, and seek

opportunities for developing joint projects. These Working Groups are focused on the seven key priority areas that were identified by the founding members of the initiative. So far, base d on the adopted criteria (relevant quorum and at least one regional government willing to coordinate the group), the Working

Groups that have been created are the following:

- · Water resources and management;
- · Resilience and disaster risk reduction;
- Forestry, protected areas and biodiversity;
- · Economic impacts and opportunities.

### Water resources and management

The Working Group on Water resources and management comprises 18 regional governments and the Capacity Development in Sustainable Water Management (UNDP Cap-Net) as a technical expert. Under the coordination of the Brazilian states of Rio Grande do Sul and Tocantins, this Working Group has organized 4 online meetings between March and October 2016 (April 8th, June 8th, September 26th, and October 26th). All meetings were recorded and are available in the session "only for participants" of the initiative's website.

Based on the discussions carried out in these

online meetings, members agreed that the priority topics of this Working Group would be the following:

- Preparing for extreme events related to floods and droughts;
- Interactions between water quality and climate change adaptation;
- Establishing criterion and indexes for climate change adaptation in the field of water resources management.

In addition, thanks to the presentations shared in these online meetings, the Secretariat could map and suggest some points of convergence related to several

matters of interest of the members who actively took part in this Working Group. These so-called "matchmakings" do not represent an exhaustive list of all points of convergence existing between these jurisdictions, but they provide a few recommended subjects in which the listed regional governments may benefit from the exchange of information and collaborative work. As indicated in Table 1, these "matchmakings" illustrate the quite untapped potential existing for regional governments to cooperate on climate adaptation.

Matchmakings - Water Resources and Management Working Group							
Participant	Expertise presented	Interest on	Suggested matchmaking				
Tocantins	"Barraginhas project" (drought/floods regulation in rural areas)	Drought preparedness	Rio de Janeiro ("Water Pact") / Catalonia				
		Incorporation of the concept of building resilience to climate change in Water Management Plans	Cap-Net / Québec / Catalonia / Lombardia (Regional Adaptation Strategy / Stakeholders engagement and participatory planning)				

Participant	Expertise presented	Interest on	Suggested matchmaking
KwaZulu- Natal	Initiatives on Water efficiency	Drought preparedness	Tocantins ("Barraginhas") / Rio de Janeiro ("Water Pact") / Catalonia
Lombardy	Water management plan	Monitoring and long-term prevision	Québec (Ouranos Program / Hydroclimatic Atla of Southern Québec) / Cap-Net
		Impact measurements in other regions	Québec (Ouranos Program / Hydroclimatic Atla of Southern Québec) / British Columbia / Cap-Net
		Investment analyses	Québec (Ouranos Program/Hydroclimatic Atlas of Southern Québec) / Cap-Net
	Water management in coordination with other regions	Interactions between water quality and climate change adaptation	Cap-Net
Québec	Quebec Governement strategy's for adaptation	Measuring the progress through adaptation in the field of water management	Cap-Net / British Columbia / Catalonia / Lombardy
	Ouranos Water Management Program, Quebec action plan on CC and Hydroclimatic Atlas of southern Quebec	Knowledge development in CC impacts (drought, flood, water quality, surface and groundwater) - Transfer of sciences and 2-way communication with end-users - Development of technical and socio-economical tools for supporting adaptation - Real case studies	
Rio Grande	Watershed management councils		
do Sul	Dealing with water extreme events	Disaster risk management program (floods and droughts)	Québec (Ouranos Program) / Rio de Janeiro
		Building of a state meteorological radar network	Rio de Janeiro
		Expansion of the hydrometeorological gauge network	Rio de Janeiro
		Incorporation of the concept of building resilience to climate change in Watershed Management Plans	Cap-Net / Québec / Catalonia / Lombardia (Regional Adaptation Strategy / Stakeholders engagement and participatory planning)
		Establishing of criterion and index for climate change adaptation	Catalonia (Catalan Adaptation Index)
		Consortiums between the government and Academia	Québec (Ouranos) British Columbia (University of Victoria) Lombardia (Stakeholders engagement and participatory planning)
British Columbia	The New Water Sustainability Act	Climate and hydrological modeling	Québec (Ouranos Program)
		Alternative water governance/area-based water planning/Watershed management plans	Québec (Ouranos Program) Rio Grande do Sul / Rio de Janeiro (Watershed Councils) Lombardia (River contracts / Stakeholders engagement and participatory planning)
		Integrating western and traditional knowledge	Québec (?)
		Protecting aquatic ecosystems and fish	Québec (?) / Lombardy (?)
		Increased water use efficiency	KwaZulu-Natal (?)
		Incorporation of the concept of building resilience to climate change in Water Management Plans	Cap-Net / Québec / Catalonia / Lombardia (Regional Adaptation Strategy)
Cap-Net	Training materials and tutorials on several areas (see concept note)	n/a	n/a

### Resilience and disaster risk reduction

The Working Group on Resilience and disaster risk reduction comprises 18 regional governments. Under the coordination of the Senegalese region of Gossas, this Working Group has organized 3 online meetings between March and October 2016 (April 6th, June 9th, and September 29th). All meetings were recorded and are available in the session "only for participants" of the initiative's website. Based on the discussions carried out in these online meetings, members agreed that the priority topics of this Working Group would be

the following:

- Index-based insurance (also referred to as parametric insurance);
- Implementing the "Priorities for Action" of the Sendai Framework;
- Monitoring and Alert Systems;
- Land use planning and urban planning as a means for risk reduction.

In addition, thanks to the presentations shared in these online meetings, the Secretariat could map and suggest some points of convergence related to several matters of interest of the

members who actively took part in this Working Group. These so-called "matchmakings" do not represent an exhaustive list of all points of convergence existing between these jurisdictions, but they provide a few recommended subjects in which the listed regional governments may benefit from the exchange of information and collaborative work. As indicated in Table 2, these "matchmakings" illustrate the quite untapped potential existing for regional governments to cooperate on climate adaptation.

Participant	Expertise presented	Interest on	Suggested matchmaking	
Gossas	Reforestation	Land use/forest management/biodiversity protection as a means to increase community resilience	Québec (Ouranos: Plan land use and manage risks to reduce vulnerabilities) / Tocantins (Fire Management)	
	Index-based insurance	Capacity building for local communities and civil servants	Québec (Ouranos: Develop knowledge and know-how) / Lombardy	
		Social and economic development as a means to reduce communities' vulnerability	Lombardy / Rio de Janeiro / Rio Grande do Sul / São Paulo	
		Monitoring and Alert Systems	Québec / Rio de Janeiro / Rio Grande do Sul / São Paulo	
		Index-based insurance	Québec [Institute for Catastrophic Lost Reduction (ICLR)]	
Tocantins	Integrated Fire Management in forests	Monitoring system for forest fires (e.g., tools to precisely measure the damage of forest fires)	British Columbia	
	Reduction of fire outbreaks	Raising environmental awareness among local landowners	Québec (Ouranos: Develop knowledge and know-how)	
	Increasing resilience to drought seasons ("Barraginhas" Project)	Dealing with conflicts related to water use: strengthening Basin Committees	Rio Grande do Sul / Rio de Janeiro	
Québec	Develop knowledge and know-how	Experiences in regulatory and procedural framework (e.g., shared federal-provincial jursidiction)	British Columbia / Rio de Grande do Sul (Watershed Councils)	
	Plan land use and manage risks to reduce vulnerabilities	Cross-scale partnerships for hazards involving spatial interconnections (local to national)	British Columbia (Guidelines for Municipalities) Rio Grande do Sul / Rio de Janeiro	
	Maintain the health of individuals and communities	Land use planning and urban planning as a means for risk reduction	British Columbia / Lombardy / São Paulo / Rio Grande do Sul / Rio de Janeiro	
	Improve the safety and longevity of buildings and infrastructure	Index-based insurance	Gossas	
	Institute for Catastrophic Lost Reduction (ICLR)			
São Paulo	Risk monitoring (e.g., floods, landslides)	Effective regulation and implementation of legal instruments of disaster risk management	Québec (Plan land use and manage risks to reduce vulnerabilities) / British Columbia / Lombardy	
		Synergies between scientific research and public administration	Québec (Ouranos)	
British Columbia	Guidelines for their municipalities on land use planning	Index-based insurance	Québec [Institute for Catastrophic Lost Reduction (ICLR)] / Gossas	
		Monitoring and Alert Systems	Québec / Lombardy / Rio Grande do Sul / Rio de Janeiro / São Paulo	
		Guidelines for their municipalities on land use planning	Québec / Rio Grande do Sul	

Participant	Expertise presented	Interest on	Suggested matchmaking			
Rio Grande do Sul	Monitoring and Alert Systems	British Columbia (Guidelines for Municipalities) Québec				
		Disaster risk management program (floods and droughts)	Québec (Ouranos Program) / Rio de Janeiro			
		Building of a state meteorological radar network	Rio de Janeiro			
		Expansion of the hydrometeorological gauge network	Rio de Janeiro			
		Incorporation of the concept of building resilience to climate change in Watershed Management Plans	Cap-Net / Québec / Catalonia / Lombardia (Regional Adaptation Strategy / Stakeholders engagement and participatory planning)			
		Establishing of criterion and index for climate change adaptation	Catalonia (Catalan Adaptation Index)			
		Consortiums between the government and Academia	Québec (Ouranos) British Columbia (University of Victoria) Lombardia (Stakeholders engagement and participatory planning)			
Lombardy	Rural Resilience	Rural Resilience	São Paulo			
	Monitoring and Alert Systems	Index-based insurance	Québec [Institute for Catastrophic Lost Reduction (ICLR)] / Gossas			
		Monitoring and Alert Systems	Québec / Rio Grande do Sul / Rio de Janeiro / São Paulo			
Rio de Janeiro	Monitoring and Alert Systems	Index-based insurance	Québec [Institute for Catastrophic Lost Reduction (ICLR)] / Gossas			

### Forestry, protected areas, and biodiversity

The Working Group on Forestry, protected areas, and biodiversity comprises 19 regional governments. Under the coordination of the Ecuadorian province of Azuay and the Mexican state of Jalisco, this Working Group has organized 3 online meetings between March and October 2016 (April 7th, June 6th, and October 3rd). All meetings were recorded and are available in the session "only for participants" of the initiative's website. Based on the discussions carried out in these online meetings, members agreed that the

priority topics of this Working Group would be the following:

- R&D tools to assess the risks of invasive species related to climate change;
- · Access to financing mechanisms;
- Land use and its relation to biodiversity and climate change;
- Enhancing effective large-scale ecological restoration.

In addition, thanks to the presentations shared in these online meetings, the Secretariat could map and suggest some points of convergence related to several matters of interest of the members who actively took part in this Working Group. These so-called "matchmakings" do not represent an exhaustive list of all points of convergence existing between these jurisdictions, but they provide a few recommended subjects in which the listed regional governments may benefit from the exchange of information and collaborative work. As indicated in Table 3, these "matchmakings" illustrate the quite untapped potential existing for regional governments to cooperate on climate adaptation.

	Matchmakings -	Forestry, protected areas and biodiversity Wo	orking Group
Participant	Expertise presented	Interest on	Suggested matchmaking
Québec	Experience with climate change plans	Assessment of climate impacts on forest exploitation (e.g., socioeconomic disruptions for pop. relying on forestry activities)	British Columbia / Jalisco / São Paulo / Tocantins
	Experience with green funds and income generated from cap-and-trade	Assessment of biodiversity conservation of the current protected areas	British Columbia / São Paulo
	The case of the Ouranos Consortium	How to integrate climate change concerns when chosing a new protected area?	British Columbia / Jalisco
	R&D tools to assess the risks of invasive species related to climate change (Ouranos)		
	Land use and its relation to biodiversity and climate change (Ouranos)		

	Matchmakings -	Forestry, protected areas and biodiversity Work	ing Group
Participant	Expertise presented	Interest on	Suggested matchmaking
São Paulo	Restoration policies (Program on Springs - "Nascentes")		
	Ecological indicators and monitoring		
Jalisco	Coordination with Federal Govt for ecological protection	Local governance mechanisms	British Columbia / Québec
		Dealing with endangered species and ecological vulnerabilities	Québec
	Coodination with different sectors (private, social and different levels of government)	Local governance and local development.	
British Columbia	Comprehensive research on climate change impacts	How to incorporate climate change preparedness into tradicional policies and decision-making process?	Québec
		Working on climate adaptation with indegenous people and traditional communities	Québec / Jalisco / São Paulo / Tocantins
		Effective implementaion of climate adaptation policies	Québec / São Paulo
Tocantins	Reforestation	Land use management (Ecological and Economic Zoning)	São Paulo
		Forest monitoring	British Columbia / Québec / São Paulo

### **Economic impacts and opportunities**

The Working Group on Economic impacts and opportunities comprises 13 regional governments. Under the coordination of the South African province of KwaZulu-Natal, this Working Group has organized 3 online meetings between March and October 2016 (April  $11^{th}$ , June  $14^{th}$ , and October  $11^{th}$ ). All meetings were recorded and are available in the session "only for participants" of the initiative's website. Based on the discussions carried out in these online meetings, members agreed that the

priority topics of this Working Group would be

the following:

- Economic evaluation of adaptation measures (including methodologies to define baselines);
- Private insurance applied to the climate risks of specific economic sectors;
- Adaptation plans for business sectors;
- How to engage large private organizations in climate adaptation strategies? In addition, thanks to the presentations shared in these online meetings, the Secretariat could map and suggest some points of convergence related

to several matters of interest of the members who actively took part in this Working Group. These so-called "matchmakings" do not represent an exhaustive list of all points of convergence existing between these jurisdictions, but they provide a few recommended subjects in which the listed regional governments may benefit from the exchange of information and collaborative work. As indicated in Table 4, these "matchmakings" illustrate the quite untapped potential existing for regional governments to cooperate on climate adaptation.

		Matchmakings - Economic impacts and opportunitie	es
Participant	Expertise presented	Interest on	Suggested matchmaking
KwaZulu- Natal	Creating new job opportunities related to climate change activities	Effective coastal management	South Australia
		Sea level rise and its impacts on coastal tourism	South Australia / Rio de Janeiro
		Evaluating the economic costs of climate change impacts	Ouranos study (Québec)
		Working with private climate-insurances	South Australia / Gossas* (other WG)
		Adaptation strategies of specific industries	Québec / Lombardy / South Australia
Lombardy	First region in Italy to develop a regional adaptation strategy	Defining an adaptation strategy including the perspective of economic impacts	Québec 2013-2020 Climate Change Action Plan (Strategic Direction 6: "Preserve economic prosperity") / California / South Australia
	Sectorial assessments on climate adaptation	Costs and benefits analysis for adaptation measures in different economic sectors	Ouranos study (Québec) / South Australia
		Working with private climate-insurances, especially in agriculture	South Australia

		Matchmakings - Economic impacts and opportunitie	es		
Participant	Expertise presented	Interest on	Suggested matchmaking		
Québec	Study on economic impacts of climate change per economic sector (Ouranos study)	Acquiring scientific data on the costs and impacts of climate change	California / Lombardy / South Australia		
		Need to redefine certain economic sectors' activities (eg. Winter sport tourism)	Lombardy (winter sport tourism) / KwaZulu-Natal (coastal tourism)		
		Working with private climate-insurances	South Australia		
		Access to return on investment data for business' climate adaptation measures	California / Lombardy / South Australia		
		Raising awareness in the business sector	South Australia		
		Tools and activities to build awareness in small and medium businesses	Lombardy / South Australia		
		Collaborative actions among economic partners (eg. Impacts on the chain of value on a multisectors scale)	California / South Australia		
South Australia	South Australia's Climate Change Strategy 2015 - 2050	Sea level rise and its impacts on coastal activities	KwaZulu-Natal / Rio de Janeiro		
	Innovative technologies towards a low carbon economy	Ocean acidification and impacts on fisheries	British Columbia		
	New water efficiency technologies	Impacts on irrigation systems	California		
	Building community capacity to take action on climate change				
	Study "Prospering in a climate change"				
	Climate Projections (CSIRO)				

### Reporting

The act of annually reporting the progress of its actions on climate adaptation is one of the three commitments that regional governments adhere to when joining RegionsAdapt. The reporting procedure takes place through CDP's states and regions online platform, where the members of the initiative must fulfill

sections 1 "Introduction" and 5 "Risks and Adaptation." By reporting through CDP's platform, regional governments are able to join a community of practitioners publicly disclosing the progress of their adaptation efforts for the first time at a global scale. In 2016, 24 regional governments have

fulfilled this commitment by successfully reporting their adaptation efforts. The results of the data collected through this reporting period will be disclosed in a report that the Secretariat will publish in December 2016.

### RegionsAdapt members who reported through CDP's Platform in 2016:

Australian Capital Territory Fes-Meknes Morona Santiago Sao Paulo Azuay Gossas Prince Edward Island South Australia Basque Country Jalisco Quebec Sud-Comoe KwaZulu-Natal British Columbia Rio de Janeiro Tocantins Catalonia La Reunion Rio Grande do Sul Tombouctou Esmeraldas Lombardy Santa Elena Western Province

## Next Steps

The following actions are some of the priorities of the initiative for 2017:

- To raise funds for enabling the following priorities:
- Two full-time persons: 1 responsible for the operational management, and 1 responsible for strategy and oversight;
- Part-time consultants that could support regional governments in developing or reviewing their adaptation plans;
- Website improvements.
- Identify and engage Technical Partners for the following Working Groups: resilience and disaster risk reduction; forestry, protected areas and biodiversity; and economic impacts and opportunities;
- · Identify and engage Sponsor Partners for

all Working Groups:

- Payable services of technical institutions that could provide the Working Groups with cutting-edge expertise (training and capacity building);
- Guidebooks for the 7 key priority areas, gathering recommendations and best practices related to the priority topics discussed in each one of the Working Groups;
- · Co-funding joint projects among members;
- Promoting staff exchanges to enhance the sharing of technical expertise between members.
- Publication of a compilation of case studies and best practices;
- Publish a guidebook on regional adaptation, compiling the actions presented in the

Working Groups (e.g. Rio Grande do Sul's annexed case study);

- Include data collected through RegionsAdapt in the NAZCA database.
- Identify and engage Technical Partners for the following Working Groups: resilience and disaster risk reduction; forestry, protected areas and biodiversity; and economic impacts and opportunities;
- Explore synergies with other initiatives: MayorsAdapt, Covenant of Mayors, WeAdapt, NAZCA portal (Non-state Actor Zone for Climate Action), Global Climate Action Champions, Compact of States and Regions, Under2MoU.

Subject	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Launch the 3 remaining WGs	Х	Х	Х									
Reporting trough CDP				Х	Х	Х	Х					
Webinars		Х		Х		Х		Х		Х		Х
Online Meetings of WGs	Х	Х	х	Х	Х	Х	Х	Х	×	Х	×	Х
Presenting 2-year results											X	Х

## Annex

# Water resources management in Rio Grande do Sul (Brazil)

### Rio Grande do Sul State- Sustainable Development and Environment Secretary

Water resources management in Rio Grande do Sul is a responsibility of the DRH (Water Resources Department) a division of the Sustainable Development and Environment Secretary.



Rio Grande do Sul State (in yellow) and the Sustainable Development and Environment Secretary divisions.

RS involvement in the Regions Adapt Initiative began when the Secretary signed as a member on December 2015. The state is a coordinator at the Water Resources working group and aside from participating on meeting alongside the other regions, has developed a working plan for this initiative.

## **Extreme Events Management State Program**

### Goal

• Establish, until December 2018, a managing structure able to predict, monitor, alert and mitigate extreme weather events as well as promote the resilience and adaptation of the population and economic activities facing climate change in Rio Grande do Sul state.

### Scope

• The Program envelops the Rio Grande do Sul state as a whole, including water resources of federal domain. For the climatic predictions the study area covers areas of Argentina, Uruguay and Paraguay along with the Brazilian states of Santa Catarina and Paraná.

### **Program Components: 7 projects**

### 1. Disaster Risk Managent Program

- Strategic project responsible for the proposition of a State Policy for Disaster Risk Management, which involves droughts, floods, windstorms, hailstorms, landslides, and water contamination.
- The policy will define the institutional arrangement necessary to confront efficiently the occurrence of these extreme events.
- The project also entails the contracting of the state system conception, the purchase of telemetric water level and rain gauges,

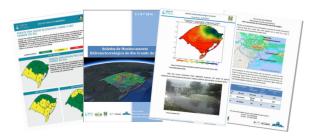
acquisition of equipment for the Civil Defense and complementary structuring of the Situation Room.

### 2. Situation Room

• Monitoring of current climatic conditions observed in the telemetric water level and rain gauges and the predicted future conditions estimated through hydrometeorological modeling.



- Project supported by the National Water Agency. Focuses on preventing extreme hydrological events.
- The Situation Room issues reports on weather conditions as well as warnings for other institutional actors.

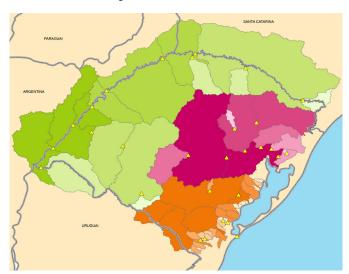


The Situation Room issues daily reports as well as weekly hydro meteorological evaluations and climatic bulletins.

### 3. Monitoring and hydrometeorological modeling

• This project aims to implement the modeling of the climate conditions e water level regimes with different prediction horizons.

• The modeling allows for the adoption of preventive measures, issue of warnings, management of surface water use conflict and preventive actions in case of droughts and floods.



Map of the modelled basins in the RS state.

### 4. Expansion of the hydrometeorological gauge network

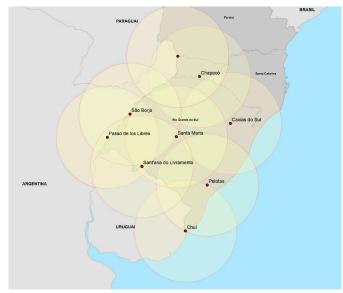
- This project aims to expand and update the state's hydrometeorological gauge network in articulation with Uruguay.
- The location of the new water level gauges is subjected to technical criteria and to the decision from Watershed Committees based on their Watershed Management Plans.



Map with the proposed location of 75 hydro meteorological gauges and plus 100 rain gauges to be installed in RS.

### 5. Building of a state meteorological radar network

- This projects aims to cover the whole state with meteorological radars capable to perform real time monitoring of the meteorological conditions.
- The reading from the radar network will be used as input for the hydrometeorological model. The building of this network is being discussed alongside Argentina e Uruguay in order to join the radar networks between the countries widening the monitoring area.
- As well as the radars, the articulating with agencies that own space control radars is anticipated to provide additional information.



RS's proposed radar network.

## 6. 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 the revision of Watershed Management Plans, concepts of climate change resilience will be incorporated, allowing for specific measures to be taken by the Committees and other institutional actors in order to face alterations on the water availability in the future.
- With this addition, the Watershed Management Plans must allocate financial, material and human resources to specific actions related with climate change.

## 7. Establishing of criterion and index for climate change adaptation

- Climate change has not yet been incorporated to the planning and management reasoning in Rio Grande do Sul state.
- The establishing of new criterion and index is necessary for the correct understanding of the climate change effects magnitude for the life conditions and economy of Rio Grande do Sul and also these indicators will serve to adequately define concepts such as prevention, mitigation, warning, response, rebuilding, adaptation and resilience.



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