Regions4
Sustainable Development

REGIONS for
BIODIVERSITY
Learning Platform

2018 Report

Subnational Governments Achievement towards Aichi Biodiversity target 9 and SDG target 15.8

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SUBNATIONAL GOVERNMENTS[1] ACHIEVEMENT TOWARDS AICHI BIODIVERSITY TARGET 9 AND SDG TARGET 15.8

EXECUTIVE SUMMARY

Regions4 is an international association that represents regional governments in the fields of climate change, biodiversity and sustainable development at the global level. In the biodiversity field, Regions4 coordinates the Advisory Committee of Subnational Governments within the Convention on Biological Diversity (CBD) and the Regions for Biodiversity Learning Platform (R4BLP), an Regions4's flagship initiative officialy supported by the CBD, which aims to support subnational governments in the implementation of the CBD and the Aichi Biodiversity Targets (ABTS). As the result of the combination of both initiatives, Regions4 prepared a study on the progress towards achieving Aichi Biodiversity Target 9 and Sustainable Development Goal 15.8.

The results contain detailed information on the region's prioritization of species and pathways, the progress made on the control or eradication of priority Invasive Alien Species (IAS), measures to prevent introduction and establishment, and the gaps and challenges in achieving Target 9. The regions participating in this report reflect efforts made in: 6 regions in South America, 4 in North America, 2 in Asia, 6 in Europe, 4 in Africa and 1 in Australia[2].

Overall, considerable efforts have been made to set region-wide targets, aligned with national targets and commitments, and to monitor progress; however, the regions reported a series of common gaps and challenges in achieving those targets.

Subnational governments are uniquely positioned to addressing IAS and ABT9, they are often the implementing bodies for many of the actions, they possess unique knowledge of their territories and are the incubators of innovative solutions to control, and in some cases, eradicate, invasive species. The results of the document confirm that subnational authorities play a vital role in identifying pathways of introduction, early detection and rapid response. More importantly, they are key in creating partnerships with local, indigenous, aboriginal and traditional communities who hold a depth of cultural knowledge and understanding of the environment that is essential to the development of biodiversity strategies.

INTRODUCTION

1) Subnational governments: the first immediate level of government below the national and above the local. It involves regional governments such as states, provinces, domains, territories, lander, cantons, autonomous communities, oblasts, etc., depending on the country. Subnational governments are distinct from "local governments", which include all levels of government below the subnational.

2) Participating regions are: Ahafo, Alberta, Azuay, Basque Country, Benin Republic, Campeche, Canary Islands, Catalonia, Chaco, Flanders, Gossas, Lombardy, Morona Santiago, North Sumatra, Ontario, Palawan, Québec, Région Sud-Comoé, Regional Council of La Reunion, Rivera, Santa Elena, São Paulo, South Australia.

Tall trees casting long shadows on the mossy green ground cover/ Credits: Sven Schlager on Unsplash

The topic of IAS was recognized as a cross-cutting issue to biodiversity at the Convention of the Parties (COP) 4th meeting in 1998, highlighting the urgent need to address their impacts in order to protect biodiversity. Since then, IAS has remained an area of focus in the context of biodiversity preservation and it is evident through various initiatives over the years, such as the adoption of the revised and updated Strategic Plan for Biodiversity 2011-2020, including the Aichi Biodiversity Targets, adopted at the COP 10 in 2010. Target 9 is dedicated to the topic of IAS under Strategic Goal B that aims to reduce the direct pressures on biodiversity and promote sustainable use:

"Target 9: By 2020, IAS and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment."

Furthermore, IAS was recognized under broader policy scope in the goals of the 2030 Agenda for Sustainable Development, Target 8 of Goal 15 [3] of the Sustainable Development Goals (SDGs) urges Parties to:

"By 2020, introduce measures to prevent the introduction and significantly reduce the impact of IAS on land and water ecosystems and control or eradicate the priority species."

The progress on Goal 15 of the SDGs in 2017 reports that biodiversity loss continues at an alarming rate according to the Red List Index. Subnational governments are uniquely positioned to respond to that call and halt biodiversity loss by controlling IAS in their territories; together with the civil society, indigenous peoples and traditional communities, subnational governments have made progress toward Aichi Target 9 and SDG 15.8. However, it is necessary to further address the challenges subnational authorities have to face. Thus, the purpose of this report is to report on the progress the regional governments from 17 countries have made, the challenges they face and how the Parties and the Convention can help overcome them.

3) Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.

Binturong or philipino bearcat looking curiously from the tree, Palawan, Philippines / Credits: Shutterstock.com

The leading governments of Ahafo, Alberta, Azuay, Basque Country, Benin Republic, Campeche, Canary Islands, Catalonia, Chaco, Flanders, Gossas, Lombardy, Morona Santiago, North Sumatra, Ontario, Palawan, Québec, Région Sud-Comoé, Regional Council of La Reunion, Rivera, Santa Elena, São Paulo, South Australia, who participated in this document, contributed with relevant information that shed light upon the important matter of IAS, worldwide.

THE REGIONS FOR BIODIVERSITY LEARNING PLATFORM AND REGIONS4'S CONTRIBUTION

REGIONS for BIODIVERSITY Learning Platform

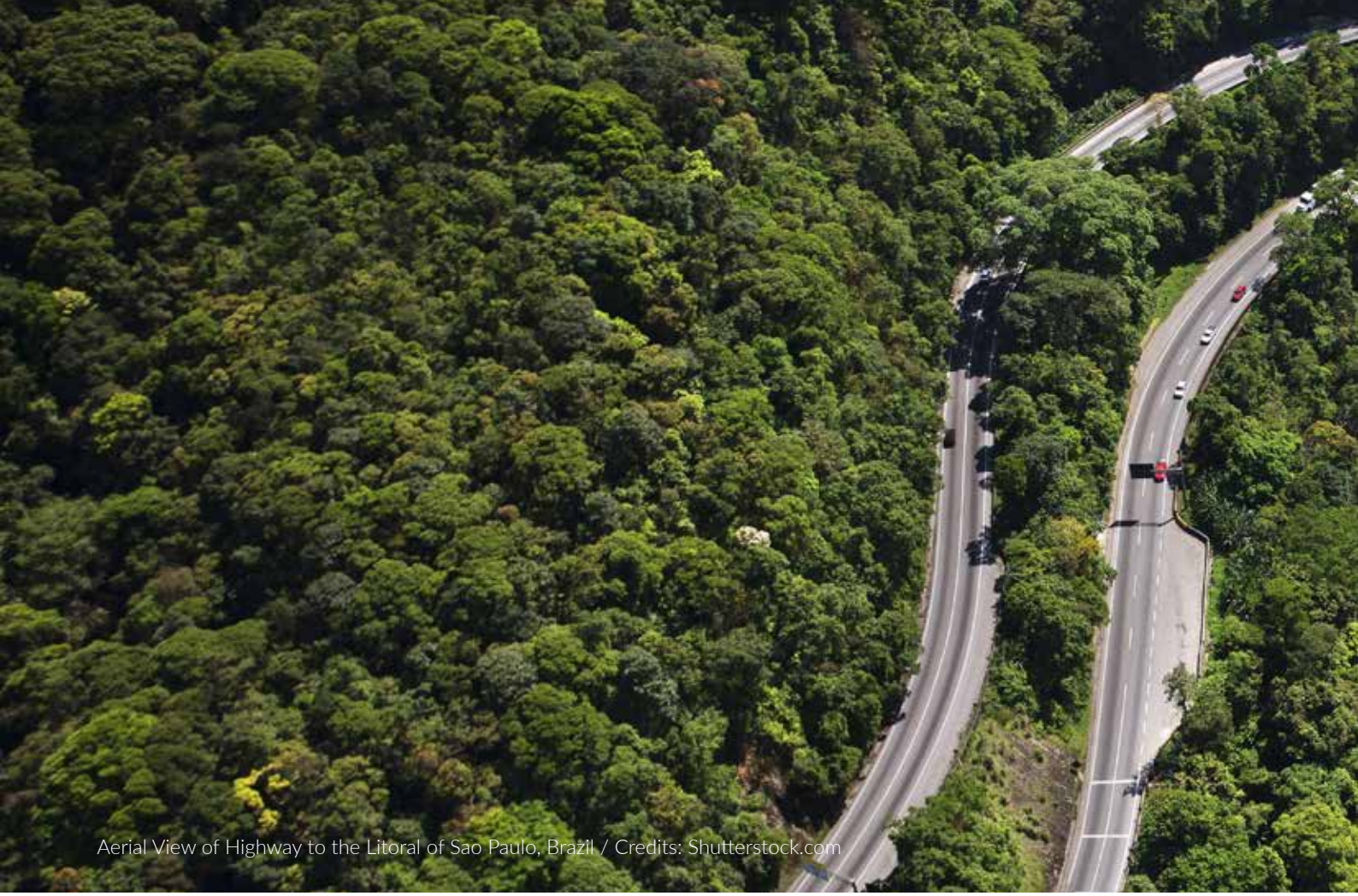
Regions4 is an international association that represents regional governments in the fields of climate change, biodiversity and sustainable development at the global level. It was established in 2002, and today it represents over 50 members from 26 countries in 4 continents. The R4BLP is a flagship initiative of Regions4 and is officially endorsed by the CBD Secretariat.

Members from Regions4 and the R4BLP got together to gather information on the pressing issue of IAS in their regions. The objective was to identify common threads and challenges, lessons learned and raise a common voice on the matter. In that sense, the members of the R4BLP hosted a series of webinars on the subject which gathered experts from leading subnational governments that have advanced this agenda: Aichi (Japan), Azuay (Ecuador) and Lombardy (Italy), and from the Convention on Biological Diversity; these webinar sessions provided a collaborative environment for cross-jurisdictional exchange, mutual learning, technical capacity building, and it cultivated partnerships among regions from both the north and south hemisphere. The participating regions saw the need to share their unique perspective and common obstacles, with the objective to seek recognition of their lessons learned and creative solutions, and serve as a contributor to the CBD and the Parties dialogue on the pressing matter that is invasive species.

The ultimate goal of the R4BLP is to assist member regions to, among other objectives, meet the Aichi Targets. Regions4 is also commited with the implementation of the SDGs; in the effort to measure progress towards the aforementioned goals, the members conducted the survey "Achieving Aichi Biodiversity Target 9" from October 2017 until February 2018. The results contain detailed information on the region' prioritization of species and pathways, the progress made on the control or eradication of priority IAS, measures to prevent introduction and establishment and the gaps and challenges in achieving Target 9. The 23 responses to the survey reflect the efforts of: 6 regions in South America, 4 in North America, 2 in Asia, 6 in Europe, 4 in Africa and 1 in Australia.

Overall, considerable efforts have been made to set region-wide targets, aligned with national targets and commitments, and to monitor its progress; however, the regions reported a series of gaps and challenges in achieving those targets, such as a lack of long-term financial support, limited capacity in taxonomic identification of alien species, insufficient data for risk analysis and insufficient methods for pathway analysis.

The regions also reported to have unique knowledge of their territories and shared success stories that demonstrate innovative solutions to control, and in some cases, eradicate, invasive species. We can see, from the results, that subnational authorities play a vital role in not only the implementation of actions, but also in identifying pathways of introduction, early detection and rapid response. More importantly, in these authorities are critical creating partnerships with local, indigenous, aboriginal and traditional communities who hold a depth of cultural knowledge and understanding of the environment that is key in the development, planning and implementation of biodiversity strategies.



Aerial View of Highway to the Litoral of Sao Paulo, Brazil / Credits: Shutterstock.com

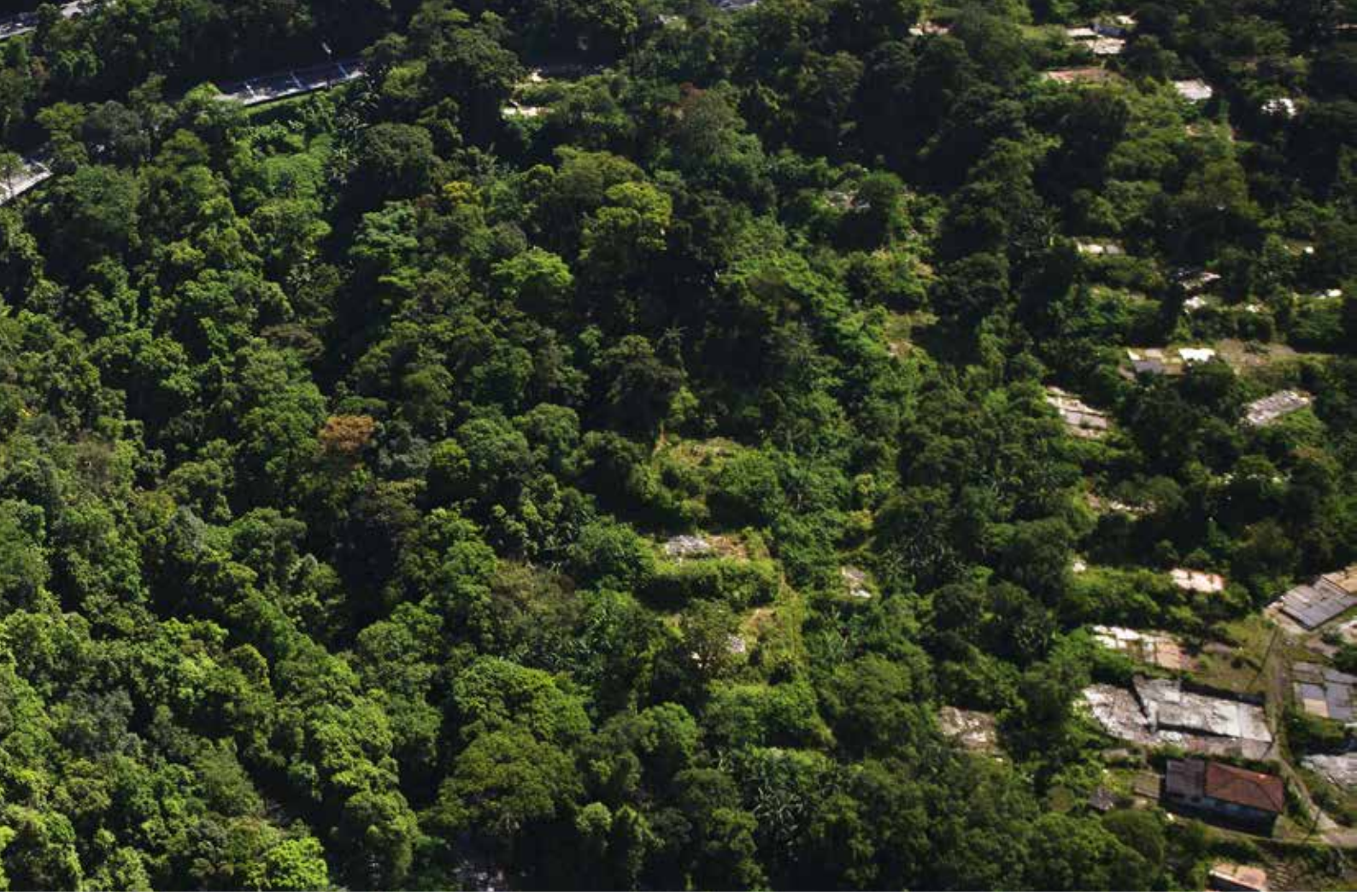
REGIONAL PROGRESS TOWARDS ACHIEVING AICHI BIODIVERSITY TARGET 9 AND SDG TARGET 15.8

Since the launch of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, the responses to control IAS have positively transformed policies at a national and subnational levels. According to the Global Biodiversity Outlook 4 (GBO-4), 55% of the Parties of the Convention have enacted IAS national legislation, and 82% of them have signed multinational agreements to prevent the spread and to promote the control/eradication of IAS in their national territories. It has been recognized by the Parties to the Convention that subnational governments are crucial in the implementation of strategies that will ultimately achieve those goals. Therefore, the R4BLP set the ambitious goal of documenting their on-going efforts in relation to IAS in their territories.

One of the early efforts of the R4BLP was the first edition of the IAS webinar (June, 2017) that had the objective of hearing Aichi's progress on tackling invasive species within their territory and consider how these lessons apply to the R4BLP members collectively. Building on the learning session, member regions recognized the necessity to continue the discussion on IAS as a cross-cutting issue, to help identify possible solutions to be applied in each of their own territories. In this sense, and based on the agreement among the regions to contact topical experts on occasion, we reached out to the International Union for Conservation of Nature (IUCN). IUCN's work centers on providing knowledge and data to support policy decisions, and it has numerous initiatives and tools to address IAS, which aligns with the Learning Platform and Regions4's work on the subject.

IUCN shared information from the CBD's Progress Report Towards Aichi Biodiveristy Targets[4], in which an evaluation of Target 9 was presented. The reports show that only 3% of the reporting countries are on track for the implementation of Target 9 and 48% are insufficient, with the rest, almost half, having made no progress or

4) *https://www.cbd.int/financial/doc/global-2016-targetsreport.pdf*



are declining against the Target. It should be noted that these numbers are based on the submission of national reports, in which not all subnational governments participate. The lack of progress can be seen as a potential opportunity for subnational governments to strengthen their participation in national reviews and contribute at the forefront of these discussions. It is also an opportunity for subnational governments to share their success stories related to addressing IAS for national governments to consider adopting and implementing in their territory to further advance their progress on ABT 9 and SDG 15.8. To foster this uptake, it is important for subnational governments to make their knowledge and experiences known and available. In that spirit, the R4BLP invited the member regions of Lombardy (Italy) and Azuay (Ecuador) to also share their valuable experiences. The topic of IAS has been a crucial one for Lombardy's biodiversity preservation efforts because historically, many animal and plant alien species have been introduced in Lombardy's territory, especially through international airports, and due to the degradation of natural habitats, which makes it easier for alien species to establish themselves. Their on-going efforts on the definition of protocols of surveillance and prioritization of invasive species at the Airport of Bergamo-Orio al Serio is a remarkable lesson, as the attendees of the webinar were able to witness from the presentation.

The other presenter, the region of Azuay, located in the inter-Andean region of Ecuador, is home to a privileged biological diversity due to its geographic location; their work with the prioritized invasive species in their region is important because it highlights the importance of a continuous and fruitful dialogue among the national and subnational authorities.
It was during that session that the proposal of preparing a joint report on the progress of the achievement of Target 9 of the ABTs was made, and on SDG 15.8, for its relevance to the matter. The many contributions and the need to share those lessons motivated the results shown and depicted in this document.

REGIONAL-WIDE EFFORTS ON IAS

Besides adopting national targets on IAS, such as the Aichi Biodiversity Targets and the SDGs, subnational governments have advanced regional targets within their territories with the aim of better identifying and prioritizing species that need to be controlled or eradicated and to establish measures to manage pathways to prevent new introductions and establishment. 13 out of the 23 regions adopted regional-wide targets on IAS, targets that allowed the regions to be proactive and very specific about their objectives on the matter. The following are some examples of such initiatives:

"By 2015, strategic plans are in place to reduce threats posed to biodiversity by invasive species" (Ontario's Biodiversity Strategy, 2011[5]).

According to the results from the 2015 report, the above-mentioned target is successfully achieved. There are strong strategic plans in place at the national and provincial level to reduce threats posed to biodiversity by invasive species. Several organizations have also developed management plans to address invasive species risks at smaller scales, often for specific species or groups of species.

"The Government of South Australia prioritizes the monitoring and management of 29 declared diseases and invertebrate pests, and an addition seven national priority plant pests as part of a national biosecurity program" (2016 State Report Card, Diseases and invertebrate pests affecting our crops).

South Australia currently remains free of 30 of the 36 state priority diseases and invertebrate pests. In 2016, the nationally listed pest, the Russian wheat aphid, was detected in Australia for the first time in the state's Mid North and is under current control actions. In the last five years, the number of priority diseases and pests that have been detected have remained fairly stable.

"The Strategy against Invasive Species in Reunion is divided into 4 axes: 1) Prevent harmful introductions, intentional or not, of new IAS; 2) Actively fight against the alien species that are established (early detection and rapid eradication) and / or that spread (eradication, containment and control); 3) Raise awareness, communicate, educate and train (facilitate information exchange) on IAS at different levels; and, 4) Govern and implement the strategy."

The Regional Council of La Reunion has specific regulations concerning the introduction of exotic species that includes measures to manage pathways and avoid new introductions. The article L.411-3 of the Code de l'environment regulates transport and marketing of exotic species and the Operational Program Against IAS (POLI 2014-2017) decreed the creation of a Steering Committee that oversees the implementation of the 13 specific actions and its related regional cooperation tasks.

Subnational governments that have not adopted an official policy on IAS do, however, consider it a cross-cutting issue. For exemple, Quebec has implemented different actions concerning IAS from its Climate Change Action Plan 2013-2020 and its Saint-Laurent Action Plan 2011-2016. These actions and initiatives follow ABT 9's logic and also include the interest in facilitating the exchange of information and data on IAS with different stakeholders, such as the civil society, NGOs, private-sector and industries and others levels of governments.

Additionally, Lombardy is currently developing their own regional strategy on IAS that will be completed by the end of 2018. Nevertheless, the region has long experience with tackling IAS with single and transversely designed projects. In doing so, they have learned that there's need for significant and continuous effort in order to succeed, and that the communication and activities to raise awareness are essential to the success of control and eradication projects. The strategy Natura 2000 represents the region's recognition to ensure that the conservation objectives and ecological coherence are supported by an integrated, unified, coordinated and participatory management strategy which aims to maintain and improve the conservation status of habitats and species by:

5) http://ontariobiodiversitycouncil.ca/wp-content/uploads/Ontarios-Biodiversity-Strategy-2011-accessible.pdf

ABORIGINAL PARTNERSHIPS PROGRAM IN SOUTH AUSTRALIA

The Aboriginal Partnerships Program aims to increase the participation of Aboriginal people in managing natural resources, improve awareness and understanding of Aboriginal culture, and protect Aboriginal heritage. The program works closely with a range of partner organizations to deliver activities across the region. Additionally, the program aims to increase the participation of groups and organizations of Aboriginal people in all levels of natural resources management – including high level strategic planning, on-ground implementation, and monitoring and evaluation. The focus is also in supporting a wide range of training and employment projects across the region.

The Program works with Traditional Owners in the South Australian Murray-Darling Basin region through the establishment of working groups such as the First Peoples NRM Working Group and the Ngarrindjeri Regional Authority / Natural Resources SAMDB Working Group. The program also supports other formal engagement groups and committees such as the River Murray ILUA Liaison Committee, the Ngaut Ngaut Co-management Board and the Kungun Ngarrindjeri Yunnan Agreement Taskforce.

The MoU that the Ngarrindjeri Regional Authorities signed with public authorities in South Australia, is a remarkable example of the respect of Ngarrindjeri traditions, and rights and responsibilities according to Ngarrindjeri laws. The unique philosophy regarding the connectivity of Ruwe/Ruwar (country/body/spirit) frames Ngarrindjeri rights and responsibilities as traditional owners and is centered on an understanding that all things are connected. As such, they view cultural heritage and natural resource management as inseparable. Their long-term aspiration to be involved in the development, planning and implementation of natural resources and cultural heritage management in their traditional lands and waters is being acknowledge by the South Australian Government through the Kungun Ngarrindjeri Yunnan Agreement (KNYA) of 2009 and followed by the Aboriginal Partnerships Program, among other actions.

Know more at: http://www.naturalresources.sa.gov.au/samurraydarlingbasin/projects/all-projects-map/aboriginal-partnerships

National Park Reunion Island in Indian Ocean / Credits: Shutterstock.com

- Addressing the threat posed by invasive and/or non-native species through the scheming of a regional strategy for IAS;
- Informing and disseminating issues related to biodiversity and the meaning of Natura 2000;
- Innovative monitoring, involvement of management bodies, volunteers and experts.

All regions considered in the survey reported to have, to some extent, continuing efforts to address IAS in their territories and lessons to share.

REGIONS TRACKED PROGRESS TOWARDS ACHIEVING IAS TARGETS

When it comes to measuring progress, the majority of the regions in the survey (14 out of 23) demonstrated their capacity to track progress towards the achievement of their region-wide and/or national targets. The activities monitored range from capacity building activities with communities, civil society and local NGOs to sophisticated monitoring mechanisms and annual assessments of their biodiversity strategies.

Morona Santiago and Santa Elena, in Ecuador, have both been working with the conservation of native species by raising awareness on the importance of natural resources. Their efforts on mainstreaming the potential damage of IAS are addressed in the form of workshops, field activities and communication material. Similarly, Campeche has also extensive experience in raising awareness, mainly to advocate for the survival of native species.

Informing civil society and local communities has also proven to be a fundamental first step in the control and eradication of invasive species for Lombardy. The implementation of the project titled *"EC – SQUARE Eradication and control of grey squirrel: actions for preservation of biodiversity in forest ecosystems"* taught a valuable lesson on the need to assess the perception of civil society on the problem posed by the grey squirrel presence. A survey revealed that only 22% of those interviewed knew that the grey squirrel was not a native species and only 17% responded to be sufficiently informed about the problem and its possible solutions.

In Brazil, São Paulo has joined forces to create a Technical Group for the evaluation of the risk degree prioritized IAS poses, and to perform studies and elaborate proposals of guidelines for the control, management and monitoring of IAS state-wide. The Group decided to categorize IAS as potentially bioinvasive alien species. Currently, 14 out of the 30 species have been assessed, there is a collective understanding of their invasive potential and the associated environmental risks, that urges the adoption of control and/or eradication measures.

When it comes to South Australia's method to track their progress, the State Report cards summarize the improvement towards achieving targets. Additionally, they help guide management practices by outlining the condition of the state's natural resources; they are generated using the best available information. Each report card focuses on a single representative measure from the State Natural Resources Management Plan and are available to the public through their website.

Similarly, the State of Ontario's Biodiversity 2015 report provides a 'report card' on the health of biodiversity in the province showing where there is a need for more efforts or where there's been success. The report contains 45 indicators that help monitor and measure invasive species, among other pressing issues like pollution, ice cover on the Great Lakes and many more. The indicator "Invasive Species Strategic Plans" is measured also by the related indicators: 'aquatic alien species in the Great Lakes', 'alien species in inland lakes', and 'alien species in terrestrial systems'. An example of the aforementioned measuring mechanism tcan be found online:

Recently, the state of Campeche implemented a communication campaign to alert of the presence of the red lionfish (Pterois volitans) within the perimeters of the Biosphere Reserve of Los Petenes. Though the red lionfish has been present in the region since 2003, its spread

LOMBARDY'S SUCCESSFUL COMMUNICATION CAMPAIGN TO SAVE THE RED SQUIRREL

EC SQUARE has conducted a continuous and intense press campaign through traditional and modern media at local, regional and national levels, considered essential to gain broad consensus in public opinion but also to change perceptions of the impacts made by introduced species, preferring an objective approach rather than an empathetic one.

Project brochures based on the contents of the Communication Action Plan were produced together with banners and posters, panels that were installed in action areas and a documentary video. The project website www.rossoscoiattolo.eu had a total of 57,623 visitors with more than 2,000 monthly hits towards the end of the project. Various materials produced are available at www.rossoscoiattolo.eu/documenti.

Information and promotional actions were particularly intense and 88 meetings with citizens or with certain categories of stakeholders were organized, discussion groups with animal welfare and environmental associations were held and participation in public events and conventions took place. News of the project was publicized through direct contact with the media, via the website, the video, the newsletter or through social network (Facebook).

There was a considerable amount of opposition to the project with appeals to the Council of State (all decided in favor of the project). Questions were put to the regional councils and requests were made for access to the documents. LIFE EC-SQUARE therefore was constantly active in providing correct information to public and legal authorities and to citizens and distributing information on IAS, on the need to control them and providing news relating specifically to the project.

See full report at: http://www.rossoscoiattolo.eu/sites/default/files/documenti/layman_web_completo_0.pdf

had been under control. However, in 2016, the National Commission of Natural Protected Areas (CONANP for its acronym in Spanish), through their EDRR Unit, captured an adult specimen in the Reserve, something not yet seen. Currently, the state has taken measures such as biological monitoring via phototraping to permanently address the threat that the red lionfish poses to the safety of native species in the Biosphere Reserve.

Catalonia and the Basque Country are both currently preparing the implementation of monitoring and tracking systems that will be ready in 2018. Catalonia's EXOCAT database is preparing yearly assessments on the region's biodiversity. This tool will gather all information available on IAS for the region, which will allow the development of integrated strategies and a better response; likewise, the Basque Country is currently gathering information on their IAS indicators and expects to publish the 1st biennial monitoring report of the Biodiversity Strategy 2030, within the next few months.

The African regions of Ahafo (Ghana) and Gossas (Senegal) reported to have no means to monitor the state of invasive species in their territories. The Region Sud-Comoé, in Ivory Coast, described to have an Anti-Pollution Center (CIAPOL) in charge of managing IAS threats, but no clear measures to monitor progress. The Republic of Benin is the only African region that has a system to track progress towards the achievement of their biodiversity targets which is the National Biodiversity Reports, which includes an exhaustive list of prioritized invasive species in their region.

STATUS OF AQUATIC ALIEN SPECIES IN ONTARIO:

The number of aquatic alien species in the Great Lakes basin has steadily increased since the first species was documented in the 1840s. As of 2017, 183 alien species were established.
The rate of newly established species increased up to decade ending in 1999. Between 1839 and 1950, 6.9 new species were established per decade. Between 1950 and 1999, the rate increased to 17 newly established alien species per decade. This increased rate of introduction coincides with the opening of the St. Lawrence Seaway in 1959. It may also reflect increased detection efforts.
Only one alien species, a planktonic crustacean (Thermocyclops crassus) has been discovered as established in the Great Lakes since 2010. The fact that only one new alien species has been established since 2010 may reflect a decrease in the invasion rate due to increased prevention efforts as well as the fact that accounting for the current decade is incomplete. No new fish species and a reduced number of invertebrate species have been detected since 2000.

See full report at: http://sobr.ca/_biosite/wp-content/uploads/SOBR-2015-Summary-Report_E.pdf

PRIORITIZATION OF SPECIES AND PATHWAYS AT THE SUBNATIONAL LEVEL

The vast majority of the regions (17 out of the 23) showed advanced work on the prioritization of species and pathways. For instance, the Alberta government has recognized invasive mussels (zebra and quagga) as major threats to not only the environment but also the economy. An over 2 million dollar program, which includes monitoring, education, watercraft inspection stations, legislation that prohibits the species and EDRR planning, was created to deal with the threat. Other aquatic invasive species have been listed as prohibited under the Alberta Fisheries Act and Regulations, both boat movement and pet trade have been identified as the largest pathway risk and are being managed through education and watercraft inspections at borders.

Red lionfish in the blue ocean / Credits: Shutterstock.com

In addition, the Weed Control Act identifies prohibited noxious weeds (terrestrial plants) that are of priority to control and/or destroy.

An extensive vehicle inspection program is currently active at Alberta borders, the focus on Aquatic Invasive Species is strong and therefore boats are considered a primary pathway for transport. The Clean, Drain & Dry Your Boat campaign is a great example on how the involvement of civil society is fundamental to prevent IAS introduction and establishment; moreover, the Alberta Fisheries Act and Regulations was recently amended to require mandatory stopping at watercraft inspection stations. In addition, mail-outs were sent to the pet industry to advise of the risks and legal implications of transport and release of prohibited aquatic invasive species.

Likewise, the Ontario Invasive Species Strategic Plan (OISSP, 2012) focusses objectives on preventing new invasive species from arriving and surviving in Ontario, and where possible, reversing or slowing the spread of existing invasive species. To manage key pathways, the Ontario Ministry of Natural Resources and Forestry (MNRF) is working with municipalities, landowners and industry to take a pathway approach to managing invasive species. This would include the development and adoption of Best Management Practices (BMP's) to prevent the spread or introduction of species.

In terms of priority species, Ontario's new Invasive Species Act (ISA, 2015) provides a framework to ban activities like buying, selling, transporting, depositing or releasing regulated invasive species. Species regulated under the Invasive Species Act must demonstrate a risk to Ontario's natural environment through a risk assessment process. Currently Ontario has regulated 20 species as prohibited invasive species and four species as restricted invasive species. The ISA also allows for the regulation of invasive species pathways.

Similarly, and since 2013, the government of Quebec and its allies have worked intensively to prioritize IAS of greater concern to achieve a greater understanding of their different introduction pathways. Consequently, they have a list of IAS currently present in the province, as well as a list of species that could be introduced as a result of climate change and human activities. The prioritization process includes different elements, such as a diagnosis on the strength of the effect of the IAS on the ecosystem, its impact on industrial activities and human health, and its own biological characteristics (speed and range of dispersion, growth rate, reproduction, etc.). Currently, the province has identified main pathways of introduction and has produced best practices guidelines for most prioritized species and continues to work toward a complete guide on all IAS species in the province.

In Japan, the Invasive Alien Species Act was enforced in 2004, at a national level. Currently, 128 IAS are recognized as priority. To prevent the harm of alien species that aren't desingnated by national law, Aichi Prefecture amended its Natural Environment Conservation Code, in 2008, adding Art. 55 and 56 to the Code. Art. 55 states that the Government is obliged to designate and announce a list of IAS to be banned from the region; as of today, 28 species have been designated as invasive by the Aichi Prefecture, most of them were initially introduced as pets or useful animals or plants for the people of Aichi.
When it comes to controlling prioritized IAS in Aichi, the roles of the Prefecture and the Municipalities are clearly aligned. The Prefecture is in charge of capacity building and disseminating information to municipalities' staff; on the other side, municipalities work with their local stakeholders to raise awareness, control and eradicate plagues of IAS.

South Australia has successfully identified the principal pathways of establishment for each of the priority invasive species known in their Natural Resource Management (NRM) regions. The exhaustive Report Cards provide details that assist in the management and control of invasive species. Some programs met their objectives by eradicating, destroying or containing the population of pest animals and weeds. Other programs did not meet their objectives to destroy populations of pest animals or weeds, but were able to contain these populations and reduce the impact of these invasive species.

THE TALE ON AN IAS IN AICHI

Largemouth Bass was first introduced in Japan in 1925 for food, and it was isolated to just a couple of lakes. The introduced population remained constrained for decades until around the mid-1960s when sports fishing with artificial lures and spinning reels became more popular and amateur fishermen began stocking lakes and rivers with the Largemouth Bass themselves.

Suddenly the fish was dispersed to inland bodies of water nationwide. This particular species lacks a natural predator in Japan and has high reproductive power. Since its widescale invasion, several native species of fish have become extinct or endangered. Today, the Invasive Alien Species Act of Japan prohibits the importation, transportation, or storage of the fish, which has been designated an invasive alien species.

An inspiring example on how stakeholders, academia and government can work together towards the same goal is the one happening in Catalonia: The Center for Ecological Research and Forest Applications and the Government of Catalonia developed the Exotic Information System of Catalonia (ExoCAT), which collects most of the available data on the distribution, origin, pathway of introduction and the state of a list of priority IAS in their territory. The database assessed up to 1119 exotic species in total, of which plants represented 50%[6]. The results showed that almost a 10% of the total alien species are considered invasive (112 species). Only one of Catalonia's IAS has required a region wide strategy for its control and eradication, the apple snail (Pomacea sp.) and since 2010, several regulatory measures have taken place, the most recent update to the law occurred when the 2017 Action Plan for the fight against the apple snail of the Delta Ebro was published.

6) *http://www.creaf.cat/es/exocat*

Red Fox Pausing in Algonquin Provincial Park, Ontario, Canada, January 2017/ Credits: Pierre Williot / Shutterstock.com

On the other side of the world, in East Asia, the Palawan Council for Sustainable Development (PCSD) is currently focusing its efforts on the implementation of the Strategic Environmental Plan which tackles zoning classifications to protect environmentally critical areas networks and promotes sustainable development. Though Palawan has projects and activities to protect and preserve endemic flora and fauna, they have not specifically targeted the eradication and management of IAS. North Sumatra is also in a similar position: while they implement bio control measures to prevent alien species introduction and establishment, they haven't prioritized species and pathways. In both cases, insufficient methods for pathway analysis and the lack of consistent funding to create an information system and a database of their native species, are the reasons behind the struggle.

Alike to the abovementioned, the regions of Ahafo, Gossas and Région Sud-Comoe report to have made no efforts on the matter.

La Reunion has developed specific regulations concerning the introduction of alien species, which include a detailed assessment of transport and marketing of these species. The following are some measures to manage pathways to prevent IAS introduction and establishment: Border control and ARI; Establishment training of control services (Customs-DADA) with network cross-services information (DEAL, Customs, DAAF); Passenger control awareness: aircraft message incorporating IAS risk info; Development of common control plan customs-technical services; Targeting specific sectors on control actions and develop public information materials.

2012-2016 PROGRESS REPORT FOR THE EIGHT NRM REGIONS IN SOUTH AUSTRALIA

Established pest animals – the distributions and abundance of five pest animals are increasing, two are decreasing, one is stable and two are variable. Managing pest animals continues to be a complex challenge, complicated further by insufficient data on the trends in the abundance and distribution of pest animals.

Weeds of National Significance (WONS) – there are 16 WONS known to be present in South Australia. The distributions and abundance of four WONS are increasing, two are decreasing, four are stable and five are variable (bridal creeper was not reported on). There is insufficient data on the abundance and trend of weeds, but it is thought that some weeds are widespread, while others have local distributions.

Diseases affecting native plants and animals – overall, there is not enough information to determine trends or impacts for most diseases, as information is obtained only when suspicious outbreaks of illness or deaths or plant dieback are reported.

Diseases and invertebrates affecting crops – South Australia remains free of 30 of the 36 state priority diseases and invertebrate pests. South Australia is the only mainland state where fruit-flies have not established. Nine priority diseases and invertebrate pests have been detected in South Australia, including the Russian wheat aphid in 2016.

Diseases affecting our livestock - Preventing the introduction and establishment of livestock diseases is a high priority in South Australia. Biosecurity SA conducts surveillance and enforces quarantine measures to reduce the number of diseases that enter South Australia and increase the likelihood of control if a disease or pest is detected.

Find out more at: https://data.environment.sa.gov.au/NRM-Report-Cards/Pages/Home.aspx

GAPS AND CHALLENGES IN ACHIEVING ABT 9 AND SGD 15.8

Though most of the regions demonstrated substantial progress towards tackling IAS within their territories, it is evident that there are still major challenges to be addressed in order to successfully attain those goals.

The recognizable reasons to the lack of progress in most of the regions are the limited capacity in taxonomic identification of IAS, insufficient data for risk analysis, insufficient methods for pathway analysis (specifically for e-commerce trades) and more importantly, since it's an issue that impacts all of the aforementioned, the lack of funding. The deep impact of financial resources is more palpable in the regions located in Africa, East Asia and Latin America. However, the regions in North America and Europe report to also have difficulties with securing long-term financial support to carry out specific actions to address invasive species threats, which are time and budget consuming.

As it is known, the control and eradication of invasive species is extremely challenging and costly. According to the consulted regions, without sufficient capacity to detect a species early in its invasion, control and eradication of the introduced species becomes nearly impossible. In that sense, risk assessments become a fundamental step to prioritize species and address these gaps by allocating funding for surveillance and control activities to major threats.

Another challenge described was the need to use a more agile management approach to address species pathways since the changes in market dynamics, recreational activities, shipping activities and more, may introduce new pathways, or increase the risk of existing ones. According to some of the subnational governments, these kind of intervention policies must be nimble enough to adapt to emerging threats and address existing ones promptly.

The above description of challenges and gaps also represent the opportunity to accelerate action towards the fulfillment of ABT 9 and SDG 15.8; the areas that represent a major threat such as the prioritization of species and pathways are, in some cases, the same ones that lack the necessary funds to succeed.

Subnational government's deep knowledge of their territories and the ability to rapidly respond to threats as they are occurring puts them in a unique position to safeguard biodiversity, and

SUBNATIONAL EFFORTS IN SPAIN TO PRIORITIZE SPECIES AND PATHWAYS

Catalonia - The Government has established measures to actively fight two IAS that are specially threatening for agriculture & industry: Dreissena polymorpha (zebra mussel) and Pomacea insularum (apple snail). Additionally, a LIFE program has been developed for aquatic ecosystems to fight the threat of Micropterus salmoides, Sander lucioperca and Lepomis gibbosus.

Canary Islands - Some of islands have established priority flora species to be controlled and eradicated. To date, early efforts have been made to identify pathways, which are focused on e-commerce. Their objective is to prevent the future introduction of invasive species.

Basque Country - Has experience with control and eradication of IAS (both flora and fauna species), however, they are isolated and lack an integral approach. They are currently finalizing a LIFE project to safeguard and conserve the European mink (Mustela lutreola), their objective is to eradicate the American mink, increase the viability of the wild population of European mink and create a new monitoring network to assess the conservation status of both species after the project.

subsequently attain national commitments. In order to materialize this potential, countries could take subnational knowledge and leadership as an advantage to mobilize resources to halt one of the biggest threats to biodiversity.

REGIONAL SOLUTIONS TO OVERCOMING BARRIERS TO ACHIEVING ABT 9 AND SDG 15.8

Regional governments have valuable insights when it comes to solutions to overcoming barriers to fulfilling IAS targets and the threat they pose to ecosystems and native species. Overcoming challenges is an effort only possible with stronger multilevel aligment and agile responses on the ground, as seen below:

Stronger actions on the ground	Stronger methods of data collection to support risk assesments and the identification of priority species and pathways.
	Introduction of substitute non-invasive species to be used as alternatives to eradicated IAS, with economical use.
	Embrace an adaptive management approach to address species pathways.
Capacity building and research	Foster capacity building for early detection of IAS and control at early stages.
	Increase research on invaded areas and the impact to the surrounding natural areas to determine strategies to avoid future invasions.
	Increase capacity building efforts with local communities, conservation unit managers and local authorities on early detection and rapid response to potentially invasive alien species.
Financial support	Sustained and long-term economic support to implementation of strategies for the control and eradication of invasive species
Stronger policies and legal frameworks	Agile intervention policies to adapt to constant changes in human dynamics and new, emerging threats.
	Regional guidelines to define priority areas for the control of potentially harmful invasive species.
	Mainstreaming of IAS as a crosscutting issue amongst sectors, with special emphasis on productive sectors such as agriculture, aquaculture, apiculture and ornamental plants.
	Update legal frameworks to provide subnational governments with the authority to rapidly respond to emerging threats.

ANNEX

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BRONG AHAFO, GHANA - JAN 15, 2017: Unidentified Fulani woman in colored clothes and headscarf sits on the street with a little girl nearby in the local village. Fulanis are ethnic group of Ghana / Credits: Anton_Ivanov / Shutterstock.com

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Regions4 (formerly known as the nrg4SD) is a global network that solely represents regional governments (states, regions and provinces) before UN processes, European Union initiatives and global discussions in the fields of climate change, biodiversity and sustainable development. Regions4 was established in 2002 at the World Summit in Johannesburg and currently represents 42 members from 20 countries in 4 continents. Through advocacy, cooperation and capacity building, Regions4 empowers regional governments to accelerate global action. For more information, visit: www.regions4.org

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