



## Round table on participatory science for the sustainable management of natural resources in the protected areas of the Guiana Shield

Side event at the V<sup>th</sup> International Congress on  
Biodiversity of the Guiana Shield

**06/08/2019**

Universidad de la Amazonia  
Florencia, Caquetá, Colombia

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## RENFORESAP in Brief

*RENFORESAP was officially launched on October 1st to 3rd, 2018 in Paramaribo, Suriname. The project "Strengthening the Network of Protected Areas in the Guiana Shield and their contributions to sustainable development in respect of local cultures, values and lifestyles" is a transnational approach amongst protected area managers of French Guiana, Suriname and Guyana. It engages the management of protected areas in the region and is being implemented by the French Guiana Amazonian Park (French Guiana); the Protected Areas Commission (Guyana); the Ministry of Planning, Land and Forest Management (Suriname) and the Ministry of Regional Development (Suriname).*

*The purpose of the project is to strengthen the resilience of the forest and the livelihoods of the local populations in a context of increasing impacts of global change on the Guiana Shield ecosystems. Its overall objective is to strengthen the capacity of protected or conservation area management in order to meet the common challenges they face. The specific objectives are to strengthen dialogue between protected areas managers and teams and to capitalise the best experiences.*

*The specific actions to achieve these objectives are the organisation of three (3) regional workshops bringing together the managers of protected areas and the production of four (4) participatory thematic overviews on how best to support local development in isolated areas in terms of ecotourism development, participatory science for the sustainable management of natural resources in the Amazonian environment, control strategies against the threats from illegal gold mining, and transmission of traditional knowledge and cultural heritage.*

*The expected results of the project include: a better visibility of biodiversity conservation issues of the Guiana Shield at a global level, a strengthened contribution of protected areas to local and sustainable development and to biodiversity conservation, a better exchange on the challenges and solutions to the problems faced by the Amerindian and Maroon communities in the region, and an improved dialogue between the countries of the Guyana shield on the medium and long term issues of conservation and eco-development of the Guiana Shield ecosystems in the wider Amazon basin.*

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## Proceedings of the side event

Date: Tuesday 6<sup>th</sup> of August 2019

Duration: 3h

Location: Heliconias Hall – Universidad de la Amazonia – Florencia – Caquetá – Colombia

Language of work: English (English-Spanish interpreter)

Participants: Participants to the Congress and the following country representative's

- Brazil: **Shaji Thomas**, Federal University of Para, Centre for Amazonian Studies
- Venezuela: **Daniel Lew**, Venezuelan Institute for Scientific Research, Biological Diversity Unit
- Colombia: **Mercedes Mejía Leudo**, Profesor at the Universidad de la Amazonia
- French Guiana: **Raphaëlle Rinaldo**, Scientific Officer at the French Guiana Amazonian Park
- Suriname: **Rudy van Kantén**, Director of Tropenbos Suriname
- Guyana: **Odacy Davis**, deputy Commissioner at the Protected Areas Commission of Guyana

Agenda :

<b>9 – 9:05 am</b>	Introduction and welcoming remarks
<b>9:20 – 9:30 am</b>	Presentation of RENFORESAP project
<b>9:30 – 9:35 am</b>	Objectives, expected outcomes and guidelines of the roundtable
<b>9:35 – 11:05 am</b>	Pitches by each country representative of the Guiana Shield Identify the challenges faced by each country in terms of participatory science for the sustainable management of natural resources in their Protected Areas
<b>11:05 – 11:30 am</b>	Post-its sessions Sharing experiences, lessons learned and opportunities for collaboration
<b>11:50 – 12 am</b>	Next steps: How to move forward on this topic?

## Introduction

It was decided to organise a side event at the V<sup>th</sup> International Congress on Biodiversity of the Guiana Shield, which was held in Florencia (Colombia), as it was important to seize the opportunity of this Congress and the presence of relevant stakeholders of the Guiana Shield at this meeting to share experiences and lessons learned on programs being carried out in the region on participatory science in the Amazonian environment.

Around 25 persons attended this side event which was divided into two sessions: a roundtable between representatives from each country of the Guiana Shield followed by a post-its session with all the participants. Speakers of the roundtable were asked to identify the challenges faced by each country in terms of participatory science for the sustainable management of natural resources in their Protected Areas. They were given 10 minutes for each pitch. As for the participatory part (post-its session), 4 posters were taped to the walls of the room with questions on the thematic area. The participants were divided into small groups which took turn in front of each poster to answer the questions. The participants had, on average, 10 minutes per poster. Both sessions are further detailed in the following sections of this report.

## Welcoming remarks

Claude Suzanon, President of the French Guiana Amazonian Park, gave the welcoming address. He briefly talked about the difficult context of the Guiana Shield being a geological formation shared by 6 countries but with 5 different languages. Communicating between the countries is not always an easy task, Mr Suzanon recounted how several years ago, it was hard to rally all the countries



and that it still is the case nowadays. He also expressed his content at RENFORESAP's efforts to bridge the gap between Suriname, Guyana and French Guiana. Concerning the thematic area of the side event, he acknowledged that the first problematic remained the appropriation of the approaches. For him, local communities were working with scientists but without any forms of restitution afterwards to the communities.

Sevahnee Pyneeandy, RENFORESAP's project coordinator, then followed with a presentation of the project. She went through RENFORESAP's aims, actions and upcoming events. Arnaud Anselin, deputy Director of the French Guiana Amazonian Park, facilitated the event. He proceeded with the

objectives, expected outcomes and guidelines of both sessions. The objective was to seize the opportunity of this Congress and the presence of the participants to share experiences and lessons learned on the thematic area. The outcomes would contribute to produce a participatory overview on how best to support local development in protected areas of the Guiana Shield on this topic.

## Pitches by each country representative of the Guiana Shield

**Brazil:** *Mr. Shaji Thomas*, Federal University of Para, Centre for Amazonian Studies

**Venezuela:** *Mr. Daniel Lew*, Venezuelan Institute for Scientific Research, Biological Diversity Unit

**Colombia:** *Mrs. Mercedes Mejía Leudo*, Profesor at the Universidad de la Amazonia

**French Guiana:** *Mrs. Raphaëlle Rinaldo*, Scientific Officer at the French Guiana Amazonian Park

**Suriname:** *Mr. Rudy van Kantén*, Director of Tropenbos Suriname

**Guyana:** *Mrs. Odacy Davis*, deputy Commissioner at the Protected Areas Commission of Guyana

### Guyana



Mrs. Odacy Davis from the Protected Areas Commission of Guyana (PAC) opened the session. She presented the protected areas of Guyana. Most of them have local communities living inside or around the areas and in some cases are land owned by the communities. She explained that, indigenous people, by law, can continue to use resources in all the protected areas. It is therefore important to collect data so that the resources can better be managed. She added that the communities take part in the process of developing management plans. For instance, if a species needs to be protected, the PAC will collect the correct data from the persons concerned. For the Commission, participatory sciences are opportunities to work together with the communities.

She also described the strategies applied by the PAC: investment in new technologies (use of drones and digital filming), establishment of local structure that involves staff and rangers (help design research priorities) and analysing the relevance of the research. Ms Davis then talked about IWOKRAMA who invested in children and young people through wildlife and nature clubs. These clubs encourage scientific participation and use of traditional methods to do research. Moreover, children who were trained 20 years ago are now part of the management team and some are rangers of the protected area.

The challenges faced in implementing these strategies are Access Benefit Sharing (ABS) policies, competing interests for youth, inadequate infrastructure and resources to implement scientific programs, participation and buy-in from communities in and around conflict areas and external resource use (e.g. mining). Finally, she listed the various examples where local communities are involved in scientific programs, i.e. through surveys to determine how they feel about protected areas and what actions to take, the use of lidar images to evaluate coastal erosion, resource mapping and camera trapping. Exchanging ideas and knowledge with students, valuing traditional knowledge and the use of indigenous languages in all actions are also means that are taken into consideration. For Ms Davis, it is important to make sure that environment policy caters for community involvement.

## French Guiana



The second pitch was from Mrs. Raphaëlle Rinaldo from the French Guiana National Park. She gave a brief description of the different protected areas of the territory and summed up the programs of participatory science that are taking place in the Protected Areas of French Guiana and the challenges faced for implementing these programs. There are 19 ongoing programs with the aims of either collecting data or collecting samples or both. The participants can be specialised (volunteers and professionals) or non-specialised (general public and paid survey workers). These programs take various forms like database building, ecology-oriented to improve the knowledge on species and socially oriented to improve the knowledge on practices linked to natural resources.

Mrs Rinaldo then proceeded with some examples of the programs being carried out:

- **Faune-Guyane (since 2015):** a participatory database on the whole territory which centralises and collects data on birds (>87%), amphibians, reptiles, fishes, mammals (including bats and marine mammals) and insects (dragonflies, stick insects). It is the initiative of a Non-Governmental Organisation of bird watchers (GEPOG) which has more than 600 000 entries. The program is useful to the Landscapes and Nature Information System (SINP) to build the regional red list of French Guiana. However, the problem faced is that the platform is not an open-source software and

therefore creates some difficulties to transfer the data to the Governmental platform. The contributors are mainly specialists from the general population.

- **OBSenMER (since 2018):** a network of volunteers and sea professionals collecting data on marine fauna using this collaborative platform (inside and outside marine protected areas). So far, there has been around 300 contributions from persons who were either accompanied by rangers or who were trained and therefore independent (fishermen for example). They had different protocols for the observations depending on the species and if they were stranding or opportunistic observations. Volunteers are also involved in photo-identification thus forming a network with sea users (fishermen) and contributing at the same time to the SINP (National Information System about Nature).
- **STOC-EPS (since 2012):** a participatory database involving volunteers and nature/ conservation professionals. STOC (Suivi Temporel des Oiseaux communs) = Temporal follow up of common birds. The GEPOG (NGO) coordinated the implementation of this national long-term bird survey protocol inside and outside protected areas. The aims were to evaluate the trend of common birds' populations in inhabited or natural areas using point counts and to assess the impacts of agriculture on bird's biodiversity. A network of around 20 trained observers (volunteers and professionals) were appointed on more than 50 trails resulting in more than 19 000 data collected. These observations were later used for land management. At first, the NGO was sceptical about rangers learning from local communities. However, this took less time than expected and local communities are now more involved in the protocol.
- **Hunting Program (2010-2018):** the program's aim was to collect data on practices in the National Park. 10 trained local investigators and 655 hunters were involved in the program, providing around 30 000 catches that were documented and samples collected. These data allowed to describe and qualify hunting practices (territories, frequency...), and constitute a DNA Bank. They were used in land planning programmes and for the constitution of red lists. They also contributed to adapted management rules which led to a recent European funded program Terra Maka'andi.

Mrs Rinaldo concluded her pitch stating that coordination is the corner-stone to facilitate participatory sciences program (funds, human resources), that participants need to be trained (volunteers or professionals), that data collected have to be used and restored to the collectors and that protected areas are a good playground for these protocols (they are made to last). She also described some unexpected positive results. For instance, the data can be for all kind of uses (communities, research, institutions...) and it can also be a good way to stimulate observations in nature or to value the skills of the rangers.



## Suriname

Mr Rudy van Kanten, Director of Tropenbos Suriname, then continued with the third pitch. He described the different protected areas of Suriname and their purposes (eco-system based, eco-system services, species habitat based, cultural objectives, natural monuments and landscape). These protected areas are managed by the Ministry of Spatial planning, Land and Forest Management.

He stated that the interior of Suriname consists of more than 80% of the land area which is part of the Guiana Shield and wider Amazonia and possess a considerable amount of natural wealth (biodiversity, freshwater resources and cultural heritage). None of the local communities (maroon and indigenous people) live inside the Nature Reserves but are present around for their livelihoods. They mostly live in Multiple-Use Management Areas (MUMA - no strict protection area where economical activities are allowed). The communities have the right to make traditional use of the natural resources in the protected areas and play an important role in Nature Conservation because of their traditional knowledge of forest preservation. According to him, it is therefore essential to engage them in the management of these areas in Suriname. He also mentioned that illegal gold-mining remains the problem in the nature reserves of Suriname and many research activities have been carried out on this subject.



Mr van Kanten then listed the different participatory science programs that are carried out by Non-Governmental Organisations (NGOs). The list is as follows:

- **Conservation International Suriname:** participatory GIS (PGIS) mapping project to identify ecosystem services with the Trio and Wayana indigenous peoples living in five villages in Southern Suriname.
- **Conservation International Suriname:** NBS Mangrove Project (CI, WWF, GCCA+)
- **World Wildlife Fund:** Sea Turtle Monitoring project
- **World Wildlife Fund:** Promoting Integrated Ocean Participatory Governance in Guyana and Suriname: The Eastern Gate to the Caribbean (EU);
- **Amazon Conservation Team:** In collaboration with Stichting voor Dorpsontwikkeling Matawai geostorytelling application for the Matawai Community
- **Amazon Conservation Team:** “Shamans and Apprentices” programs to help preserve the transmission of cultural identity in the face of modern change
- **Amazon Conservation Team:** participatory mapping projects with local communities; Initiated and continued to support an Amazon Conservation Ranger program to help safeguard protected areas

- **Amazon Conservation Team:** conducted comprehensive surveys of biological and other natural resources, concentrated in the southern half of the country
- Tropenbos Suriname: P3DM Upper Suriname River Area, 3-dimensional model and the map the living area of the Saamaka community (Tropenbos, WWF, UNDP-SGP, EU-ACP-CTA).

The role of the government is as important as that of the NGOs:

- **Ministry of Physical Planning, Land and Forest Management:** Revision Management plans of Bigi Pan MUMA, Coronie MUMA and Saramacca MUMA (UNDP)
- **SBB/REDD+:** implementation of a pilot project with the Community of Brownsberg, Pusugrunu and Frederiksdorp regarding the SLMS (Satellite Land Monitoring System), NRTM (Near Real Time Monitoring) and SFM (Sustainable Forest Monitoring)
- **Cabinet of the President of the Republic of Suriname:** Ecosystem Based Management and Ocean Governance Demonstration Project
- Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystem (CLME project, abbreviated CLME+ project 2015-2020).

Mr van Kantén then proceeded with the threats that such programs face in Suriname. For instance, in terms of accessibility as most protected areas in Suriname are situated in remote areas. Other threats are the gold rush as a result of high commodity prices, land degrading due to mining and logging, water pollution and disturbance of tradition and culture of indigenous and maroon communities.

He also talked about the challenges that the country is facing financial and manpower shortage to manage and control the protected areas, land rights' claim of the local communities, legal and illegal economic activities, respect and protection of traditional knowledge and institutions and language gaps. More related to the communities, respecting FPIC (Free Prior Informed Consent) protocols remains a challenge, as well as formal recognition of traditional knowledge in Scientific Research Documents and not only a "Thank you" note. The local communities are calling for support for research projects that are culturally appropriate, community-owned and directed meaning research that combines both scientific and traditional knowledge systems. For him, this could sometime come into conflict with "Western Science view". He ended his pitch with a proposal to adopt ethical guidelines that encourage indigenous participation and include full disclosure and written documentation of consent and support from community leaders and participants.

## Colombia



Mrs Mercedes Mejía Leudo, Professor at the Universidad de la Amazonia of Colombia, was the next speaker. She mentioned that the Guiana Shield is sometimes an unknown area to Colombians, and that is why this type of cooperation between the Guiana Shield countries is very important as it sheds light on this region. Moreover, the presence of protected areas is very important as it has a double role of conservation for culture and biodiversity. For instance, the National Park of Chiribiquete is a reference to other countries and is recognised by the UNESCO.

The Humboldt Institution has a collaborative project on the monitoring of deforestation through an open platform that can be used by everyone. According to Mrs Leudo, this is very important as some areas of the Guiana Shield are facing a lot of problem with illegal gold-mining. If more people participate in the monitoring and make the information available, this could help reduce deforestation due to this activity. The Ministry of Environment had a resolution to decrease the rate of deforestation to 0% in 2020 but they had to abandon it because the reality is different. Lack of resources and money remain the main issues while the impacts of gold-mining can be seen on the Caquetá rivers which contain high levels of Mercury threatening the livelihoods of the communities. Additionally, agriculture and farming also contribute to deforestation in this part of the Guiana Shield.

Lack of human resources is also a problem. For example, the Chiribiquete National Park has only 25 persons involved in the protection of its borders. It was recently extended but without any additional resources. International cooperation can be useful, but they still need money and knowledge to protect this huge area. A lot of communities are now participating in the conservation of protected areas. There is an initiative from farmers in Caquetá who are helping preserve turtles in the rivers by collecting their eggs, breeding the juveniles and then releasing them back into the environment. For Mrs Leudo, there are a lot of opportunities to work together and to contribute to the biodiversity of the Guiana Shield. Unfortunately, the Guiana Shield is like a land of extractivism and the local communities are part of the solution to reduce this deforestation as they are themselves impacted.

## Venezuela



Mr Daniel Lew, from the Venezuelan Institute for Scientific Research, agreed last-minute to give a brief pitch for Venezuela on behalf of his colleague, Mariapia Bevilacqua, who could not make it to the Congress due to lack of funding and political instability in the country. Mr Lew stated that Venezuela has around 17% of protected areas and they all have many particularities. The country has been experiencing a serious political and economic crisis with economical blockage. This situation has both social and environmental impacts. In 2006, there were various investments in research activities, however, with the crisis, the priority is now for food and health.

Mr Lew stated that they are convinced that conservation initiatives are fundamental, however, they are conscious that development is stronger than conservation issues. He then recounted a discussion he had with colleagues at the Institute of Scientific Research about the meaning of development. They believe that development is growth and progress, i.e. positive words but, it means a permanent increase of use of energy and resources. Years after the concept of sustainable development became in use at multi-lateral conferences, a lot of countries nowadays have not been able to put it fully in practice. He pointed out the case of carbon dioxide emission and then asked the participants what model of development we must stimulate?

The recognition of traditional communities is another topic Mr Lew talked about. He stated that these communities are recognised in the Venezuelan laws, but the latter are not reinforced. The communities are waiting for the recognition of their territories for more than 30 years now. This legal status is very important to work in these areas and to work with the traditional population. He is positive that to find new ways of development, we need to work closer with the indigenous people. Their concepts and way of life can be inspirational to build a new and different approach towards nature instead of using up the resources that are available.

## Brazil



Last-minute also, Mr. Shaji Thomas, environmental lawyer from the Federal University of Para (Centre for Amazonian Studies), agreed to replace his colleague Ligia Lopez Simonian who could not make it to the roundtable. Mr Thomas briefly explained the recent political events in Brazil which is governed by a military government as almost all the institutions are directed by military persons. The Constitution of the country has provisions for indigenous communities, but these rules are not being used by the actual government. There are several types of protected areas in Brazil, it includes national parks, nature reserves and biological reserves. However, there is no adequate monitoring of these areas. Moreover, there are a lot of big projects that are being carried out in these areas for example hydroelectrical and mining ones. There is no good mobilisation of maroon and tribal communities to protect these areas and stand against these projects.

However, the communities are trying to use some strategies against the government. They have been protesting for the last two months in Brasilia and are also taking legal actions against the government. Furthermore, in all the public universities, there are group discussions for finding ways to help the communities. An association has been created to develop strategies against governmental projects. The main difficulties remain financial support as the governmental has cut down all financial possibilities for the public universities and shortage of human resources as there are few researchers who are really dedicated to tribal/ indigenous research.

Mr Thomas presented some actions that could help change the situation: form a common front of discussion between all the countries of the Guiana Shield and use the traditional knowledge and participation of local communities to develop new strategies (work at the community-level). He then ended his pitch with examples of projects that are already involving local communities like fishing in protected areas. The communities are themselves managing and protecting the fishing inside this area though it is not accepted by the government. There is also the use of technology where medicinal plants are being categorised by the communities and they are planning to publish a book out of it.

## Post-its sessions

<b>What are the on-going projects in or around the Protected Areas of your country that involves participatory sciences?</b>				
	<b>Name &amp; Objectives of the project</b>	<b>Who are the stakeholders involved?</b>	<b>What are the sources of funding?</b>	<b>What are the impacts of these programs?</b>
1	VID's Project	local communities in collaboration with the VIDS (Association of indigenous village leaders in Suriname)	United Nations (UN)	Awareness of their rights and inventory of sustainable development
2			Non-Governmental Organisation (NGO) and European Union (EU)	ongoing training of communities in protecting mangrove and use of resources
3	Traditional knowledge Project	Guyana, Protected Areas Commission (PAC), Protected Areas Communities	Darwin Project	Participatory documentation of traditional knowledge using videos and photos; will inform policy at national and international level
4	Iwokrame Science Programme	PAC		ecological threat monitoring, turtle monitoring
5	Guyana Protected Areas System 3. Component 2: Sustainable Land and Resource Use	PAC, local indigenous communities, governmental agencies	KFW Germany	Sustainable use of resources through landuse planing, pilot resource use agreements
6	Community Resilience Building from Red Cross Society	Local communities, Suriname Red Cross Society, Canadian Government		Resilience Building
7	Marine Spatial Planning Project (Suriname-Guyana-French Guiana)	Guyana, PAC, World Wildlife Fund (WWF), Protected Areas, Local Communities	EU	Now starting - will help to define marine protected areas
8	Sea Marine Interactions	Local Communities, Government officials, GHFS, WWF	SRJS - IUCN Netherlands	Marine Interactions, Raising awareness and capacity building of local communities
9		UNDP Venezuela	UNDP	Ecotourism, training of rangers, education, infrastructure
10	Forest Certification, Co-management & Monitoring programme, Education for Climate Change Adaptation and Mitigation – ECCAM project, Ecotourism : best practices development and promoting community tourism	IWOKRAMA (Guyana)		
11	Brazil: Mangrove Protection Group - protection of mangroves and sustainable use of its resources by the local communities	local communities, university and government agencies		
12	Guyana: training courses at CBD, UG that involve rangers and community organisers that transfer knowledge to PA residents ex: (i) writing courses (ii) how to make posters (iii) how to do statistical analysis (iv) how to conduct social surveys		WWF, UG	Skill building, transfer of knowledge
13	Venezuela: tortuga project; control of bushmeat; long lasting project	UNDP (aferrerperezl@gmail.com)	UNDP	

	Name & Objectives of the project	Who are the stakeholders involved?	What are the sources of funding?	What are the impacts of these programs?
14		FAO, UN Environnement, WWF, IUCN, REDPARQUES	EU	tools and methodologies for a common view of issues and challenges of protected areas e.g climate change vulnerability, conservation opportunities, management effectiveness)
15	Canada Bioblitz: document all biodiversity in a park	scientific institutions + protected areas	Canadian wildlife Service (Federal)	first inventory survey of new wilderness reserve
16	IAPA Project (Integration of the Amazon Protected Areas) : strengthening national protected areas systems in the amazon biome	national protected areas systems of Bolivia, Brazil, French Guiana, Peru, Ecuador, Colombia, Guyana, Suriname and Venezuela		
17	Research projects by University of Guyana, students and staff that focus on the Research Mandate	Undergraduate + Graduate students	PAC, UG, WWF	Students are exposed to research
18	Communities around the Kanuku Mountain Protected Areas: aim at conserving and protecting the flora and fauna of the Kanuku Mountains	KMCRG		Communities who rely on these areas for their everyday activities and through sustainable practices



<b>Meaningful engagement of local communities in science and mangement in the Protected Areas of your country</b>				
	<b>Which tools/tips are effective to involve local communities (language gaps, educational projects)?</b>	<b>Engaging communities, how can this be done sustainably?</b>	<b>How to get scientists involved in the process of engaging with communities?</b>	<b>According to your experince, what are the good practices to be highlighted?</b>
1	Combining the traditional knowledge with scientific data; use their local language to define the concepts and methodology	1) Get communities to understand rationale for conservation , in this way actions will be continued long after end date of products -> longer term impact 2) Manage communities' expectations -> showw them that finances will not always be available but actions should continue nervertheless.	Integral explorations with indigenous and scientific communities	Canada: Interactive communication
2	Adaptability of the methodology used in the land, according to the land and community	Creating local job opportunities for communities so that the people informed and trianed are still in the area for a while	Language skills: make compulsory the use and knowledge of regional languages in the Guiana Shield during studies at University	Familias guarda bosques = Forestor families must be trained to control and decrease hunting, fishing and destruction of the natural resources
3	Talk with them to get their ideas to do social community project in the local community	Have follow-up initiatives for projects that have short life span: long term commitment from the scientists with the people/ community	Discussion and dialogue with the community, using their own experience; space for discussion	1) Be transparent and honest with local communities 2) Participatory approaches to planning management





	Which tools/tips are effective to involve local communities (language gaps, educational projects)?	Engaging communities, how can this be done sustainably?	How to get scientists involved in the process of engaging with communities?	According to your experience, what are the good practices to be highlighted?
4	Work on the strategies and action plans with the local communities	It may be possible implementing communal economical projects focused on cultural traditions of the communities and the land use	Design protocols/ agreements for scientist to be obligated to work with locals -> aso to share data in community-friendly ways e.g simple posters, translations, etc.	Activities/ exercices pictorials; follow their rules/ command systems; involve everyone, children, young people, old people
5	Use of socially acceptable technology made by the local community (technology used and prepared or developed by the community itself)	Involving children and young people who are still in the community with differenciated strategies	Have a code of conduct for scientists when applying for research with local communities	Doing science projects with children and youth
6	Translation into indigenous language; use simple language or explain scientific/ difficult terms	Build ownership : the communities feel like the project is theirs, actively involved in the process at the beginning	Canada: Bioblitz events -> 24 hours where scientists document all biodiversity with the help pf the public	Collaborative management
7	Have pilot interviews where we can assess the needs and priorities of the communities so that the reserach work can be of use to them	Respect the value of traditional knowledge	Database softwares for specific Biodiversity that is online	ecological restoration of degraded ecosystems implementing permaculture design methods integrating oily plants and wildlife management as the main actor in the restoration
8	Citizen science projects - local communities help scientist collect data	Include local community at every step of the project	Show scientists that it is a win-win situation. Giving and receiving feedback from communities.	
9	(i) Translation of meeting, print and non-print materials in local languages (ii) Participatory planning and mangement : communities must be involved from the very beginning (iii) Design specific community-friendly workshops (etc.) to not overwhelm but get as much and proper information as possible	To work together with the community on a long term basis, to help the community on other social areas to improve	Do scientific project with the children and youth of the community; to train local people in dong research project	
10	polymerise scientific knowledge and ancestral knowledge to solve problems precisely and continually	Involve + train (as necessary) representatives of the local/ indigenous community	Engagement through the community leadership through FPIC and ensuring local + national laws/ protocols are followed	



**Access Benefit Sharing in the Protected Areas of your country**

	<b>What are the approaches to grant access to natural resources?</b>	<b>How are the current challenges being addressed on this topic?</b>
<b>1</b>	GUYANA - Environment Protection Agency: Carten Protocol, Draft ABS Protocol, PA Act, Amerindian Act, FPIC (in revision), NGOs (Iwokrama), EPA Research Protocol	GUYANA : 1) Lack of a land use plan 2) Conflicting/ multiple land uses (mining + forestry + agriculture) 3) no copyright laws 4) ABS is currently being revised with FPIC incorporated 5) Lack of knowledge by institution e.g customs
<b>2</b>	IWOKRAMA: 1) National, Community & IWOKRAMA permitting process 2) Involvement of local community representatives, students, IWOKRAMA and university scientist 3) FPIC	
<b>3</b>	SURINAME: 1) the rules/ approach are old (1970) and have been put in place by the government 2) The land right are not yet recognised by the government	SURINAME: 1) transparency and accountability of the ABS Protocol ->building protocols and implementaiton 2) Change of legislation 3) Build effective local organisations -> Capacity building 4) Getting over internal conflicts in communities to share a vision or move to a common vision
<b>4</b>	CANADA: Application to get permission to work in protected areas and access to natural resources	CANADA: Communications can be done directly with stakeholders groups
<b>5</b>	FRENCH GUIANA: 2007-2016 -> yes specific to the National Park; 2016-> ABS Protocol all over France + Permit in PAs : ongoing work to build FPIC protocol with communities	
<b>6</b>	BRAZIL: participatory approach where community can make decision on the use of natural resources. Consultation protocols exist.	BRAZIL: top-down decision making
<b>7</b>	COLOMBIA : law on prior consultation + specific PA-only with indigenous	COLOMBIA : 1) recognise the traditional knowledge associated with genetic resources throughout the ABS process 2) public policy on conservation: biodiversity and ecosystemic services management policy 3) political durability and sustainability for the surrounding communities and the participation of the indigenous communities 4) the clarity of land-use in buffer zones
<b>8</b>	VENEZUELA: law on prior consultation but differnet exploitation in the Natural Parks	VENEZUELA: 1) no prior consultation with the communities 2) indigenous froup looking for income are active miners inside National Parks 3) limited support from government in health issues 4) necessity to recognise the needs of local communities instead of what researches think are the nedds of local communities 5) they must be the key actor in the objectives and proposals.

### **Strengthening the network between the countries of the Guiana Shield**

	<b>What are the opportunities for collaborating on participatory sciences in the Protected Areas?</b>	<b>How to communicate, moving forward, on the sustainable management of natural resources in the Protected Areas?</b>
1	Promote contact between local communities from different regions/ countries	To promote the languages of the Guiana Shield to all scientific students of the region. Obligatory: English, Spanish, Brazilian, French
2	Common forum of discussion where shareholders and scientists can exchange experiences	Showing that through sustainable management of natural resources, both parties (PA and communities) may benefit in the long run
3	Involving universities from border regions in collaborative projects	More info in schools about management of natural resources in national and regional protected areas
4	1) Exchange programme for children and youth in the protected areas between the PA of different countries 2) Doing field visit with children and youth to the PA	Pilot projects in all areas about sustainable management of natural resources and make visitations or exchange programs to know these models
5	Congress, Seminars, Conferences - Attend and share info among 6 countries of Guiana Shield through local, indigenous, policy makers	1) Exchange more materials electronically -> emails, websites, etc. 2) Translate materials in main languages of the Guiana Shield. 3) Short videos.
6	Exchange of experts between and among countries	1) Using the social media to make interesting science programs 2) Collaboration with the school program to include management of natural resources 3) To begin dialogue with other disciplines
7	Joint field trips/ expeditions for participants from the different countries	Awareness: create simple books of the Biodiversity of the Guiana Shield in the five different languages
8	Systematic exchanges of students across protected areas of our 3 countries	Newsletter, scientific journals or online forums; different types of communication
9	1) Sharing of reports/ Newsletters electronically between countries on science projects and approaches 2) protected area exchanges between countries	Links between community participation and economic opportunities. Viability of community participation can be stimulated if the community can generate income
10	MALARIA: as an entrance to community is the initiative of health like curving malaria: natural methods	Biological corridors pays for environmental services
11	The water resource can be a federation theme (health, protection of resources) for collaboration	Identifying the biodiversity in the area, the function of each of the species in the biosphere, including the dynamics and interactions that arise to promote durably and sustainable actions for the conscious use of what they can provide
12	1) Wildlife species with great coverage in area, shared distribution areas 2) Umbrella and/ or flagship species	Elaboration of community projects with emphasis on the conservation of strategic areas and the use of non-timber resources from the forest.

## Next steps: How to move forward on this topic?

A consultancy will be launched on this thematic area in the framework of the RENFORESAP project. It will be partly built on the information provided by the pitches and the post-its sessions. The participants, whose contact details were made available, may also be solicited by the consultant to enable a more detailed exchange of information and exploration of the various aspects of this topic.

Since the event was running out of time, the participants did not have time to give their feedback on the proceedings and information exchange.

## List of participants

<b>RENFORESAP side event on participatory sciences for the sustainable management of natural resources in the Protected Areas of the Guiana Shield</b>		
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