



April 2024

The Institutionalisation of Bioculturalism through Community Protocols: The Case of Guna Yala

Jean Foyer

CNRS, Centre de Recherche et de Documentation sur les Amériques, France, jean.foyer@cnrs.fr

Monica Martinez Mauri

University of Barcelona, Spain, martinezmauri@ub.edu

Geoffroy Filoche

IRD/SENS, France, geoffroy.filoche@ird.fr

Geodisio Castillo

Instituto del Patrimonio Cultural del Pueblo Guna (IPCPG), Panama, geodisio@gmail.com

Recommended Citation

Foyer et al., (2024). The institutionalisation of bioculturalism through community protocols: The case of Guna Yala. *The International Indigenous Policy Journal*, 15(1). <https://doi.org/10.072.152/iipj.2024.15.1.15872>

The Institutionalisation of Bioculturalism through Community Protocols: The Case of Guna Yala

Abstract

Biocultural Community Protocols (BCPs) are environmental governance mechanisms for biodiversity that aim to establish, at the local community level, a normative framework for the central themes discussed in the framework of the Convention on Biological Diversity (biodiversity conservation, traditional knowledge, prior and informed access, benefit sharing, agro-biodiversity conservation, etc.). Taking into account the Guna history about the idea of biocultural diversity, but also the specificities of the Guna political system, this article aims to shed light on the local implementation of this type of protocol in the indigenous territory of Guna Yala (Panama).

We thus show that, despite the active role played by Gunas experts at the international, national, and regional levels, the Gunas have not adopted BCP's. Due to the pre-existence of research regulation mechanisms in GunaYala, but also to a certain mistrust of global environmental governance, the Guna authorities have for the time being not considered the BCP's as being relevant enough. Beyond this particular example of unfinished institutionalization, BCPs must be understood as a localized mechanism serving the advancement of the more general idea of biocultural diversity.

Acknowledgements

The authors would like to thank the Gunadule people and their authorities for the exchanges that fuelled this research, as well as the Agence Nationale de la Recherche (France) for financial support as part of the BIOCULTURALIS project coordinated by Fabien Girard.

This text is dedicated to Blas Lopez, who passed away in June 2024. Most of this research was carried out from his home, always so welcoming, in Gardi Sugdub. Blas was a great friend, a fantastic link between the world of social sciences and the Guna world, and a lifelong fighter for Guna autonomy.

Keywords

Guna People, Panama, Convention on Biological Diversity, Indigenous knowledge, community biocultural protocols, environmental governance

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License](#).

The Institutionalisation of Bioculturalism through Community Protocols: The Case of Guna Yala

At the end of 2018, when this research project began, an online search using the phrase “Protocolo Biocultural Comunitario Panamá” (Panama Biocultural Community Protocol—CBP) gave as its most relevant results PowerPoint documents produced by Gunadule¹ associations and a formal document referring to a Ngäbe community called El Piro.² The Gunadule documents seemed to suggest that this matter had been discussed in Guna Yala for at least ten years but reflection on the question had not yet led to the adoption of such a protocol. We thought that it was important to investigate this case *in situ* to understand the terms of this deliberation.

Biocultural Community Protocols (BCPs) are mechanisms for environmental governance of biodiversity which, since the Nagoya Protocol³ (Aubertin et al., 2021; Teran, 2016) have sought to establish locally, at the level of Indigenous territories, a regulatory framework for the key concerns that are discussed in the Convention on Biological Diversity (CBD). These issues are varied, although they basically refer to the following questions: conservation of biodiversity and the traditional knowledge that might be associated with it; matters of prior and informed access; the physical and symbolic dimensions of this diversity; the issue of sharing the benefits that might derive from the use and management of biodiversity; and to other questions pertaining to conservation of agrobiodiversity.

In practice, BCPs can be both a mechanism for controlling bioprospecting activities and a tool for raising awareness of conservation of biodiversity and/or of traditional and ancestral knowledge. In addition to the scope of the questions they can address, BCPs have recently been applied in contexts and with goals that can also vary. The Bioculturalis project, funded by the ANR (Agence Nationale de la Recherche) of France, in which we have participated, is specifically interested in the implementation of these new kinds of normative frameworks at the local level (Girard et al., 2022), in particular in Madagascar (Girard & Rakotondrabe, 2022) and, in terms of the present study, in Panama. This latter research is primarily concerned with the emergence of regulations on biocultural rights and also the kinds of tensions that emerge among the different parties involved (Indigenous and/or local communities, NGOs, the state, and international institutions).

The following questions guide this study. Why have the Gunadule people not yet wanted to adopt this mechanism? Through what process does a mechanism of environmental governance conceived at the international level come to reach the local level of Gunadule territories? In more general terms,

¹ Generally referred to as Kuna people, they are now referred to as Guna people since the letter “K” was replaced by the letter “G”, to be more in line with the local pronunciation, by decision of the linguistic section of the Guna General Congress in 2011. In the article, we use the proper Indigenous name of Gunadule or Gunadulegan (plural form). The language spoken by the Gunadulegan is Dulegaya.

² Between the beginning and end of our survey, another CBP was prepared in the Embera community of Ipeti in 2020. The El Piro and Ipeti CBPs can be accessed on the CBD (Convenio sobre la Biodiversidad Biologica [Convention on Biological Diversity]) website. At present, they are the only two formalised CBPs in the autochthonous territories of Panama.

³ This protocol was adopted in 2010, signed by Panama in 2012 (Law 57 of 4 October), and took effect at the international level in October 2014.

what elements does this process contribute to our understanding of the institutionalisation of bioculturalism?

The case of the biocultural protocol in the Gunadule context is relevant for several reasons. First, it belongs to a relatively long tradition and discussion in terms of both relations with the scientific community and those between Indigenous peoples and nature conservation. In these two aspects, the Gunadule are pioneering, and it is therefore logical that they should also be so when it comes to thinking about the matter of biocultural protocols. Hence, the present study is an opportunity to situate the specific mechanism of the BCPs in the long history of the Gunadule with regard to relations with scientific circles and the question of pairing biological diversity and cultural diversity, and also to contemplate the specific process of institutionalisation of the Guna Yala context, which is characterised by the importance of the regional scale and the centrality of the institution of the congress. Before addressing these points, we shall describe the context and the method used in our study.

The Context: The Guna Yala Comarca

The Republic of Panama recognises the territorial rights of Indigenous peoples under two legal concepts, comarcas (provinces) and collective lands (Law 72 of 2008). In 1953, with the enactment of Law 16, the administrative and legal status of the country's first Indigenous comarca, San Blas (the present Guna Yala) was definitively established. With this legislation the state of Panama consented to recognise, by means of an organic charter, the supralocal Indigenous autonomy associated with extensive territories, and the concept of Indigenous comarca was officially acknowledged. Although the Gunadule people are not the most numerous, they are the most advanced in the process of constructing autonomy (Castillo, 2018). Today, three of the country's six comarcas are identified with this people of Chibcha origins.

The Guna Yala Comarca is governed by two congresses. The first is called the General Congress of Guna Culture (*Onmaggeddummad Namaggaled*). In it, the *saglas* (chiefs) sing the *Bab Igar* and the *argar* (interpreters) explain the message contained in the sacred song to the audience. In recent years, this congress has gained momentum in the cultural and political domains through its work of guiding the other congress, the *Onmaggeddummad Sunmaggaled*, in making decisions that affect the wellbeing of the communities and their people. This second congress, known as the Guna General Congress, which is political and administrative by nature, consists of four delegates and one chief from each community who express their standpoints and participate in decision making that affects the whole population of the region.

These regional bodies have agreed on several regulations to reinforce their autonomy, these including the *Gunayar Igardummadwala* (Basic Law of 1995, amended in 2013, and currently under review), the General Regulations of the Congress (1993), the Comarca Statute (2000), and the regulations governing tourist activities in Guna Yala (2007). These rules coexist with regulations and customary norms that govern each of the forty-nine communities comprising the comarca. There is a high degree of local autonomy and coordination with comarca politics is sometimes tricky.

Theoretical Framework: Biocultural Diversity and its Institutionalisation

Promotion in the international sphere of a mechanism like the BCPs should be seen in the broader framework of the history of institutionalisation of the notion of biocultural diversity and

bioculturalism. These notions stem from the idea that there is synergy between biodiversity conservation, on the one hand, and cultural diversity as represented by Indigenous populations, on the other. Conceptualised for the first time in the scientific field of ethnobotany (Posey, 1999), in 1990 and 2000 it became the subject of epistemic advocacy or, in other words, science-based discourse with a precise political agenda (Hayden, 2003), which very quickly took it into the spheres of global biodiversity governance with the adoption of the Convention on Biological Diversity (CBD) in Rio de Janeiro in 1992. The Nagoya Protocol and the BCPs continue the institutionalisation or normalisation of the concept of biocultural diversity and its various manifestations. Accordingly, in recent years, the notion of bioculturalism has been broken down into different areas associated with the terms "territory," "heritage," "rights" (Chen & Gilmore, 2015) and, in the present case, that of "protocol."

Participating in the chains and networks of translation through which circulate the concept of biocultural diversity and a mechanism like the BCPs are scientists from different disciplines (biologists, ethnobotanists, biotechnologists, anthropologists, etcetera), jurists, more or less conservationist ecologists, politicians, members of international institutions, NGO workers, civil servants and, of course, Indigenous peoples who move between local communities and international settings. Hence, several authors have shown the productive misunderstandings and complex games of reciprocal instrumentalisation which, to a greater or lesser degree, arise from discussions between biodiversity agents (especially ecologist organisations) and Indigenous populations (Albert, 1993; Carneiro da Cunha, 2009; Conklin & Graham, 1995). In this domain, we have been following this process of institutionalisation for more than fifteen years (Filoche & Foyer, 2011 ; Foyer, 2008, 2011; Foyer & Ellison, 2018) and have produced a critical analysis of this notion of biocultural diversity, which draws attention to the multiple sets of translation at work between scales (local, national, international) but also between sectors and agents that give rise to it. Studying the attempts at BCPs in the Guna Yala Comarca allows us to demonstrate the workings of this institutionalisation in an autonomous Indigenous territory and also to understand its connections with the national and international spheres. Through the analysis of local translations of global mechanisms like the BCPs, this article aims at contributing to two debates: one about the ambiguity of the notion of bioculturalism, and another about the dynamics of translations between levels and actors in the implementation of the devices of global environmental governance. The anthropology of development has shown how certain programs conceived at international level often land very superficially at local level, with the main and self-referential aim of maintaining development projects, often without taking account of social, political, and cultural contexts (Mosse, 2005). Other works in this field have emphasized the effects of domination and the role of intermediaries (de Sardan, 2013) in the implementation of development policies. We ourselves have insisted on the importance of these intermediations in the Guna world, through the figure of the Guna technicians, the Sikwis (literally "birds", referring to the people who guide the chiefs, their secretaries)), responsible for linking the world of the communities with the various national and international levels of the Waga (non-Gunadule) world (Martínez Mauri, 2008). We also draw inspiration here from work in environmental political anthropology, which emphasizes the agency of local actors in reshaping and resignifying environmental projects according to Indigenous cosmogonies or political agendas (Carrier & West, 2013). In the field of political sociology, agenda setting refers to how the public authorities, in particular the state, addresses social issues (Cobb & Ross, 1997). We take up this idea here to show that, although the question of access to biological resources and

traditional knowledge is identified by some Gunadule experts as deserving the attention of the General Guna Congress, this issue hasn't become important enough for a specific regulation yet.

Method and ethics

This study is based on two periods of fieldwork. The first was carried out over a period of two weeks by three researchers—an anthropologist, a sociologist, and a lawyer—in May 2019 between Panama City and the Guna Yala Comarca. Twenty interviews were conducted with people concerned with questions of access to genetic resources and/or traditional knowledge, which is to say, Gunadule experts and Indigenous authorities, scientists from various disciplines—biologists, biochemists, biotechnologists, and others—and Panamanian administrative officials, especially from the Ministry of the Environment. Owing to the COVID-19 pandemic, the second part of the survey could only be conducted in March-April 2022, over a four-week period in Guna Yala and Panama City, where another series of interviews was carried out, mainly with Indigenous experts and practitioners of traditional medicine. Together with ten interviews conducted between 2018 and 2022 by one of the researchers, who resides in Panama City, the present research is then based on some forty interviews. The study was further enriched by examination of documents detailing the history of Guandulegan relationships with the scientific community.

The study has also been enriched by the holding of a workshop titled “Protocolos bioculturales, ¿una necesidad para la Comarca de Gunayala?” (Biocultural Protocols: A Necessity for Guna Yala Comarca?), in the Faranda Soloy Hotel on 31 March 2022. Jointly organised with the Guna People’s Cultural Heritage Institute (IPCPG), the workshop discussed, in addition to a presentation of the resumption of the first part of our study, an account of experiences in drafting the BCPs in two of the country’s Indigenous communities, and an explanation of a Panamanian regulatory framework with regard to access to genetic materials. In the afternoon, more informal roundtable discussions allowed the participants, most of whom were Guandulegan, to discuss the appropriateness or otherwise of adopting such a system in the Guna Yala Comarca. It is important to note that our objective was never to promote the adoption of a BCP, but rather to understand the state of collective reflection on these issues in the Comarca of Guna Yala. It was by responding to requests from our Gunas interlocutors that we nevertheless found ourselves in a position of action research, which consisted of accompanying the reflection of Gunas technicians and members of the Guna Congress. After the workshop, we spoke with Geodisio Castillo, the former head of the IPCPG, who had followed our research from the beginning, and invited him to participate as a co-author of this article in order to observe the principle of joint research that is established in the norms of the General Congress of Guna Culture.

Indeed, in line with the purpose of this study, we have paid particular attention to compliance with the research standards laid down by the Guna General Congress since, among the Gunadule, access is never taken for granted and must always be negotiated. Before working in the Guna Yala Comarca, all scientists must prepare a document that presents in synthesis the aim of the research, the methodology, the expected results, and the expected benefits for the Gunadule people. Once the document has been examined, and depending on the subject, the request for authorisation is addressed either to the NGO attached to the Guna General Congress or to the General Congress of

Guna Culture (CGCG).⁴ In this case, since our research pertained to cultural matters, we applied to the latter and met with the executive director of the IPCPG/CGCG, and a traditional authority, *sagladummad* Domitilio Morris. We should note that in this interview and those that followed, when we presented the BCPs as the focus of our study, our interlocutors did not seem to know about them, at least in their institutional form after the Nagoya Protocol. Nevertheless, the themes covered at the meeting, especially matters of prior, informed access, and benefit-sharing were familiar to them.

During the discussion, we were informed of another principle with which researchers must comply, namely the participation of a Gunadule student as an assistant in our research, for training purposes. We were put in contact with a young law student, daughter of a Gunadule lawyer and leader, and we met her a few days later. Since she had to attend a university course at the time of our fieldwork, she had to withdraw from participating in our survey the day before we left for Guna Yala. In order to conduct our research, we collected the note from the General Congress of Guna Culture the day before our departure and presented it to the authorities of each island in the presence of our correspondents to demonstrate the legitimacy of our research. After finalising the research, we sent a report of several pages to the Congress and outlined the procedure for resuming our work. Far from being anecdotal, these principles took us right to the heart of the main concern of our study on what it is possible or not possible to do in terms of research in Gunadule territory.

Results

A. A Tradition of Relations Negotiated with the Scientific Community

It is important to highlight the fact that these oversight practices were constructed over time in a long experience of relations with the scientific community and, at this point, we should recall some important stages.

One of the first contacts between the Gunadulegan and scientists occurred in the 1920s when the Gunadule leader Nele Kantule wanted to make his culture known beyond his borders. To this end, he dictated to two of his secretaries at the time, Guillermo Hayans and Rubén Pérez Kantule, a whole series of elements comprising the Gunadule tradition, among them the social, political, and cultural organisation of his people. These data were to become the basis of the work of the Swedish anthropologist Erland Nordenskiöld, who visited the San Blas islands in 1927 and subsequently invited the young Rubén Pérez Kantule to spend six months in Sweden (Martinez Mauri, 2009). Although Nordenskiöld died unexpectedly in 1931, this teamwork eventually led to the publication, in 1938, of a reference work on Gunadule culture and the constitution of a major documentary collection at the Gothenburg Museum where he was the principal curator of ethnology. The anthropologist James Howe notes that, in this relationship, the Gunadule not only played a very active role in the production of anthropological data concerning themselves, but they also consciously used the discipline as a “weapon of self-defence” (Howe, 2013), or a way of obtaining recognition of their cultural and territorial autonomy (Howe, 2011).

Another relevant and more recent episode in the relationship between the Gunadule and scientists concerns the presence and subsequent expulsion of a station of the Smithsonian Tropical Research

⁴ The IIDKY (The Guna Yala Research and Development Institute) and the IPCPG (Guna People's Cultural Heritage Institute), respectively.

Institute (STRI) from Guna Yala in 1998. The STRI is the Panamanian section of one of the oldest and most prestigious research in the United States, the Smithsonian Institution.⁵ In the early twentieth century when the Panama Canal was being constructed by the Americans, a first Smithsonian expedition to inventory the region's flora and fauna was undertaken in 1910. Later, in 1923, the first Smithsonian facility in Panama, the famous Barro Colorado Biological Station, which was constructed on an island in Gatun Lake, became an obligatory stop for most of the leading American tropical biologists (Raby, 2017). The STRI researchers began to work in the Guna Yala Comarca in the 1970s and, in 1977, a biological station was set up to conduct short-term biological research and longer-term climate monitoring studies.

⁵ Directly linked to the Federal Government of the United States, the Smithsonian Institution has a network of some twenty national museums, mostly based in Washington, among them the National Museum of Natural History and the National Museum of the American Indian, both of which are devoted to presenting Indigenous cultures across the continent.



Figure 1: The former STRI station in Guna Yala⁶

⁶ Source: https://biogeodb.stri.si.edu/physical_monitoring/research/sanblas

The story of this relationship with the STRI and its expulsion regularly appears in our interviews with the Gunadule, sometimes evoking motives and a range of reasons, but the experience has left its mark on the memory of their relationship with scientists. The repeatedly mentioned reason for the expulsion is the fact that, very early one morning, before daybreak, some Gunadule fishermen, frightened by some STRI divers and their bright lights, decided to alert their representatives to adopt measures at the General Congress that was being held in their community. After an intense discussion, the assembly decided to break the agreement with the STRI and expel its people from the Comarca. In addition to this anecdote, there are several other explanations for this decision. Most Gunadule informants say that the STRI did not report their activities and lacked transparency, while others mention the difficult negotiations about the amount of money the STRI paid the Congress each month for being allowed to stay⁷ and, still others say that the expulsion was the work of a group of young people influenced by anti-imperialist ideas, who strongly disapproved of the presence of an American enclave in Gunadule territory. This was a particularly difficult decision for both the Indigenous authorities and the Smithsonian Institute. Even if before the advent of tourism the payment of a fee by the STRI represented the main source of income for the Congress, the latter was nevertheless more concerned to reassert its authority over the territory. For the Smithsonian, the expulsion was also remembered as a step backwards in the advancement of scientific knowledge and for the conservation of some exceptional ecosystems. Whatever the case, the decision represents an affirmation of Gunadule authority over their territory, to the extent that it was able to expel such a prestigious and powerful institution as the STRI. The Gunadule biologist Heraclio Herrera, sums it up as follows:

The elders kicked out the Smithsonian because they wouldn't give back information. It was a great shame for the scientific world because it represented 20 years of work and information. It was then that the Smithsonian created a department of public relations (Heraclio Herrera, 22 May 2019).

Many other stories illustrate the relations, of both collaboration and conflict, between the Gunadule and the scientific community, but it is important to note that a whole generation of Gunadule scientists was trained in the life sciences or the humanities (sociologists, anthropologists, and archaeologists, among others) thanks to this experience of working together. This is a generation that also intermediates with the world of the *wagas* (non-Gunadule) and advises the authorities in the congresses. For example, the comments of Heraclio Herrera, the present head of the IIDKY, are particularly conclusive in this regard.

I studied biology, and specifically zoology, at the University of Panama between 1981 and 1984. I was about to write my undergraduate dissertation when the PEMASKY project [see section B] began. From 1985 to 1987 I was the assistant of a biologist, a botanist. In the years I worked with the PEMASKY project, I was the intermediary between the elders and the scientists. I also worked for four years in the field, where I made a lot of contacts, and I think that this is when the idea of having a Gunadule assistant came up. I finally graduated in 1989 with a dissertation on traditional medicine. Between 1991 and 1994, an important institution was the botanical garden of Saint Louis, Missouri, and through Walter Lewis, I was the botanical garden's reference in the country until 1994. I collected the plants, but my own people often hindered my collecting. It was more about cultural "jealousy" than

⁷ According to one of our informants, this amounted to \$3,000, which the Congress wanted to raise to \$5,000

information for the CBD. Once in Narganá, they confiscated my material. The commercial aspect was always in the mind of the authorities. In this kind of process, the Guna Congress turned to the educated younger people to resolve this or that problem (interview 22 May 2019).

This testimony is revealing for several reasons. First it shows the close ties between some Gunadulegan and the scientific world, either as local researchers or through links with prestigious institutions. Second, it indicates that the principles of transparency also apply to Indigenous researchers themselves. Finally, it reveals the as-yet-unfinished process of Gunadule autonomy with regard to the production of knowledge concerning their territory and their culture. The final aim of the Gunadule autonomy project is to end dependence on external actors and to be able to draw on the community's own internal strength, or at least to be able to permanently negotiate the alliances it chooses itself (Howe, 2011). From this standpoint, the protocols are seen as a way of guaranteeing these principles without losing sight of the main aims, which are the comarca's development and autonomy. Heraclio López, current head of the IPCPG, describes the reasoning as follows:

We need a lot of scientific and technical studies for development in the comarca, but we lack our own professionals. For these research projects we need more studies and written protocols. (Heraclio Lopez, 20 May 2019).

B. Biocultural Experiences at Various Levels

Before we present the Gunadule initiatives related with the idea of bioculturalism, it will help to provide several contextual elements about Gunadule cosmovision and the way they relates to their environment. Indeed, bioculturalism, as a western scientific and institutional concept, only partially translates the great complexity of the Gunadule traditional system and the conception of the world that underlies it. This complexity has been highlighted by scientists who have worked in this area (Chapin, 1983; Nordenskiöld, E., & Pérez Kantule, 1938) and by the Gunadule themselves (Waga, 2000) explaining their biocultural experiences as existing at many levels. On the therapeutic and spiritual levels, Gunadule medicine (*duleina*) is structured around a certain social distribution of tasks: the *Gar Igar* (rheumatologist-traumatologist) who specialise in bones; the *Naibe Igar*, experts in snake bites; the *Gurgin Igar*, the Gunadule equivalent of neuropsychologists; and the *Siggwi Gaed*, the birthing specialists or midwives. Nevertheless, for the Gunadule the heart of botanical medicine resides in the *inadulegan* (specialists in medicinal plants) and the *nergan* (specialists in dreams and therapeutic songs, who are gifted with clairvoyance). The biocultural dimension, understood here as the integration of botanical, physical, and spiritual dimensions of the work of the *inadulegan* or botanists is quite evident since it combines the work of healing with plants with knowledge of the songs that activate their curative power, a task that essentially blends human songs and the agency of plants, which is very different from materialistic approaches in terms of active compounds or genetic resources of western biochemistry. In the case of the *nergan*, biocultural duality is even somehow absorbed into an ontology in which one travels through dreams and sings to other planes of reality where spiritual beings prevail. The world of the *nergan* is esoteric in the truest sense of the word (Faivre, 2012) since it refers to both hidden realities and the secret that overlays these realities. At this very local level, rooted at the very heart of Gunadule culture, traditional and ancestral knowledge entail ontological questions that are difficult to reconcile with the administrative and legal categories of international law. With the exception of experts who are familiar with this international vocabulary, the biocultural protocols and, more broadly, the idea of

bioculturalism are unknown to the Gunadule who do not separate nature and culture (Descola, 2005). In their everyday lives, both are in constant interaction. In their language, Dulegaya, there is no word that refers to the idea of nature, culture, or even landscape because these concepts are forged in a naturalistic matrix. In our symposium, the more traditionalist Gunadulegan worked hard to find a way to translate the idea of biocultural protocol into Dulegaya. Similarly, the difference between the disciplines of biologists and anthropologists does not really make sense because the fields of knowledge they cover are, in the Gunadule conception, intertwined like strands in a rope. Although the idea of bioculturalism only partially translates their understanding of these matters, the Gunadulegan have been pioneers in several local and international initiatives at the interface of conservation and defence of biological and cultural diversity.

From the political and historical point of view, the Gunadule were early pioneers in their fight to conserve their forest. In the 1980s, the Udirbe project was a forerunner in the struggle to conserve the forests of Guna Yala and, in 1983, the Gunadule initiative PEMASKY (Project for the Study and Management of Guna Yala Wilderness Areas) was established. One of the first conservation endeavours originating in an Indigenous territory, PEMASKY set a precedent in terms of the existence of a first research protocol. It was important in the education of a generation of Gunadule experts who, having been trained with scientists under the auspices of PEMASKY, are still very active today. The main result was a declaration by the Guna General Congress (Resolution 3, 7 November 1987) designating the Comarca as a Biosphere and World Heritage Site which included land and sea, and the approval of a plan for its management and development.⁸ At present (2022), the general congresses have a Regional Commission for Protected Areas to produce a new project proposal for extending the land section into the marine area⁹ and to revise the management and development plan. PEMASKY was also influential in the creation of the National System of Protected Areas (SINAP) in 1992 with the aim of strengthening the country's protected areas.¹⁰

⁸ The jurisdiction of Narganá, with approximately 100,000 hectares of land was declared a Protected Wilderness Area by the National Institute of Renewable Resources (INRENARE), which is now the Ministry of the Environment. Although this protected area has not been recognised as a Biosphere Reserve by UNESCO, the very early use of this international category shows the Guna Congress' capacity for local appropriation of international conservation norms and standards.

⁹ Including *mubille* (the marine area, a sanctuary for the Gunadule people) represents a great opportunity for increasing the comarca's carbon stocks. The forest and sea sequester and store carbon from the atmosphere, thus helping to prevent its release.

¹⁰ Later on, in 1994, INRENARE, with Resolution JD-09-94 of 18 July, defined the various categories of management of Panama's Protected Areas. One of them refers specifically to Indigenous peoples, stating, "Wilderness Area located in an Indigenous Comarca or Reserve: This refers to any category of management defined by this Resolution and situated within the legally established Indigenous Comarcas and reserves that have been declared a protected wilderness area through the General Congresses of each Comarca or Reserve, in accordance with the regulations in force for each one."

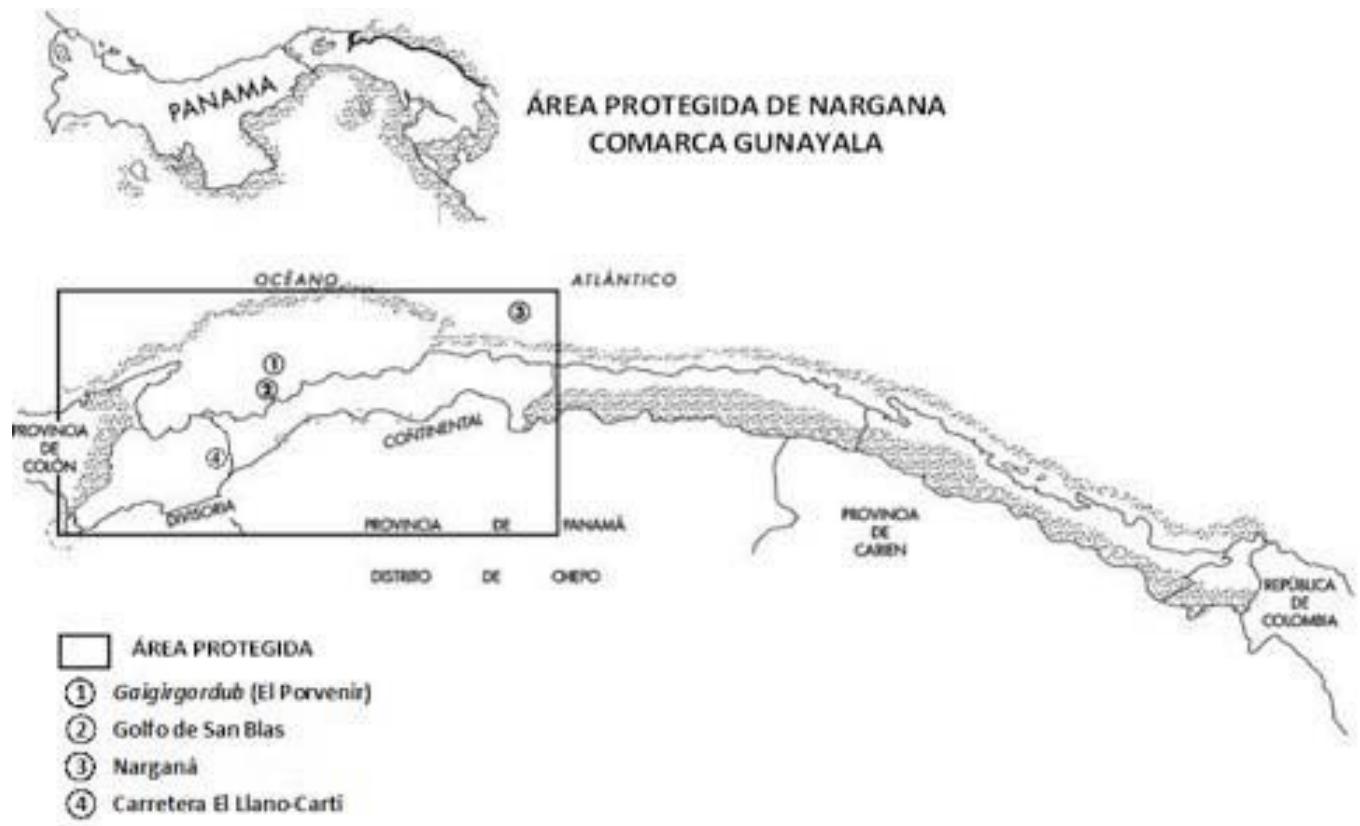


Figure 2: The Protected Area of Narganá

In addition to this model of protected Indigenous areas, the General Congress of Guna Culture and the IPCPG have also launched a historic effort to develop *duleina* (Gunadule botanical medicine), which recognises the participation of women in defending traditional and ancestral knowledge. The women, now organised around the Bundorgan association, participate in decision-making in the general congresses and other instances concerned with defence of Gunadule knowledge. Likewise, in December 2019, the General Congress of Guna Culture also established the Ina Ibegungalu Care and Learning Centre to treat the sick and train new *inadulegan* (Gunadulegan botanical doctors) and to exchange experiences among themselves. The Centre is presently situated at kilometre 27 of El Llano-Carti Road, inside the Terrestrial Cultural Zone of the protected Narganá Wilderness Area.

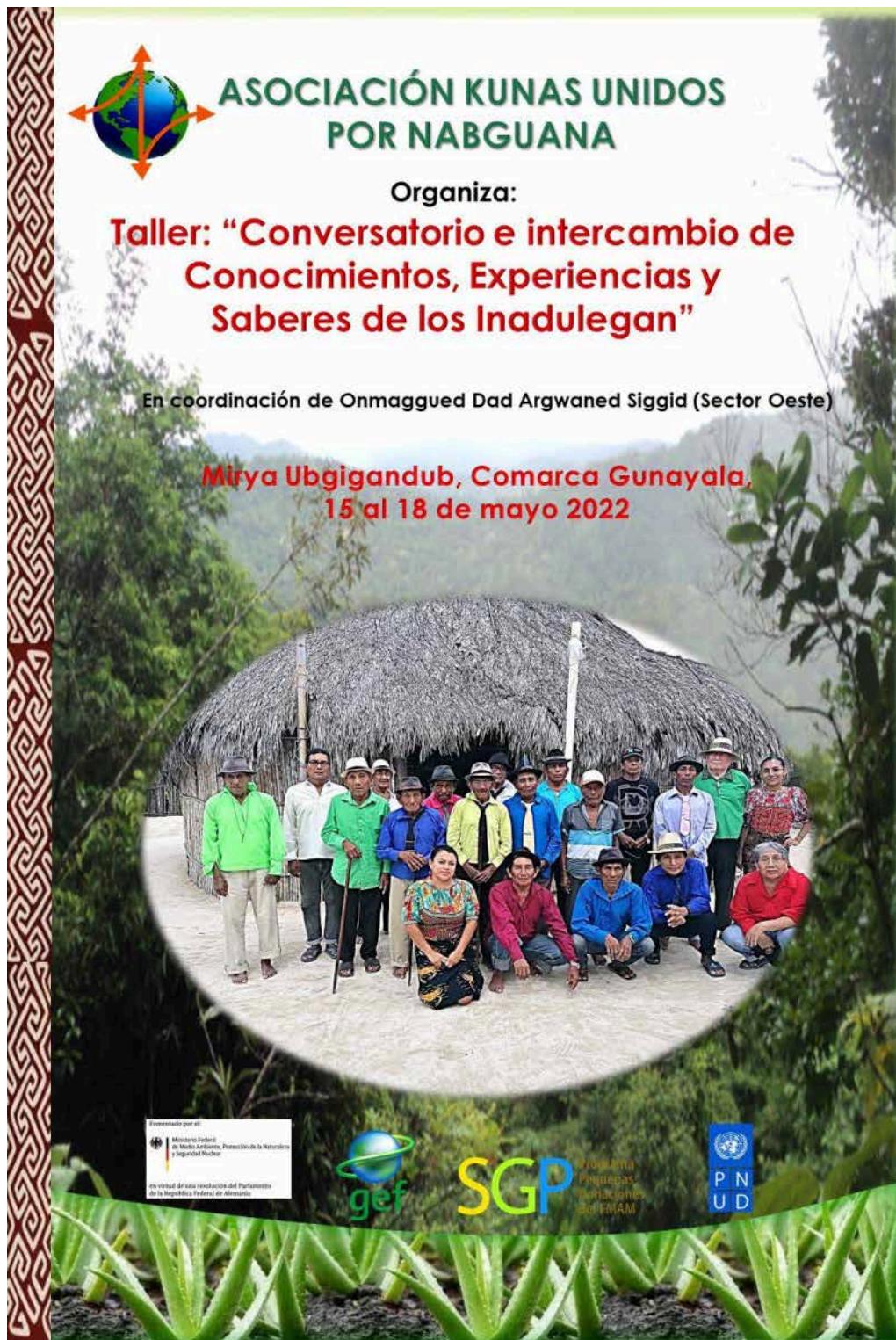


Figure 3: Poster of an Inadulegan Meeting in May 2022¹¹

This work at the local level has been complemented with other activities in the international domain in different scenarios where issues of defence of cultural diversity, human rights, and/or biodiversity are discussed. A small group of Gunadulegan including Atencio López, Onel Masardule, Marcial Arias, Estebancio Castro (RIP), and Florina López, were especially active in UN settings after the

¹¹Source: <https://www.facebook.com/101065722280554/photos/a.111509291236197/175883004798825/>

early 1990s. Marcial Arias recalls that in 1992, the year of the 500th anniversary of the “discovery” and also when the Rio Earth Summit was held, “We made the most of the situation. Everyone wanted to be Indigenous” (interview 22 May 2019). In particular, it was in the framework of a working group on Article 8(j)¹² of the CBD that this international lobbying work began. The working group served as a model for the discussion forum that led to the United Nations Declaration on the Rights of Indigenous Peoples in 2007 and, in this case also, the Gunadule representatives actively participated in the debates. In the international domain, these experts are also found in the World Intellectual Property Organisation (WIPO), in particular in the debates taking place in the framework of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC). More recently, after 2010, these Gunadule experts have also joined the climate change negotiations, in which the question of traditional knowledge has become important (Foyer & Dumoulin Kervan, 2017).

Onel Masardule recalls that the category of bioculturalism emerged in the international discussions of Indigenous groups starting from the category of “biocultural territories.” This notion, which was developed by a group of Indigenous experts and scientists, in which Alejandro Argumedo, programme director of the Peru-based Indigenous People’s organisation ANDES, also participated, sought to distinguish a specifically Indigenous type of conservation from the other more widely accepted form, but this failed to become established at the international level. Nevertheless, “bioculturalism” reappeared some years later during the Nagoya Protocol negotiations in which the term “community protocols” was initially used. This term did not appeal to the Indigenous negotiators, who preferred the expression “biocultural protocol” in order to highlight the specifically Indigenous dimension of the mechanism, which was then in its infancy. Onel Masardule explains that the advantage of the category of bioculturalism is that it conveys a more integral vision of biodiversity because, “For us, the Indigenous peoples, everything that comes from nature is connected with culture and spirituality” (personal interview, 1 April 2022).

C. The production of a national legal framework to protect biocultural rights

The Gunadule’s extensive experience in matters of international regulations on cultural rights and intellectual property has led to the establishment of an effective legal framework at national level. The use of motifs of the mola, a traditional Gunadule woven cloth, is just one example of biocultural control since the mola expresses cultural meanings about nature as a whole. One incident that occurred during our first field study demonstrates the degree of expertise and negotiating skills of the Gunadule, even when faced by extremely powerful commercial actors.

The case, which we have been able to follow in real time, concerned the use of a mola design in a pair of sports shoes produced by the famous American brand Nike. The story went viral in May 2019 when the company announced on the social networks that it was going to launch a new model devoted to Puerto Rico. The advertisement showed an image of the product featuring a brightly

¹² This notable article of the CBD states that each party must, “Subject to its national legislation, respect, preserve and maintain knowledge, innovations, and practices of Indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations, and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices”.

coloured mola design, without any reference to its producers. Critical voices were soon raised, including some of Indigenous activists in the United States, accusing Nike of plagiarism and using an Indigenous model in a decontextualised way without recognising the true creators of the design.



Figure 4: Campaign against Nike's use of a Mola design¹³

The fact that Nike failed to acknowledge the origin of the design also caused a great outcry in Panama. The four Gunadule nations swiftly issued a statement declaring that Nike had used the mola without consent, "only to make millions of dollars on the backs of our Gunadule mothers and sisters who have preserved this collective traditional knowledge for centuries." The Gunadule authorities called a press conference with the support of Panama's Ministry of Commerce and Industries. Just a few hours after this public event, the international media took up the story and Nike announced that it was cancelling the launch of the new model. The company quickly realised that the legal framework was not in its favour. Thanks to the signing of the Trade Promotion Agreement (TPA) between Panama and the United States, Panama's Law 20, which protects the molas, is mandatory in both countries, which means that Nike would not have been able to defend itself against legal action by the Gunadule.

Since 2000 Panama has been governed by Law 20 "On the Special Intellectual Property Regime Governing the Collective Rights of Indigenous Peoples for the Protection and Defence of their Cultural Identity and their Traditional Knowledge and Enacting Other Provisions." By means of this law, inventions, models, petroglyphs, symbols, figures, designs, and other autochthonous expressions are protected by a special registration system in the Department of Collective Rights and Folkloric Expressions of the Directorate General of the Industrial Property Registry (Digerpi) of the Ministry of Commerce and Industries. In 2001, the Gunadule were the first of the Indigenous peoples of Panama to use this organism when they registered the mola. Although this groundbreaking law on traditional knowledge was originally conceived to cover genetic and biological resources, it ended up referring mainly to crafts for political reasons.

¹³ <https://www.20min.ch/fr/story/des-amerindiens-accusent-nike-de-plagiat-263979573146>

More recently, at the national level, the regulations have been supplemented to address issues of access to biological resources and traditional knowledge, frequently at the initiative of Gunadule lawyers, who have been especially active in their drafting. One example is Law 17 of 2016 on Protection of Indigenous Medicine Knowledge which addresses head-on questions of access and benefit-sharing, especially in its sections 24 and 25. Likewise, Law 37 of the same year is concerned with the matter of free, prior, and informed consent of Indigenous Peoples, while the Executive Decree of 2019 deals with the use and control of genetic resources and territorial control. According to the Gunadule lawyer, Aresio López, these regulations should not be taken separately but as a coherent whole that forms a system of protection for the defence of Indigenous intellectual property rights, their biodiversity, and their traditional knowledge. This shows that, in terms of protection of biocultural diversity, there is a national level between the local level of the comarca and the international level and UN institutions where the Gunadule are also very active in the processes of producing regulations.

D. Divergent Agendas: UN Environmental Protection Mechanisms under Suspicion

Although there are efficient regulations governing cultural and/or biological research in Guna Yala, we were able to confirm thanks to our fieldwork that, currently, no community protocol regulating biocultural research or benefit-sharing derived from the use of biodiversity or of associated traditional forms of knowledge has been made public. In this section, we offer an overview of the main attempts to produce a BCP at the level of the Guna Yala Comarca as well as some explanations as to why the Congress has not, so far, been willing to approve this policy.

After 2005, even before the concept of the BCP was institutionalised in international bodies, Gunadule experts, organisations, and research centres produced several documents on the matter, anticipating what a BCP might become and showing, once again, that the Gunadule are forerunners in terms of discussion about adapting the CBD principles to local regulations.

One of these documents, titled “Conocimiento kuna, biodiversidad y propiedad intelectual” (Kuna Knowledge, Biodiversity, and Intellectual Property), was published by the Dobbo Yala Foundation in 2006. While it is not the first document to be produced by Indigenous professionals concerning this question, it is the first to have been published and widely circulated at the national level. Only thirty-two pages long, this booklet describes the people who have traditional knowledge about biodiversity, as we outlined in the previous section (Herrera et al., 2006). It also includes an account of the guidelines that must be observed by any person who wishes to acquire such knowledge as well as a compilation of the national and regional regulations on Indigenous medicine and access to genetic and biological resources. The concluding section presents the basic rules to be followed by researchers who are interested in studying ancestral knowledge on biodiversity and its medicinal uses. Basically, this section makes it explicit that access to this collective knowledge requires the agreement of the two Gunadule congresses of Guna Yala, the cultural (*Onmaggeddummad Namaggaled*) and the political (*Onmaggeddummad Summagaled*).

Another document produced by non-governmental organisations consisting of Gunadule professionals is the “Protocolo Indígena de Acceso a Recursos Genéticos y Distribución Equitativa de los Beneficios” (Indigenous Protocol on Access to Genetic Resources and Equitable Benefit Sharing), which was drawn up by the Foundation for Promotion of Indigenous Knowledge (2008-2011). In its first part, it compiles some legal provisions on human rights and discusses national laws

that recognise Indigenous sovereignty over territory and resources. The final part of the document outlines a series of factors that must be considered in any research on genetic and biological resources that is conducted in Indigenous territories. In this case, the guidelines are very general and do not indicate the Indigenous body with which access or benefit-sharing agreements should be negotiated. It merely urges researchers to respect the sociopolitical organisation of the communities, to promote participative research, and to ensure that benefits are fairly shared.



Figure 5: Covers of the documents

Hence, while in the early 2010s BCPs were being promoted at the international level, there were at least two documents that could have served as the basis for a biocultural protocol. Yet the experts who launched these initiatives did not manage to make the issue a priority for the General Congress because the discussions were concerned with debates about another UN mechanism, namely the programme for Reducing Emissions from Deforestation and Forest Degradation (REDD+), which is at the intersection of climate and forest issues. At first, the negotiations of Indigenous peoples with multilateral organisations and private companies were largely focused on the technological and methodological aspects of the programme, but after 2011 the sociopolitical concerns about the rights of Indigenous Peoples and forest communities, land tenure, and governance came to the fore. The implementation of free, prior, and informed consent (FPIC) as a specific right pertaining to Indigenous Peoples, and intellectual property rights over traditional knowledge of plant species also rose to the top of the agenda. At the international level, and in line with campaigns against biopiracy in the 1990s and 2000s, the REDD+ programme was denounced as a form of neoliberalisation and commodification of life. In Latin America, the positions of Indigenous organisations on the matter of participation in the various REDD+ programmes were polarised since some groups emphatically rejected it while others agreed to join them and receive funds as long as the mechanisms were

adapted to Indigenous realities (Sauls, 2020; Wallbott, 2014). In the case of Panama, negotiations between the country's leading Indigenous organisation COONAPIP, REDD+, and the UN broke down in 2013. Two years earlier, the Guna General Congress had rejected the proposal of Wildlife Works Carbon, one of the first companies in the world to develop REDD+ projects validated in the voluntary market through the Verified Carbon Standard (VCS). It is highly likely that these heated debates on the REDD+ programmes have made it difficult to include the BCPs into the agenda of the Guna Yala Comarca. The two schemes, although different and not coming from the same international arenas, were probably intermixed by the Gunadule authorities because of their origin in the UN, and their shared desire to develop the natural resources of the Gunadule territory on a commercial basis. In this situation, the BCPs were perceived as yet another attempt to attract researchers, international officials, and multinationals to the comarca territories. In sum, promotion of the BCPs has been affected by unfavourable international, national, and local contexts in a situation marked by suspicion towards REDD+ mechanisms.

After these failed attempts in the first half of the 2010s, the issue of whether to include the BCPs in the agenda resurfaced on other occasions in accordance with developments in the international, national, and local arenas. In 2018, the Koskun Kalu Research Institute (IIKK) reappeared, now re-established as the Institute of Cultural Heritage of the Guna people, which could be seen as the technical arm of the General Congress of Guna Culture. From the outset, it has drawn attention to the need to protect the ancestral and "traditional" knowledge of the Gunadule people, especially concerning medicinal plants and all they know about them, to which end it has drawn up a "community biocultural protocol for researchers". This guide or protocol, now completed, has been discussed internally among the Gunadule authorities and the *inadulegan*, but it has not been made public. In 2019, with funding for the UNDP-GEF Global ABS Project, Nelson de León Kantule, a member of the NGO Gunas United for Napguana, compiled the internal laws and regulations related with the ABS (access and benefit-sharing) project and traditional knowledge in the Guna Yala Comarca. This document has not been published either, but it is available for internal consultation through the section of the Ministry of the Environment in charge of ensuring compliance with the provisions of Executive Decree 19 of 26 of March 2019, which regulates access to and control of the use of genetic and biological resources and traditional knowledge. In 2019, too, during our first visit, we were informed of suspicions about a group of Japanese who, it seemed, had taken plant material, in this case cocoa, from Gunadule territory. Since cocoa is a plant used in several Gunadule ritual practices, the visit of the Japanese researchers is viewed as being problematic and, in fact, as a potential case of biopiracy.

This renewed interest was affected by the situation brought about by COVID-19 at the beginning of the 2020s, and the need to establish a Biosecurity Protocol because of the rapid spread of the pandemic. To a large extent, the global health crisis halted the activity of the two Gunadule congresses and their experts for almost two years. However, the issue was gradually re-emerging at the time of our second visit. It would seem that political conditions have changed since the early 2010s as the Congress is now less suspicious of the UN mechanisms of environmental protection. Hence, at the end of 2021, the Guna Yala General Congress, in an ordinary assembly held in the Goedub community, changed its mind about REDD+. It repealed a 2013 resolution that not only rejected the REDD+ pilot project, but also prohibited any Gunadule organisation, governmental or otherwise, from holding events, conferences, or workshops on the matter. The plenary session of the assembly decided to give a new chance to policies for reducing emissions deriving from deforestation and degradation of forests and thus authorised its specialist organs (IIDKY and IPCPG) to draw up

a protocol for the implementation of projects of mitigation, adaptation, and resilience in accordance with the regulations of the Guna Yala Comarca. As happened in the early 2010s, when reluctance to move forward with a protocol on biocultural matters seemed to be linked to qualms over another UN forest and climate mechanism, it would seem that implementation of a BCP is related with the dynamics of acceptance of projects associated with REDD+. Accordingly, at its last meeting, from 16 to 18 May 2022 in the Aglidub community, representatives from the three sections of the Association of *Inadulegan* who were present asked the head of the IPCPG to finalise the details so that the “community biocultural protocol for researchers” would be completed and ready for approval at the next cultural congress.

To summarise the biocultural agenda of the two Gunadule congresses so far (July 2022), at least four protocols are being discussed in an ongoing dialogue between the Gunadule experts and the members of both congresses. One is concerned with biosecurity and covers questions of health and rules in the face of epidemics and pandemics in addition to COVID-19 with the aim of combining allopathic and Gunadule medicines. A second protocol considers issues of conservation with the extension of the Narganá Wilderness Area into the marine zone, thus reviving the idea of protected Indigenous zones. A third protocol deals with questions pertaining to carbon capture and sequestration in relation with devices like REDD+. Finally, the fourth protocol focuses on issues addressed in the BCPs (research and access to genetic resources and traditional knowledge).

Discussion and conclusions:

We have observed that the production of a BCP for the Guna Yala Comarca is part of a long history of negotiation between the Gunadule people and the scientific community. However, it should also be analysed in the light of their particular relationship of biological and cultural diversity, as well as their links with UN institutions and their mechanisms.

This political history testifies to a thorough collective reflection on the defence of Gunadule territory and culture, a process that entails the drafting of more or less formal regulations whose application is guaranteed by the political structure of the congresses and the technical expertise, both legal and scientific, of a group of Gunadule advisors. With these elements in mind, it's now time to answer the three questions we set out to answer in this study.

First, why the Gunadule people have not yet wanted to adopt this mechanism? A simple answer would be: "because the Guna Congress does not consider this issue a priority and this device indispensable." The key role of the congresses and respect for their authority is an especially salient point in this case study if it is compared with other cases of producing BCP's in a much more vertical way in Panama or other places where the existence of a clearly identifiable central authority of almost unanimously recognised legitimacy is not so common. The Gunadule are people for whom regulation has a special centrality and Guna Yala is a territory organised around general, regional, and local congresses, so the production of a BCP outside this framework is almost inconceivable. While some people have considered producing a protocol at the level of a single local community, the majority recognise that a BCP cannot be truly legitimate unless it is first endorsed by the congresses at the level of the comarca. For the Gunadule, the community refers to the local level of the islands but also to the regional level of the whole comarca. As we have shown in our section on the establishment of the BCP agenda, approval of such a norm would not be possible without the approval of the Congress. Compared to most of the other BCPs, which have been produced at the

level of a single community or village, the centrality of the Congress is also visible in the scale of the BCP, which would apply to the whole comarca of some 51 communities—most of them on islands—and approximately 30,000 inhabitants. It is clear, then, that the Gunadule congresses are concerned about biocultural issues that go beyond what is strictly understood as a BCP, that its regulatory activity in the area is intense, and that this process of producing regulations is the result of an effort to translate the various mechanisms of environmental governance (including REDD) into the terms of Gunadule culture. Another peculiarity of the debates around the Gunadule BCP is that they are concerned with non-agricultural biodiversity and traditional knowledge related with medicine, with very little attention to agrobiodiversity and seeds. By contrast, other BCPs also seek to participate in another international framework (the International Treaty on Plant Genetic Resources for Food and Agriculture [ITPGRFA]) which is concerned with issues of seed conservation.

The Guna Yala Comarca does not yet have a BCP formally approved by the Congress but it has shown that the territory has sufficient regulations on questions that are essentially covered by the BCPs. In these circumstances, it is debatable whether a BCP is really necessary in Guna Yala although it could constitute an additional guarantee of the defence of the resources and knowledge of the Gunadule territory. In the view of Marcial Arias, one of the Gunadule international experts, the possibility that the Indigenous communities could produce and implement a BCP depends mainly on their degree of organisation and ability to enforce the law. Depending on the degree of organisation, BCPs can be both Trojan horses for extractivist bioprospecting projects and an effective means of defence.

“The Nagoya Protocol is a little dangerous because it opens the door to research. We must distinguish between strong Indigenous peoples like us, the Gunadule, who stopped the Nike people without any help from the government, and other Indigenous Peoples who are much weaker and depend on their relationship with the state” (22 May 2019). This quote makes it clear that a BCP in Guna Yala would be a new instrument confirming the authority of the Gunadule people over their resources, knowledge, and territories.

The second question was: “through what process does a mechanism of environmental governance conceived at the international level come to reach the local level of Gunadule territories?”

We have seen that, through dialogue with scientists, but also thanks to their own technical expertise, the Guna have been pioneers in setting up local systems that combine the conservation of biodiversity and cultural heritage. We have even suggested that they have played a central role in promoting the notion of bioculturality at international level. On this last point, it is interesting to note that Indigenous groups which are active at the international level give much less support to the category of biocultural rights, which they perceive as a potential competitor for the established sphere of Indigenous rights. These semantic-diplomatic games in the international arena around the notion of bioculturalism demonstrate that this domain is governed by its own logic and sets of interests that do not always coincide with more local standpoints and interests. While the international, national, and local levels are thus linked in the circulation and institutionalization of the idea of bioculturality, each level retains its own temporality and political logic. In concrete terms, while the Guna experts circulating in the international arena have played a definite role in setting the agenda for a scheme like the BCP's, they are clearly not in a position to impose this agenda on the two Congresses that have decision-making power at regional level. More generally, while the

intermediation of Guna technicians at various levels (international, national) remains a central element of the Guna world, it is "the Old Ones" (the Congresses) who make the final decisions.

Beyond the particular case presented here, it should be asked what the BCPs can tell us about the more general process of "institutionalisation" of biocultural diversity. They can be understood as an expression of legitimisation or legalisation of the notion of bioculturalism at the local level, after this has already occurred at the international level. The idea of bioculturalism somehow becomes an object of local regulation whose main objective seems to be much more to reinforce territorial autonomy than to encourage bioprospecting projects. For the Gunadule, protection of traditional knowledge must go hand in hand with recognition of their territories and institutions. Absence of legal recognition of Indigenous territories erodes and extinguishes traditional knowledge.

Rather than being a legal revolution through new rights that are able to take Indigenous viewpoints into account, the BCPs seem to be another instrument of eco-government in Indigenous territory (Agrawal, 2005; Ulloa, 2004), with potential in terms of territorial autonomy and conservation but also with risks of intrusion by outside actors. Together with other concepts linked with bioculturalism (heritage, rights, knowledge, territories, etcetera) and also with additional instruments like funding for the strengthening of Indigenous territories in the context of climate change,¹⁴ and the various regulations on the new "rights of nature,"¹⁵ the BCPs constitute another mechanism at the interface between defence of biodiversity and defence of cultural diversity. Externally, but also internally, the biocultural argument is becoming one of the key elements of Indigenous discourse in the struggle for territorial autonomy, thus reinforcing still more their image as guardians of biodiversity. Although we have seen that there can be discrepancies and other more or less productive misunderstandings, between the international and local levels, and between the actors, the fact remains that recognition of the synergy between protection of nature and defence of Indigenous actors and their territory is gaining ground. From a discourse that was still marginal at the end of the 1990s it has become quite commonplace thirty years later.

References

Agrawal, A. (2005). *Environmentality: Technologies of Government and the Making of Subjects*. Duke University Press. <https://doi.org/10.2307/j.ctv11sn32g>

Albert, B. (1993). L'Or cannibale et la chute du ciel Une critique chamanique de l'économie politique de la nature (Yanomami, Brésil). *L'Homme*, 33(126), 349-378. <https://doi.org/10.3406/hom.1993.369644>

¹⁴ At the UN Climate Change Conference in Glasgow (COP 26), the discourse affirming that guaranteeing Indigenous rights over their territories is a privileged instrument for forest conservation and hence in the struggle against climate change was very present, as demonstrated by the pledges of funding to an amount of 1.7 billion dollars by the US, British, German, and Dutch governments as well as other large private funders.

¹⁵ The new legislation on the rights of nature seems to represent a new form of regulation in which rights are granted to natural entities like forests and rivers, on most occasions with the involvement of Indigenous actors and representations. For example, the famous Colombian case on the rights of the Atrato River has, in fact, led to a transfer of responsibility to local populations and, in particular, Embera (Revet, 2021), while the very recent Panamanian Law 287 of 24 February 2022 explicitly mentions Indigenous cosmovisions in support of these new rights.

Aubertin, C., Nivart, A., & Muséum national d'histoire naturelle (France) (Éds.). (2021). *La nature en partage: Autour du protocole de Nagoya*. IRD éditions, Institut de recherche pour le développement. <https://doi.org/10.4000/books.irdeditions.40350>

Carneiro da Cunha, M. (2009). *“Culture” and culture: Traditional knowledge and intellectual rights*. Prickly Paradigm Press.

Carrier, J. G., & West, P. (Éds.). (2013). *Virtualism, governance and practice : Vision and execution in environmental conservation*. Berghahn Books.

Castillo, B. (2018). *La comarca de Tulenega de 1871 como antecedente en la construcción de la autonomía Guna en Panamá*. [Master's thesis., Universidad de Panamá].

Chapin, M. (1983). *Curing among the San Blas Kuna of Panama* [Doctoral dissertation University of Arizona].

Chen, C. W., & Gilmore, M. (2015). Biocultural rights: A new paradigm for protecting natural and cultural resources of Indigenous communities. *International Indigenous Policy Journal*, 6(3). <https://doi.org/10.18584/iipj.2015.6.3.3>

Cobb, R. W., & Ross, M. H. (Eds.). (1997). *Cultural strategies of agenda denial: Avoidance, attack, and redefinition*. University Press of Kansas.

Conklin, B. A., & Graham, L. R. (1995). The shifting middle ground: Amazonian Indians and eco-politics. *American Anthropologist*, 97(4), 695-710. <https://doi.org/10.1525/aa.1995.97.4.02a00120>

Descola, P. (2005). *Par-delà nature et culture*. Gallimard.

Faivre, A. (2012). *L'ésotérisme*. Presses Universitaires de France. <https://doi.org/10.3917/puf.faivr.2012.01>

Filoche, G., & Foyer, J. (2011). La bioprospection au Brésil et au Mexique, un eldorado?. Entre instabilité des pratiques et permanence des représentations. *Revue d'anthropologie des connaissances*, 5, 2(2), 234-259. <https://doi.org/10.3917/rac.013.0234>

Foyer, J. (2008). *Diversité naturelle et culturelle face aux défis des biotechnologies: Enjeux et controverses au Mexique*. [Doctoral dissertation, Université de la Sorbonne nouvelle - Paris III].

Foyer, J. (2011). *Les multiples politiques de la diversité bio-culturelle: Entre modernités alternatives et rhétorique instrumentale*. In C. Gros & D. Dumoulin Kervran (Eds.), *Le multiculturalisme au concret* (pp. 373-389). Presse de la Sorbonne Nouvelle. <https://doi.org/10.4000/books.psn.696>

Foyer, J., & Dumoulin Kervran, D. (2017). *Objectifying traditional knowledge, re-enchanting the struggle against climate change*. In A. Stefan, F. Jean, & M. Edouard (Eds.), *Globalising the Climate. COP21 and the climatisation of global debates* (pp. 1-20). Routledge. <https://doi.org/10.4324/9781315560595-9>

Foyer, J., & Ellison, N. (2018). Conserver les maïs mexicains. La diversité bio-culturelle et ses ambiguïtés. *Études rurales*, 202(2), 120-139. <https://doi.org/10.4000/etudesrurales.15306>

Girard, F., Hall, I., & Frison, C. (Eds.). (2022). *Biocultural rights, Indigenous peoples and local communities: Protecting culture and the environment*. Routledge. <https://doi.org/10.4324/9781003172642>

Girard, F., & Rakotondrabe, M. (2022). *Biocultural community protocols and boundary work in Madagascar*. In F. Girard, I. Hall, & C. Frison, *Biocultural rights, Indigenous Peoples and local communities* (pp. 241-267). Routledge. <https://doi.org/10.4324/9781003172642-12>

Hayden, C. (2003). *When nature goes public: The making and unmaking of bioprospecting in Mexico*. Princeton University Press. <https://doi.org/10.1515/9780691216362>

Herrera, H., Limnio, I., Alvarado, A., & Valiente, A. (2006). *Conocimiento Kuna, biodiversidad y propiedad intelectual*. Congreso General Kuna, Fundación Dobbo Yala.

Howe, J. (2011). *Chiefs, scribes, and ethnographers: Kuna culture from inside and out*. University of Texas Press.

Howe, J. (2013, octobre 27). Antropología como autodefensa. *La Prensa*. https://www.prensa.com/Antropologia-autodefensa_0_3785621439.html

Martínez Mauri, M. (2008). Figuras intermedias, identidades ambivalentes. Alteridad, mezclas y mediadores en Kuna Yala (Panamá). In V. Stolcke, & A. Coello, *Identidades ambivalentes en América Latina* (siglos XVI-XXI), Editorial Bellaterra, Bellaterra, pp. 229-245.

Martinez Mauri, M. (2009). Ruben Pérez Kantule : La diplomatie autochtone avant les ONG à Kuna Yala (Panama). In B. Bosa & E. Wittersheim (Eds.), *Luttes autochtones, trajectoires postcoloniales* (pp. 243-265). Karthala. https://www.researchgate.net/publication/262004833_Ruben_Perez_Kantule_la_diplomatie_autochtone_avant_les_ONG_a_Kuna_Yala_Panama

Mosse, D. (2005). *Cultivating development: An ethnography of aid policy and practice*. Pluto Press. <https://doi.org/10.2307/j.ctt18fs4st>

Nordenskiöld, E., & Pérez Kantule, R. (1938). *An historical and ethnological survey of the Cuna Indians*. AMS Press.

Posey, D. (Ed.). (1999). *Cultural and spiritual values of biodiversity*. Intermediate Technology. <https://doi.org/10.3362/9781780445434>

Raby, M. (2017). *American tropics: The Caribbean roots of biodiversity science*. The University of North Carolina Press. <https://doi.org/10.5149/northcarolina/9781469635606.001.0001>

Revet, S. (2021). Les droits du fleuve. Polyphonie autour du fleuve Atrato en Colombie et de ses Gardiens. Sociétés Politiques Comparées - Revue européenne d'analyse des sociétés politiques, 52. <https://doi.org/10.4000/terrain.22695>

de Sardan, J.P.O. (2005). *Anthropology and development: Understanding contemporary social change*. Zed Books.

Sauls, L. A. (2020). Becoming fundable? Converting climate justice claims into climate finance in Mesoamerica's forests. *Climatic Change*, 161(2), 307-325.
<https://doi.org/10.1007/s10584-019-02624-1>

Teran, M. Y. (2016). The Nagoya Protocol and Indigenous Peoples. *The International Indigenous Policy Journal*, 7(2), Art. 2. <https://doi.org/10.18584/iipj.2016.7.2.6>

Ulloa, A. (2004). *La construcción del nativo ecológico: Complejidades, paradojas y dilemas de la relación entre los movimientos indígenas y el ambientalismo en Colombia*. Instituto Colombiano de Antropología e Historia (ICANH), Colciencias.

Waga, A. (2000). *En defensa de la vida y su armonía*. Congreso General Guna. Indiana University

Wallbott, L. (2014). Indigenous Peoples in UN REDD+ negotiations: “Importing power” and lobbying for rights through discursive interplay management. *Ecology and Society*, 19(1).
<https://doi.org/10.5751/ES-06111-190121>