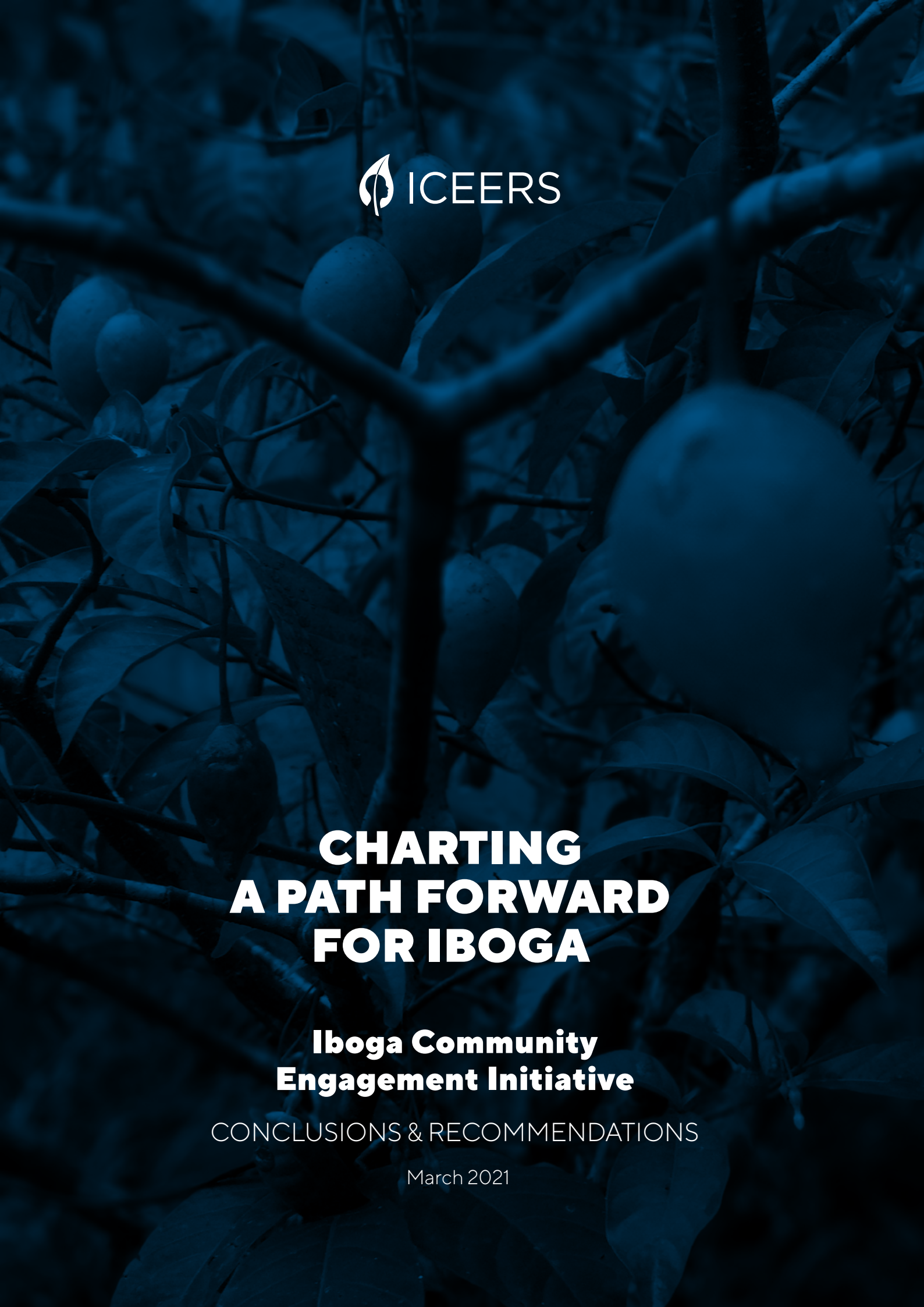

ICEERS

CHARTING A PATH FORWARD FOR IBOGA

Iboga Community Engagement Initiative

CONCLUSIONS & RECOMMENDATIONS

March 2021

ICEERS

A project by
International Center for Ethnobotanical Education, Research and Service (ICEERS)

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A: Community, Reciprocity, and Global Healing

Conclusions

- The international iboga and ibogaine communities would benefit from enhanced networking, communication, and collaboration in order to increase sustainability efforts and foster greater opportunities for human and planetary healing.
- The current global iboga ecosystem is out of balance, and iboga's connection to its roots in Central Africa needs to be restored.

Recommendations

- Strengthen international networks to create opportunities for cross-cultural and cross-sectoral networking, communication, and collaboration.
- Establish bottom-up self-regulatory processes that foster alignment and collective responsibility among the international treatment clinics and ceremony facilitators to inform regulatory processes regionally and internationally.
- Encourage collaboration between research groups, universities, businesses, and non-governmental organizations that are engaged in generating new evidence around iboga and ibogaine.
- Build common narratives and advocacy efforts to promote human rights in relation to practices with iboga and ibogaine.
- Place the principle of reciprocity at the heart of all processes, emphasizing respect for the plant, its origins, and its traditional stewards.

B: Bio-cultural Regeneration and Sustainability

Conclusions

- In Central Africa, and especially in Gabon, wild *Tabernanthe iboga* is being over-harvested, which is impacting sustainability.
- Sustainable *Tabernanthe iboga* cultivation in Gabon, as well as in other African and tropical countries, can provide benefits for local communities and ecosystems.
- How the Government of Gabon proceeds in the short term with regard to the regulation of the cultivation and effective export of iboga will have an impact on the future of iboga locally and internationally in the long term.
- Producing ibogaine from sources alternative to *Tabernanthe iboga* will reduce pressure on wild plant populations in Gabon and Central Africa.

Recommendations

- Encourage international communities to work together to raise awareness about the impact of the rising demand for *Tabernanthe iboga* on bio-cultural sustainability.
- Engage in concrete efforts to assess the actual current number of iboga plantations across Africa and other tropical countries with the aim of increasing the number of plantations engaging in agroforestry and regenerative agriculture techniques.
- Create collaborative, ethical funding programs that prioritize the development of sustainable iboga plantations and bio-cultural conservation.
- Research and invest in alternative sources to *Tabernanthe iboga* (such as Voacanga africana) for the extraction of ibogaine and other alkaloids and compounds.
- Continue advocating for regulatory frameworks in Gabon that support sustainable cultivation and exportation of iboga and prioritize community benefits.

C: Recognition and Evolution of Traditional and New Healing Approaches

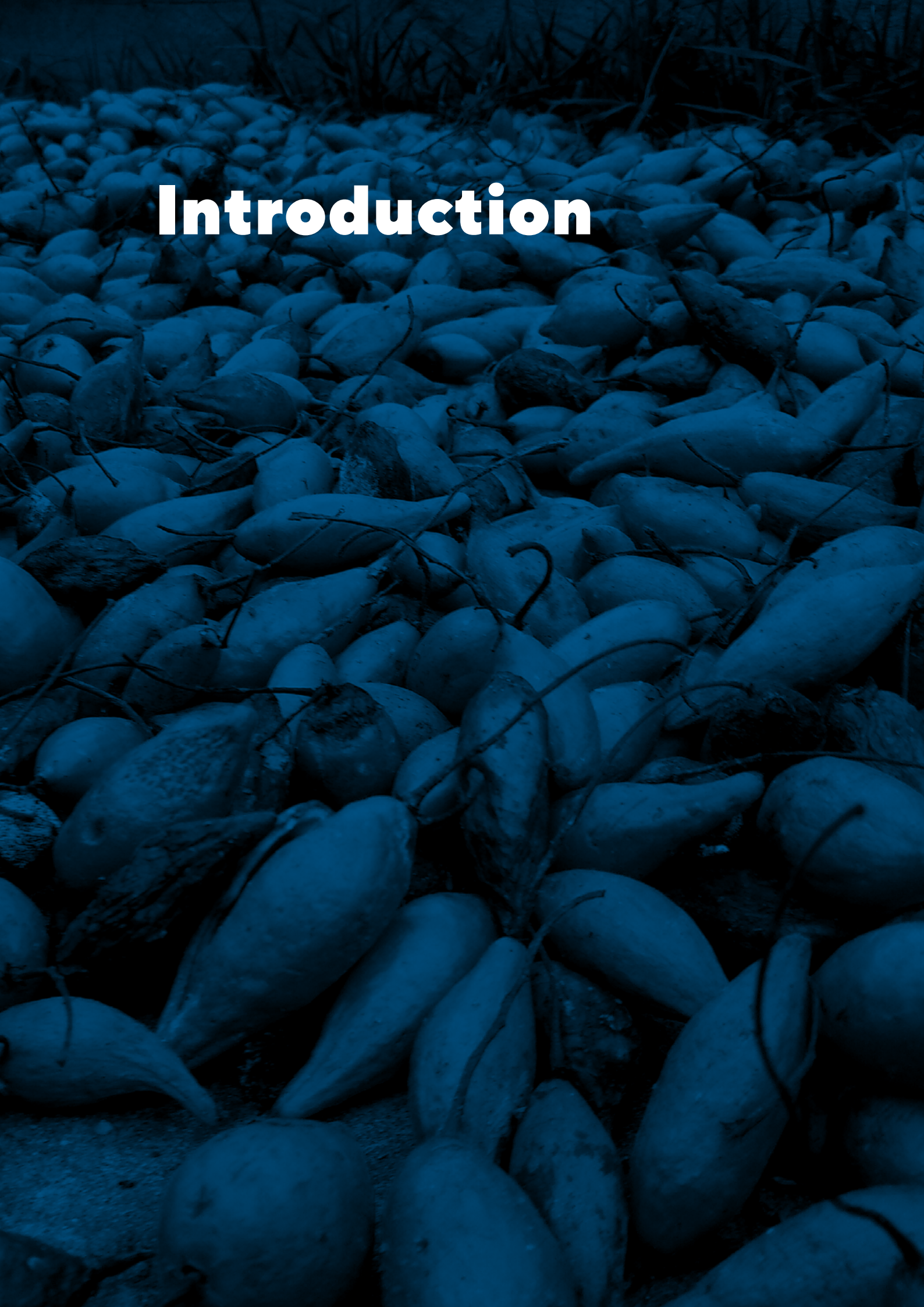
Conclusions

- Availability of pharmaceutical grade ibogaine for clinical use could lead to improved access to therapies, yet this opportunity comes with ethical, accessibility, and sustainability issues that need to be considered.
- Clinical therapies with iboga or ibogaine for problematic drug use are highly valued for their effectiveness and holistic care models; however, standards of care vary widely and risky practices must be addressed.
- Within Gabon, iboga is part of a complex bio-cultural traditional medicine system that presents opportunities for improving health care for local communities, and this knowledge could be applied internationally to improve mental health and addiction care systems.

Recommendations

- Develop and implement standards of practice and care within the international clinics offering iboga and ibogaine therapy to improve quality and safety of services.
- Official recognition of traditional, complementary, and alternative medicine (TCAM) at the local and international levels would contribute to the development of applications for the improvement of mental health and addiction care worldwide.
- To fully understand the therapeutic potential of iboga and ibogaine, research needs to bridge science and the wisdom of traditional knowledge.

Introduction



Introduction

We are living in times of great change. In the Spring of 2020, how communities engage together shifted significantly because of the pandemic, which also brought to light inequalities and vulnerabilities and made evident the connection between all humans on earth.

This has always been the message that plant teachers, such as iboga, have to share—that humans are interdependent with each other and the natural world. Embedded in this teaching is the understanding that illnesses, such as addiction and depression, and ecological crises are symptoms of a greater imbalance. They are signs that we have forgotten who we are, forgotten *interbeing*, and lost our way. Iboga, and other master plants (such as ayahuasca and peyote) and mushrooms, offer humans the incredible gift of holding our hands as we walk this path home. Traditional peoples, such as the Pygmies and the Bantu in Gabon and Central Africa, have honored, developed, and maintained the teachings and practices that serve as our guides on this path, teaching newcomers how to respect the plants, practices, and teachings.

When ICEERS decided to begin this initiative, we were responding to a community request. Many people in the international community dedicated to iboga and ibogaine felt that the diverse threads that represent the diversity of people with relationships with this sacred plant needed to be knit together. It was time to take a step back, to tap into a broader perspective, and to weave together diverse points of view to inform the way forward. As iboga practices have become increasingly globalized, there have been many opportunities for learning and healing, and interest has grown significantly in what this plant has to offer. Those we spoke to in Gabon reminded us that iboga is a gift for all of humanity. And, as with all gifts, what is given must be received with grace and be paid forward.

Unfortunately, this sacred cycle of reciprocity is out of balance. At the level of ecology, the plant *Tabernanthe iboga* has not been treated with respect. In the wild of Central Africa, iboga is being over-harvested and not replanted, poached, and sold on the black market where benefits do not come back to local communities. The teachings are being shared, yet are often stripped of their connection to Bwiti and their origins in Africa. On the international level, iboga and ibogaine have become part of services offered by clinics to help people struggling with addiction. These treatments have helped many. Yet there are also cases of malpractice, profit-driven services, disrespect of tradition, and even deaths.

We believe that a collective vision can serve as a guiding light, supporting community leaders, visionaries, practitioners, and policymakers to navigate through unknown terrain and to remain focused on a future even though the exact path is not yet illuminated. The purpose of the iboga and ibogaine Community Engagement Initiative was to engage with the global community to crowdsource opinions and ideas about what an ideal future looks like for iboga and ibogaine in global society. We conducted the initiative in two phases (see details below) and published reports following each phase, sharing visions from the communities we engaged with and findings that provided insights into the current state of iboga and ibogaine practices, as well as opportunities and challenges. In these reports we did not offer conclusions or recommendations. We waited, let what we heard settle, and came back to the findings with fresh eyes from which to offer consolidated perspectives and invitations for ways in which collectively we can act together to create a positive future for iboga from the perspective of bio-cultural sustainability grounded in reciprocity.

Brief Context: From Africa to the World

Iboga is an endemic plant from the forest of the Congo Basin that has been honored by several Indigenous peoples in the region for generations. The Pygmy peoples of Central Africa were the first to recognize the healing and spiritual properties of iboga; they safeguarded iboga as a gift that is now being shared with the rest of humanity. According to oral histories, the Pygmies shared the knowledge of iboga with the Bantu peoples, who then joined and further developed the Bwiti spiritual tradition that is still alive and healthy today.

The first mention of iboga in Europe appeared in an English text written in 1819, and the first plant specimens arrived in France in 1864. At the beginning of the 20th century, in 1901, methods were developed to extract its most powerful alkaloid, ibogaine. Initially ibogaine was introduced in France to treat fatigue and depression, and it was not until 1962 in the US that its powerful effects in treating addiction from substances, such as opioids, were discovered. It was at this point in history that the next phase of the story began as word about this cultural treasure spread around the world.

Ceremony and treatment with iboga and ibogaine have shown to be incredibly helpful to people who are addicted to opioids and other forms of addiction. This property is unique as no other plant or medicine is currently known to be so effective in helping people with addictions. In a time where this illness is at a high in many countries, this application has garnered attention in the West as solutions are sought for addressing the epidemics of addiction and mental illness. Unfortunately, in 1970, however, ibogaine was listed in the Schedule I under the Controlled Substances Act, effectively blocking its use at the international level and therefore condemning it to the underground. However, in spite of this, by the end of the 20th century global awareness had grown, and along with it demand for the plant and its alkaloid.

This situation has led to the emergence of various challenges, two of which stand out. On the one hand, addiction treatment clinics have opened in several countries, joining a decades-old medical subculture offering services outside legal and official clinical frameworks and regulations. Building on traditional knowledge, in some cases, or completely innovating, these clinics have designed varying protocols and provided relief to thousands of people around the world. However, these clinics are not regulated, nor are their practices or professionals, and there are no formal programs (outside of traditional initiations of medicine people in traditional practices in Central Africa) that train people to administer this powerful medicine. While there are many dedicated individuals offering these services, people in need of help often take great risks in their search for healing—risks that could be avoided with adequate regulatory frameworks and standards. Unfortunately, there have been avoidable deaths, and the high cost of treatment has limited access for too many.

The growing demand for detox and addiction treatment has been joined more recently by rising curiosity shown by another type of community. These are different communities scattered around the world that use various psychoactive plants and mushrooms in ceremonial settings because of their psychotherapeutic benefits and their capacity for spiritual connection. Several of these communities have been introducing this plant into their psycho-spiritual ceremonies, thus adding to the growing international demand for iboga.

As a result of this global growth in demand for iboga and ibogaine, the pressure on the plant within the wild has increased alarmingly. Iboga has never been cultivated until now, as the Bwiti practitioners in Central Africa, and especially in Gabon, have always gone to collect it in the forest, harvesting it in sustainable ways. The lack of legal import and export frameworks has led to the creation of a black market, criminal enterprises trading in iboga (among other products such as ivory). Although the situation is not yet critical, iboga in the wild is at a tipping point, which has also impacted the Bwiti spirituality of the Pygmy and Bantu peoples and their access to iboga.

The Engagement Initiative

As noted above, ICEERS stepped forward to conduct this initiative in response to a growing need for a scoping to take place to outline the various aspects of what is happening with iboga and ibogaine practices and the "market" for these substances within a global supply chain. In 2018, ICEERS began this process, designing two phases of an initiative to connect with the international community and key communities in Gabon to harvest perspectives and ideas about what an "ideal future for iboga and ibogaine" looks like. The entire initiative was based on the premise that from our diverse standpoints, we all hold pieces of the picture. The methodologies employed for each phase were as follows:

- **Phase 1 (2019):** Visions of the International Community on Iboga/ine

  The objective of this initial phase was "to engage with the global iboga and ibogaine community, working together to enable positive change by identifying the community's strengths and assets and identifying a shared vision for the future." To this end, we used online engagement tools, such as surveys and videoconferencing, and combined elements of qualitative methodology (in-depth interviews, focus groups, and dialogue sessions) and quantitative methodology (a global survey in four languages). In total, 55 people from 12 countries were interviewed, and another 228 people from 34 countries were surveyed. This phase was carried out with the invaluable collaboration of a Steering Committee (see Acknowledgments below for a list of members), with whom actions were co-designed and progress and results were constantly discussed.
- **Phase 2 (2020):** The Future of Iboga: Perspectives from Central Africa

  The objective of the second phase was "to create a powerful opportunity for African perspectives and voices to influence how iboga and ibogaine are globalizing, bridging perspectives, and strengthening intercultural connections between local, African stakeholders, and the global iboga and ibogaine community." To accomplish this, we conducted a several-week field visit to Gabon. During this time, we were able to interview 56 people in depth, visit 12 Bwiti communities, and get to know different iboga plantations with their distinct management models. This phase was made possible with the collaboration of Blessings Of The Forest (BOTF) and Ebando, who accompanied us and provided invaluable contacts, context, and shared analysis. In this phase we also collaborated with the renowned filmmaker Lucy Walker and her professional team, who were able to capture video footage (visit our website to view clips).

How to Approach This Report

The reports from Phase 1 and Phase 2 did not include conclusions and recommendations. We made this decision upon realizing that although each phase offered independent results, the final conclusions needed to be woven together once the perspectives of all participants had been gathered, synthesized, and were thoroughly considered. If you are interested in the methodologies employed and our detailed findings, or to read direct quotes from informants, please refer to the reports from each phase.

We've grouped the conclusions and recommendations into three thematic areas:

- **Community, reciprocity, and global healing**
- **Bio-cultural regeneration and sustainability**
- **Recognition and evolution of traditional and new healing approaches**

We encourage everyone with an interest in iboga and ibogaine to engage with this report—discussing the conclusions and bringing your experience and analysis to the table. We see these as the starting point of a dialogue that we hope will engage with the ideas found within these pages. Change is made possible through relationships—strong relationships and

community ties are essential for overcoming all obstacles. There are many strengths that we share collectively, and it is our hope that these can be leveraged to care for the future of this cultural treasure.

The "recommendations" here are not directive—rather, we have made an effort to word them as invitations. We invite the reader to consider your role within this global ecosystem, and we hope the information in this report provides you with the information you need to understand the impacts of your actions. Our hope is that the diverse communities of interest can begin to work together from a foundation of sustainability and reciprocity. Our shared vision is for the community to come together and commit to taking an ecosystems-based approach to creating a better future, an approach that recognizes the interactions between multiple elements. An ecosystems-based approach begins with the plant itself, considering its future and all that it needs to continue to grow in the wild, as well as the traditional peoples and cultures that have safeguarded and stewarded rituals, knowledge, and ceremonial practices for generations. It is also an approach that considers the needs of the earth's inhabitants, who are seeking spiritual growth and healing from addiction and who long to feel connected.

Acknowledgments

This initiative would not have been possible without the generous contributions of many people who shared their time, energy, and visions, and who have our heartfelt thanks.

For their contributions to Phase 1, we would like to acknowledge and thank the members of the Steering Committee: Benjamin De Loenen, Doug Greene (deceased), Tom Kingsley Brown, Patrick Kroupa, Jeremy Weate, Hattie Wells, and Sarita Wilkins. We would also like to thank Kenneth Alper, José Carlos Bouso, David Emer, Christine Fitzsimmons, Yann Guignon, Uwe Maas, Dennis McKenna, Tanea Paterson, Genís Ona, Natalia Rebollo, Constanza Sánchez, Süster Strubelt, Eric Swenson, Clare Wilkins, Àlex Verdaguer, and Holly Weese (deceased).

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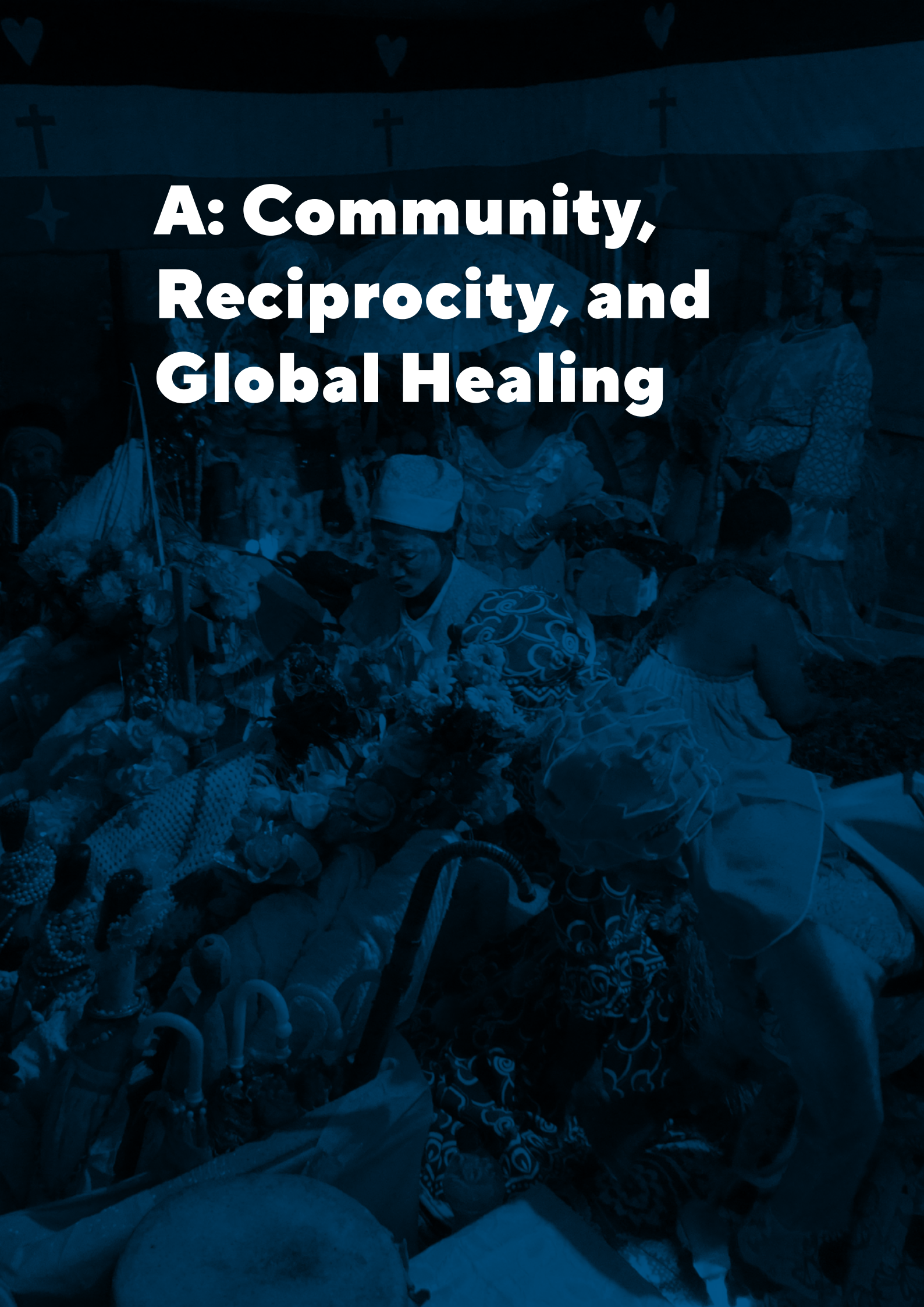
We would also like to extend our thanks to Dr. Bronner's and the RiverStyx Foundation for their financial support.

In addition to these collaborators, our most sincere thanks go to the hundreds of people and dozens of communities in Gabon and all over the world that shared their experiences, ideas, and dreams with us within the framework of this project. We acknowledge here the great generosity of the iboga and ibogaine communities and hope that this work does justice to the time and knowledge they have shared.

On est ensemble,

Ricard Faura and Andrea Langlois

A: Community, Reciprocity, and Global Healing



A: Community, Reciprocity, and Global Healing

Conclusions

1. The international iboga and ibogaine communities would benefit from enhanced networking, communication, and collaboration in order to increase sustainability efforts and foster greater opportunities for human and planetary healing.

Although hidden from view, there is an international network linking all those involved in iboga and ibogaine. Hubs within this network are connected to each other through traditions, supply chains, relationships, policy, and practices. The network is made up of individuals, groups and organizations, and botanical, ecosystem, spiritual, and molecular actors.

Human actors are the people, groups, and communities that are related in one way or another to iboga or ibogaine. For clarity, they can be grouped into several categories, always keeping in mind that within each grouping there is significant diversity:

- **Bwiti communities** and all the people who use iboga in Gabon and other Central African countries
- **International psycho-spiritual communities**[1]
- **Iboga and ibogaine medical subculture.** Individuals, organizations, entrepreneurs, and investors involved in the iboga and ibogaine medical subculture (medical professionals, patients, therapeutic assistants of various backgrounds, integration service providers, clinic owners, and investors) who generally operate in a legal environment where their activities are not fully regulated
- **Authorized healthcare professionals.** Doctors and other health professionals who work in contexts where medical use of iboga is permitted, either as a prescription pharmaceutical, through "compassionate use," or extended access (as is currently the case in New Zealand, South Africa, and Brazil)
- **Supply chain actors** (harvesters, cultivators, distributors, producers, and investors)
- **Decision-makers, policymakers, and non-profit organizations** (local, regional, state-level, and international)
- **Researchers** (university-based, pharmaceutical companies, non-profit organizations, etc.)

Non-human actors are the botanical, ecosystem, spiritual, and molecular actors who are part of the natural world. These include:

- **Iboga shrubs**
- **Ibogaine** and the other alkaloids present that can be extracted from *Tabernanthe iboga*, semi-synthesized from *Voacanga africana*, or fully synthesized in the laboratory
- **Forests** and the bio-cultural and social-ecological systems of Gabon and Central Africa

Mapping out these actors and making visible and working with these networks, both formal and informal, can hold the key to creating systems-level change. Robust network connections and flow can be fundamental in creating lasting, equitable social change and activating resilience and social justice. There is significant opportunity in connecting these stakeholders and actors together to participate jointly in local and international regulatory, policy, and practices spaces, informing decisions that have an impact on the whole.

Networks can be leveraged to create narrative change and equitable access to and determination of resource flow and can support self-organization and empowerment through

more distributed decision-making in service of social justice, sustainability (of the network and of ecosystems), and prosperity.

2. The current global iboga ecosystem is out of balance, and iboga's connection to its roots in Central Africa needs to be restored.

As noted above, the first documentation of a specimen of iboga leaving Africa was in 1864. This was the beginning of a long process of globalization and the beginning of iboga's disconnection from its roots.

In 1901, a method for extracting ibogaine was developed. Starting in 1939, it was sold in France as a tablet under the name of Lambarène (the name of a city in Gabon) for the treatment of fatigue and depression. The research community became interested and research was undertaken from the 1950s onwards, with a particular interest in iboga as an adjunct to psychotherapy. In 1962, its powerful effects in treating addiction from substances, such as opioids, were discovered by Howard Lotsof, who stopped using heroin after taking ibogaine. Activists dedicated time and effort over the coming years to advocate for access to iboga for people struggling with addictions, often people who were marginalized in many ways and neglected by the health care system. This advocacy continues to this day.

Then, in the late 1960s, the doors began to close to research and therapeutic applications with policy changes. In the US, sale and distribution of ibogaine was regulated in 1967, and it was listed as Schedule I under the Controlled Substances Act in 1970. In France, ibogaine was definitively banned in 2007 after an ibogaine-related death was reported. These policies slowed the globalization process and also served to stigmatize this cultural treasure by categorizing it as a "drug" and making it illegal.

This early history of "iboga out of Africa" points to a legacy of colonialism that many plants have experienced, including tobacco, cacao, and coca, among many others. Plants have travelled the world since humans began to migrate to new territories; there is nothing inherently negative about this fact of human existence. However, when plants are taken from one place and enter an economic system in another that then creates benefits for companies and individuals that grossly surpass what the original peoples were paid for their products or knowledge, an imbalance is created.

Fast forward to today, in 2021, to a time when iboga and other plant and fungi medicines have garnered attention not only from medical professionals and researchers, but also industry and venture capitalists. Iboga and ibogaine are seen as possible revenue sources rather than cultural treasures, and this has significant consequences. As outlined in our Phase 1 and 2 reports, and in this current report, the consequences of the rise in global interest in iboga and ibogaine are significant. This rise in demand is having a tremendous impact on biological and cultural sustainability for the plants and cultures that steward them and devote themselves to these practices.

The current global ecosystem for iboga is out of balance. The origins of the plant materials and the original therapeutic and spiritual knowledge of iboga are often not acknowledged, and there continues to be stigma in law and policy, which fail to see the therapeutic and spiritual characteristics of iboga. Currently, global communities (although there are exceptions) are not in right relationship with the peoples of Central Africa, such as Bwiti communities. Reciprocity with the plants and these peoples are critical for building a foundation of respect, upon which we can build structures that support healing and wellness for all.

Despite the legacies of colonialism that continue to take resources from Indigenous people and lands, with iboga there is the opportunity to do things differently.

Recommendations

1. Strengthen international networks to create opportunities for cross-cultural and cross-sectoral networking, communication, and collaboration.

For informal networks of communities, people, and services to function harmoniously and to generate benefits for all members, these networks must be actively and reciprocally connected and become aware of the power and benefits of a coordinated network. We recommend the creation of opportunities for connection, dialogue, and collaboration, based on agreed-upon principles that address power imbalances and create opportunities for building bridges. More specifically, working within a more aware and organized network would enable:[2]

- **Changing the dominant narrative of each particular group** to recreate a collective narrative that is inclusive of the specificities of all actors, facilitating their fluid interrelationship
- **Making information flow more transparent** and accessible
- **Creating more equitable access to resources**
- **Supporting self-organization** and democratic empowerment
- **Working with policymakers** to change policies and procedures and facilitate the development of fairer and more sustainable means and ends for all stakeholders in the network

Furthermore, when building and strengthening these networks and any new initiatives, it is imperative that the traditional stewards of iboga be included—namely, the Bwiti communities of Gabon—as well as considering that the natural environment is an actor and a partner in this work. Bio-cultural conservation must be considered as high priority for all activities related to iboga and ibogaine.

2. Establish bottom-up self-regulatory processes that foster alignment and collective responsibility among the international treatment clinics and ceremony facilitators to inform regulatory processes regionally and internationally.

International actors involved in working with iboga and ibogaine are interconnected, even if within their daily practice there is no direct collaboration among them. Most of these actors (e.g., treatment clinics and psycho-spiritual groups) are not formally organized. However, the experience of communities linked to other ethnobotanical plants, such as ayahuasca, shows that the iboga and ibogaine communities may also benefit from coming together in associations to set standards and articulate common interests. There are a number of successful initiatives established by similar communities that work in emerging health and well-being fields that were not or are not yet recognized within local health systems. One example is how Traditional Chinese Medicine practitioners outside of China have organized themselves into professional associations in countries such as the US, and specifically in California.[3]

We find another recent example in the Netherlands, where individuals and communities working with ayahuasca have come together to form an association, along with clinics and practitioners working legally with truffles.[4] What is common among these cases is that they began with groups coming together to discuss common concerns and best practices and to build communities of practice. Following these processes, they decided to organize under an umbrella of collective responsibility that allows them to develop ethical approaches and to address common issues, such as minimum safety standards or service quality.

Furthermore, bringing these groups together under a common umbrella allows them to generate a powerful collective voice in a global context, building relationships with local administrations as these practices will be regulated by local legislative bodies and international ones. This is why it is highly desirable that clinics and all groups working with iboga and ibogaine engage in dialogue, articulate points of alignment, and build a collective movement. By coming together and sharing experiences and knowledge, these communities could become an example of a responsible global community working with sacred plants. The international community could work together to determine how services and practices outside of Africa can be carried out safely and in reciprocity with and support communities of origin.

3. Encourage collaboration between research groups, universities, businesses, and non-governmental organizations that are engaged in generating new evidence around iboga and ibogaine.

Research and science have never advanced in isolation. Science builds on existing evidence and knowledge and thrives in contexts of mutual aid and when those involved support each other to generate more comprehensive evidence. Currently, there are multiple studies in development by academics, non-governmental organizations, pharmaceutical companies, and treatment clinics seeking to learn more about iboga, ibogaine, or their analogues. In the current context of competition and the fact that there is a profit motive among some players, sharing early or unpublished findings is not the norm.

An additional area of concern currently is that several groups are "racing" to file patents around the world related especially to production methods and specific uses of naturally occurring psychoactive alkaloids. Traditional communities have historical knowledge of these plants, fungi, and animal secretions with psychoactive properties, as well as their therapeutic properties. The possibility that these natural substances or the knowledge of their application could be patented is a very controversial topic, and there are advocacy efforts coming together in opposition.

Future approaches must move in a different direction than extractivism, instead building systems of knowledge that are collaborative and serve to share the benefits. Collaborative approaches to research are encouraged to accelerate the generation of quality evidence. This, in turn, will have a positive impact on informing policies and the regulation of iboga and ibogaine and practices (traditional and clinical). Greater cooperation will also translate into better impacts with regard to all aspects of iboga, ibogaine, and its analogues, including cultivation, production, treatments, therapies, policy, etc.

Furthermore, it is of the utmost importance that Indigenous research methods and knowledge be considered on an even playing ground. Indigenous peoples are the historical experts in the uses of iboga within the epistemological framework of Bwiti traditional medicine. These Bwiti experts know how the plant interacts with other plants and hold distinct understandings of variables not typically considered in contemporary scientific debates, particularly the single biomedical model. However, as steps are taken to create space for traditional knowledge holders within science and research, it is of critical importance that knowledge not be "extracted" from these local experts and that ownership and control over data is collected within their communities. Research initiatives need also to consider how to bring benefits back to these original stewards of iboga.

The Nagoya Protocol is an important international treaty aimed at protecting Indigenous traditional knowledge and sharing the benefits of its use. This protocol dictates that national laws in each signatory country take measures, as appropriate, to ensure that parties interested in access to traditional knowledge associated with genetic resources held by Indigenous and local communities have the prior informed consent or approval and participation of those communities, and that mutually agreed terms have been established.[5] There are also

several examples of Indigenous research methods that attend to these important issues at a national level, such as the OCAP principles in Canada, which provide frameworks for First Nations information management on their way to data sovereignty, by following the principles of ownership, control, access, and possession.[6]

4. Build common narratives and advocacy efforts to promote human rights in relation to practices with iboga and ibogaine.

Outside of Central Africa, iboga and ibogaine are not very well known to the general public nor to local, national, and international governments and bodies. Although there have been many efforts over the years in several countries (US, Canada, South Africa, New Zealand, and others) to create awareness around the potential benefit of legalizing and regulating iboga and/or ibogaine, there have not been efforts to create shared narratives. There are no common discourses regarding what iboga and ibogaine are and what they are not. Some speak of ibogaine as a "miracle cure," others say it is a "dangerous substance that kills people," while still others describe iboga as a psychoactive plant similar to others, and so on.

The common objective of seeking recognition for iboga and defending the rights of those with relationships to iboga and ibogaine is undermined by this lack of clarity, which in some cases has landed people in trouble with the law. In order to act strategically, it is advisable to bring together different global experts in advocacy to jointly build collective, evidence-based, and traditional knowledge-informed narratives to support strategic efforts. Shared meaning-making and use of common narratives, particularly around human and Indigenous rights and the importance of sound policy, will only serve to strengthen efforts. There are also mechanisms for testing narratives and using memetics and digital campaigns to raise awareness.

5. Place the principle of reciprocity at the heart of all processes, emphasizing respect for the plant, its origins, and its traditional stewards.

Reciprocity is a principle embedded within many Indigenous cultures around the world. It consists of relating to another person, community, or entity (nature, beings, spirits, etc.) in a mutual and direct way. It is about interconnection, respect, and right relationship. Reciprocity comes from a deep recognition that we are all connected, and that when we receive a gift, it is our obligation to reciprocate as well, either directly or indirectly.

Iboga is an ethnobotanical that has been used traditionally in Central Africa, and particularly in Gabon, by different communities. Its spiritual, mental, and physical benefits, as well as its impressive efficacy in terms of what we now call "psychedelic medicine," were passed down from generation to generation until the colonial and post-colonial interests discovered it and sought to exploit it for their benefit. The questions of how to make reparations for past exploitation and how to engage in a sacred relationship of reciprocity with iboga and with these original stewards is one that warrants a much broader dialogue with traditional medicine carriers, as well as with the international community at large. These discussions need to consider iboga grown in Central Africa and other places in the world, as well as ibogaine and any forthcoming extractions or synthetics. Therefore, while the depth warranted to this topic is not possible within these pages, we will plant a few seeds.

One of the more straightforward approaches to reciprocity is rooted in the principle of relationship, or "right relationship," as it is sometimes called. While iboga and extracted ibogaine are now sold and used in many places around the world, their origin is in Central Africa. The original human-plant relationship began with the Pygmies and was then passed on to the Bantu. Today, this knowledge is held by Bwiti communities. Being in right relationship with these traditional knowledge holders begins with acknowledgment—the practice of citing

and naming the place and culture of origin for these practices and teachings. Modern Western culture has a tendency to erase or glamorize Indigenous peoples and knowledge, which at its worst becomes extractivist (the extraction of plant materials or teachings for profit) or cultural misappropriation (using teachings that have not been freely given, not acknowledging the source of knowledge, or capitalizing on the cultural legacies of others). The first and most basic step in cultivating reciprocity lies in acknowledging, recognizing, and honoring ancestral traditions and living cultures.

A2E Association member showing a child how to grow iboga at the Ebyeng community plantation, in the Ogooué-Ivindo province. ©Ricard Faura

The second thread of reciprocity is of a more spiritual nature and is expressed in a teaching offered by Duncan Grady, a North American indigenous elder of Blackfeet and Sulk Ancestry.[7] Grady maintains that what makes reciprocity sacred is rooted in how we live what we receive from these practices—in our honoring of the teachings and of the lessons by bringing them into our lives. With regard to iboga, then, sacred reciprocity comes to life when an individual who has engaged with these practices, either ceremonially or through clinical treatment, carries this experience with them out into the world, honoring the experience by taking time to integrate, to contemplate, and to share what they have learned.

The next thread relates to material reciprocity. Iboga plants, knowledge, and culture have been extracted from Central Africa in order to benefit individuals and companies far away from the source without regard to sharing these benefits since the early 1900s. This colonial legacy of cultural theft and extractivism must be addressed through reparations and concerted efforts to disrupt current activities that are building on this legacy. In Phase 2 of our initiative, we travelled to Gabon and spoke with community members, Bwiti practitioners, NGOs, and government officials about how to rectify this, and many expressed their desire to share this treasure with the world for the benefit of all and for healing. However, there was also the request that the economic benefits circle back to local communities. This economic reciprocity could take many forms and deserves thorough exploration and expansion.

We will note several policy initiatives that have sought to regulate the economic benefits that arise from the commercialization of these bio-cultural plants and their associated knowledge. An important one is the Nagoya Protocol (2010), which focuses on the protection of

genetic resources and the fair and equitable sharing of the benefits arising from their use. Access and benefit sharing (ABS) laws are a suitable vehicle for building solutions around shared intellectual property, focusing on how the benefits derived from the commercialization of natural products should be shared with the local communities who contributed decisively with their knowledge. It should be noted that since traditional knowledge exists in the public domain, it cannot be patented and therefore compensation for such knowledge must be channelled through a global agreement structure. In this regard, the World Intellectual Property Organization, a United Nations agency, has produced monographs to keep stakeholders updated on this issue.

Women from the A2E Association working at the iboga community plantation in Ebyeng, in the province of Adooué-Ivingo. ©Ricard Faura

Despite the absence of specific regulations, there have been several respectful and exemplary collaborations between scientists, companies, and native communities from which the subsequent set of products and knowledge have been developed. Some of these experiences, for example, have designated that the benefits of the commercialization of this type of products will be shared with the communities that originally held the knowledge finally translated into marketable products. In some cases, between 10% and 20% of total benefits are shared with communities. With regard to iboga, this logic of intellectual property and access and distribution of benefits can be applicable to the set of activities, businesses, and products that benefit economically from the production, commercialization, and use of iboga, ibogaine, or any of their analogues.[8]

In a final note, reciprocity implies the opportunity to create connections between people and communities. One of the impacts of an experience with psychoactive plants can be a greater sense of connection with the natural world. Regarding iboga, those involved at an international level have the opportunity to help create connections between traditional medicine practitioners and communities in Central Africa with communities, institutions, and companies in the Western world. With these connections comes the possibility of creating networks of solidarity and reciprocity that lead to the preservation and regeneration of forests and revitalization and honoring of bio-cultural knowledge.

B: Bio-cultural Regeneration and Sustainability

B: Bio-cultural Regeneration and Sustainability

Conclusions

1. In Central Africa, and especially in Gabon, wild Tabernanthe iboga is being over-harvested, which is impacting sustainability.

The most concerning issue arising from an unregulated global market for both iboga and ibogaine (still mainly extracted from *T. iboga*) is that of plant sustainability. Iboga populations in the wild are facing pressures due to over-harvesting, improper harvesting techniques, poaching, and black-market sales, as well as habitat destruction.[9] The International Union for Conservation of Nature's Red List of Threatened Species has listed *T. iboga* as a plant of concern, however not yet as endangered.[10]

In February 2019, the Government of Gabon finally stopped all exports from the public domain, expressing concern about the sustainability of the plant. Gabon has not yet formalized mechanisms to allow for legal exports from private or community plantations (see below), although it appears the process is underway. Currently legal export of iboga from this country is officially prohibited. For the time being, this leaves the iboga export market in the hands of illegal networks that mostly continue to extract iboga from the forests of Gabon and Central Africa.

Every activity related to iboga and ibogaine—from cultivation, harvesting, and distribution, through research and policy, to ritual and clinical uses—has a direct impact on the sustainability of iboga and its regeneration and subsequently on the health of forests in Gabon and Central Africa.[11] Therefore, all involved share a responsibility to address the direct and indirect impacts of their actions on this critical issue.

The current situation in Gabon is undoubtedly complex, since although there is a ban on the extraction and sale of iboga from the public domain, in practice the few private or community plantations that exist are not receiving permits to initiate a sustained process of legal export of iboga. There are currently *T. iboga* plantations in the process of rapid maturation in other neighboring countries in the region, such as the DR Congo and Cameroon. However, the information currently available on Cameroon's exports is also controversial. On the one hand, we have received information suggesting that stable plantations are being started in that country as well, although, as an example, only photographs are shown that do not provide any guarantees as to where they were taken. On the other hand, organizations based in Gabon that monitor the international iboga market have gathered evidence showing how different illegal export networks collect wild iboga in Gabon and smuggle it to Cameroon, where they manage to get the necessary permits to sell it as a standardized legal product from Cameroon.[12]

Important plantations have already been set up in other non-African tropical countries as well, for example in Costa Rica. It remains to be seen whether all these initiatives are able to supply *T. iboga* (or ibogaine extracted from it) and offer solid guarantees of traceability and legal permits for export. This should always be a precondition for assuring buyers that they are purchasing a quality product and are not thereby contributing to the destruction of bio-cultural ecosystems in Central Africa. In any case, it seems clear that the vast majority of iboga currently available on the international market, as well as ibogaine extracted directly from this plant, is still illegally collected from wild specimens that have grown for years hidden in the forests of Central Africa, mainly in Gabon. In this sense, it can be concluded that currently all of the iboga from this region is controlled by a market that cannot be con-

sidered ethical or sustainable, mainly due to the total lack of guarantees in traceability. This situation leads the group of clinics that work with iboga or ibogaine, as well as individuals and communities that acquire iboga for psycho-spiritual or psychotherapeutic reasons, to resort to the illegal iboga market. Consciously or not, they become collaborators in the progressive depredation of this sacred plant.

2. Sustainable *Tabernanthe iboga* cultivation in Gabon, as well as in other African and tropical countries, can provide benefits for local communities and ecosystems.

Because the international demand for iboga is rising, and it is clear that harvesting wild plants is not sustainable, it is critical to seek alternatives. Several projects provide insight into what the future might look like for the production of iboga and ibogaine in ways that benefit local communities and ecosystems.

There are a few examples of promising *T. iboga* plantations in Gabon; however, the plants are still young, and it is unclear as to whether the plantations will be successful. Some are *T. iboga* monoculture farms (with between 20,000 and 35,000 plants), which has brought up concerns around the impact of monoculture farming in the region. In general agriculture, the monoculture farm model has developed significantly in Central Africa at the expense of the Congo Basin forests. This area is a UNESCO World Heritage Natural Site and is the second largest biomass reserve in the world, after the Amazon. Monoculture cultivation is not seen as a long-term solution, particularly because monocultures are susceptible to various challenges not faced within balanced ecosystems, as well as the fact that with the current global climate emergency, further deforestation is undesirable.

In the absence of in-depth studies on the actual extent of *T. iboga* in the wild, all we can be sure of is that this plant is endemic to Central Africa and found in different countries in this region. Gabon seems to be the country with the largest quantities of wild iboga and is also a territory where several plantation models are being established. In addition, we have also been informed that there are plantations in Cameroon, Ghana, DR Congo, Costa Rica, Mexico, and Brazil. However, it has not always been possible for us to obtain solid evidence of the existence of these plantations. Further scoping and research are needed to determine the extent and viability of these cultivation initiatives.

Despite the shift in ibogaine production toward alternative sources to wild *T. iboga* from Gabon, there is evidence of international demand for a type of "fair trade" iboga root bark—meaning plants that are cultivated and harvested according to standards for sustainability. As has been articulated in the reports accompanying this one, there is a need for "traceable" iboga, so each plant can be traced back to where it was harvested or the plantation where it was grown, as well as including labels that include information about amounts of alkaloid they contain.[13] There are many examples of standards for fair trade products, which also include ensuring that local communities benefit from international sales.

3. How the Government of Gabon proceeds in the short term with regard to the regulation of the cultivation and effective export of iboga will have an impact on the future of iboga locally and internationally in the long term.

The Gabonese Government recognized iboga as a national heritage in 2000 and in February 2019 banned exportation to those who do not have permits. This shows that the government recognizes there is a need to act, as well as an incipient intention to take charge of the situation. The current export ban only affects *T. iboga* from the public domain, opening the door to the export of this plant if it comes from the private or community domain. The main objective of this regulation was to stop the poaching and massive export of this plant in its

wild state, thus promoting both the protection of this endemic plant in its natural environment and the eventual development of a regulated export business from government-authorized plantations.

- In February 2019, the Government of Gabon also halted all legal exports of this plant from the country, meaning that, for the time being, the only viable alternatives for acquiring ibogaine are from alternative sources to *T. iboga* or directly from the illegal market.The most recent steps taken by the government may indicate that it is committed to promoting community-based plantations that comply with the Nagoya Protocol on Access and Benefit-Sharing. However, we must keep an eye on how this process evolves in the medium term.
- In September 2020, the Ministry of Water and Forests of the Government of Gabon signed a collaboration agreement with the NGO Blessings Of The Forest (BOTF) Gabon,[14] authorizing the community association A2E to start the exportation process for plants cultivated according to clear criteria of quality, traceability, fair trade, and reciprocity with local communities. The collaboration agreement also outlines support for the creation of new community plantations in different parts of the country over the next five years.
- Therefore, it appears that steps are being taken to support the regeneration of *T. iboga* and to generate positive economic impacts for local communities. However, the delicate political climate in Gabon, along with what remains an ambiguous regulatory situation with regard to production, export, and distribution, still leaves a wide margin for the entry of companies that could ignore the interests of the local communities and the needs of the region's ecosystems. There is still a significant risk that without careful planning and advocacy, this could lead to the development of large monoculture cultivation that could have detrimental impacts including deforestation.

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4. Producing ibogaine from sources alternative to *Tabernanthe iboga* will reduce pressure on wild plant populations in Gabon and Central Africa.

Research is underway to develop cost-effective processes for producing ibogaine from sources alternative to *T. iboga*, which could have short- to medium-term impacts on increasing the supply of ibogaine available internationally and, importantly, on decreasing the pressure on *T. iboga* in its natural ecosystem in Gabon and Central Africa.

Increasing demand for sources of iboga for the production of ibogaine has sparked new investments in several areas of research and development. First, there is an interest in funding research into how to produce synthetic or semi-synthetic ibogaine and similar molecular compounds for medical and scientific uses, mostly for the pharmaceuticals market. Investors are targeting funds toward designing, patenting, and producing ibogaine that can be developed in laboratories without having to rely on *T. iboga* or other organic materials, such as *Voacanga africana*. It appears that some progress has been made, with lines of research focused on the following areas:

- **Synthetic ibogaine:** Processes for deriving synthetic ibogaine were discovered in 1966; however, methods for producing it are not currently scalable in a way that would also be profitable. Synthetic ibogaine is produced with existing precursors, without the need for plant material. Many people hold the opinion that this should/will be the future of ibogaine production.
- **Non-psychoactive synthetic ibogaine:** Currently there are initiatives underway to produce ibogaine analogues that maintain its anti-addictive properties but are not psychoactive. Examples include noribogaine, 18-MC and, more recently, Tabernanthalog (TBG). Noribogaine (12-Hydroxyibogamine) is the main metabolite of ibogaine and remains in the body long after ibogaine has disappeared. 18-MC (18-Methoxy-Coronardine), on the other hand, is a synthetic congener of ibogaine

that uses the skeleton of the original alkaloid as a model. TBG is a synthetic molecule that was announced at the end of 2020 with the same purpose as 18-MC and is in full development phase.

» **Cell-cultured ibogaine:** Ibogaine hydrochloride has been produced in cell cultures; however, it is not yet clear whether large-scale production will be lucrative and therefore feasible.

» **Semi-synthetic ibogaine:** At this time, this substance is synthesized from the voacangine present in the *Voacanga africana*. A production method has been patented and initiatives to produce semi-synthetic ibogaine extract are currently funded and underway. *V. africana*, like *T. iboga*, is in the *Apocynaceae* family and contains ibogaine, although not in sufficient quantity to make its extraction efficient in terms of profitability for the manufacturer. However, the plant also contains another alkaloid called voacangine that is being used for the production of semi-synthetic ibogaine. This plant is already an important *non-timber forest product* (NTFP) grown and exported from countries such as Ghana, Cameroon, Nigeria, and the Ivory Coast to international pharmaceutical companies as precursors for the production of medicinal compounds. Because it is already cultivated for international pharmaceutical products that are regulated by international health agencies, it is currently the only source from which ibogaine can be synthesized.

Recommendations

1. Encourage international communities to work together to raise awareness about the impact of the rising demand for *Tabernanthe iboga* on bio-cultural sustainability.

Until ethical, traceable, and sustainable sources of *T. iboga* are available, individuals, groups, clinics, and retreat centers outside of Central Africa that work with it—or ibogaine derived from it—are knowingly or unknowingly playing a role in the current sustainability crisis. Collective responsibility is a foundational value when considering the globalization of plant medicines, such as iboga. The physical distance between source and use (clinical, ceremonial, or personal) creates a potential moral or ethical distancing in terms of responsibility for bio-cultural sustainability.

The further the distance, and the more people involved between harvesting and consumption, the greater the disconnect. As noted above (see C2), there is a need to shine a light on supply chains, bringing them above ground so that ethical and sustainability issues can be addressed and iboga and ibogaine purchased outside of the source country are traceable. Sustainability issues must also be clearly linked to the consequences they have on Bwiti and other communities in Central Africa who have deep cultural relationships with iboga.

This reality places the burden on international purchasers of iboga and its derived products to do their due diligence regarding the source of the plant matter. Unfortunately, there is ample misinformation, and many sellers make compelling claims regarding the sustainability of the source of their product. Considering the rise in practices with iboga and ibogaine, the current challenge is to ask whether the number of plants available in the wild can meet these demands at this time and if not (which evidence points to), what are we going to do collectively to address this reality?

Until such a time that sustainability is assured, we invite all who use *T. iboga* as a tool for therapeutic and psycho-spiritual work to seriously consider seeking alternatives to this species until ethical, traceable, and sustainable options are guaranteed.

2. Engage in concrete efforts to assess the actual current number of iboga plantations across Africa and other tropical countries with the aim of increasing the number of plantations engaging in agroforestry and regenerative agriculture techniques.

Historically, there is no tradition of cultivation of *T. iboga* in Central Africa or anywhere else because communities have been able to harvest it in the wild. However, rising international pressure on wild populations due to increased demand requires cultivation models in climates where it can grow. This implies starting plantations in Gabon and Central Africa where it already grows in the wild as well as in other tropical places around the world. Iboga cultivation is already happening in other countries at similar tropical latitudes within Africa (Cameroon, DR Congo, and Ghana), Central America (Costa Rica and maybe Mexico), and South America (Brazil), although it is unclear to what extent. An intentional mapping of current cultivation initiatives globally would be helpful in developing sustainability plans; however, there remains much secrecy around these efforts, which are also impacted by legal frameworks around plant medicines and profit motives. An audit of where *T. iboga* is being grown may be warranted, as this information is currently not available.

It is important to stress that it is not simply *any* kind of cultivation that is needed; large monocultures damage ecosystems and do not benefit local communities. Iboga grows mainly in the forest understory; therefore, production techniques are recommended that mimic this system, such as agroforestry, permaculture, and regenerative agriculture. These approaches would help strengthen environmental sustainability, invigorate economic opportunities for locals, promote productive diversity, strengthen social equity, and protect the biological and cultural diversity of existing systems. Agroforestry initiatives and regenerative agriculture are being initiated at the community level (see R4 below), and there are also currently international organizations interested in investing in agroforestry projects for the cultivation of *T. iboga* and *V. africana* in Gabon and other African countries.

Furthermore, the development of community-based iboga plantations in Gabon may provide a solution to address the growing shortage of iboga in some parts of the country, while at the same time providing new sources of income for the farming villages.

3. Create collaborative, ethical funding programs that prioritize the development of sustainable iboga plantations and bio-cultural conservation.

Creating a philanthropic fund that could boost the implementation of diversified plantations in different locations in several countries would be of great help to ensure a sustainable and quality flow of iboga to the international market in the next decade. The development of plantations with the support of philanthropic funding could also activate the implementation of mechanisms of reciprocity with the peoples and communities close to the plantations, as well as with the ancestral peoples who have used this plant. Other projects, both community and private, developed by these communities and also working for the common good could equally benefit from these funds.

Funding in the conservation space should operate to build capacity and enable local communities to be part of the solution. Collaboration between funders, advocates, spiritual community members, and cultivators should be based in principles of transparency, decolonization, empowerment, and accountability.

4. Research and invest in alternative sources to *Tabernanthe iboga* (such as *Voacanga africana*) for the extraction of ibogaine and other alkaloids and compounds.

There are currently trends that herald a growth in demand for ibogaine for medical and therapeutic uses in the coming years. The current dependence on *T. iboga* for the extraction of this alkaloid and growing international demand present challenges (noted in more detail above in C2) that are increasing the pressure on wild populations of *T. iboga.* These pressures may endanger the plant's survival in the wild and of the Bwiti communities of Gabon and other places in Central West Africa.

Furthermore, the current dependence on *T. iboga* for the extraction of ibogaine also impacts the consistent, stable availability of ibogaine for clinical and therapeutic use. Research is needed to identify alternative sources to *T. iboga* to protect the plant and the Bwiti communities of Gabon, while offering immense opportunities for the growing international investment in psychedelic pharmacological solutions for mental health problems at the global level.

V. africana is a potential alternative that deserves greater attention. Only a small proportion of ibogaine is derived from *V. africana*. In our 2019 report, only 20% of treatment providers that participated in our questionnaire indicated that they were using ibogaine derived from *V. africana*.[15] Despite claims about sustainability and good practices on websites of the many distributors of products derived from *T. iboga*, the truth is that currently, ibogaine sourced from legal *V. africana* plantations are the only ones that can truly claim traceability. Therefore, it is also the only one that guarantees that the production process does not involve illegal poaching and that criminal gangs are left out of the distribution chain.

It is therefore recommended that the various clinics and centers that do not wish to participate in the purchase of poached, unsustainable iboga and its derivatives seek alternatives derived from traceable sources of *V. africana*. New traceable options will become available; however, in the meantime *V. africana* is the only "ethical" alternative on the market. Therefore, investment in new plantations of *V. africana* appears to be an interesting option. It should be noted that, although the amount of semi-synthetic ibogaine that can be extracted from it is much more limited than that which is extracted directly from *T. iboga*, the plant as a whole is used in many other applications—pharmacological, nutritional, cosmetic, textile, and even musical—that currently have their own market and demand.

5. Continue advocating for regulatory frameworks in Gabon that support sustainable cultivation and exportation of iboga and prioritize community benefits.

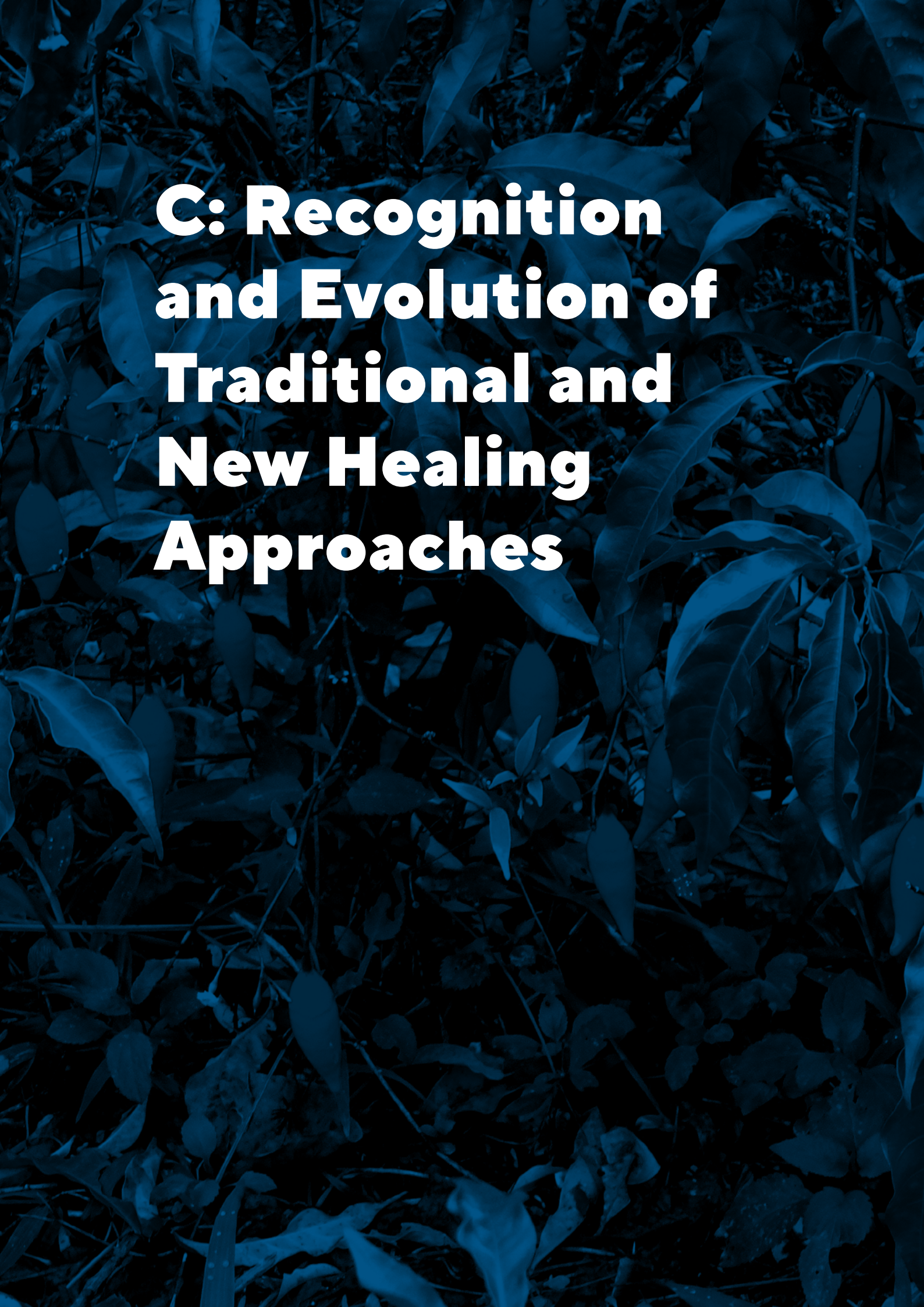
Current regulations prevent the export from Gabon of *T. iboga* that is harvested from public forests, thus allowing only plants cultivated on private land to be exported. The work has just begun to determine how this regulation will be put into practice.

It is imperative that the Government of Gabon develop policies and procedures that are transparent and developed through consultation with local stakeholders (Bwiti communities, scientific sector, local and foreign investors, local industry, and local forests and ecosystems).

The development of innovative policies could pave the way for:

- Agroforestry plantations managed by community associations and/or by private investors, producing *T. iboga* and other agroforestry products, such as honey, fruit, and traditional medicines, for Gabonese and international markets
- The development of businesses and technological infrastructures in Gabon for the production of quality products for sale internationally, facilitated by the international transfer of technology, knowledge, and specialized resources

- The promotion of research consortia and collaboration between universities and industry, both local and international, for the development of research with *T. iboga* (in areas related to botany, traditional medicine, pharmacology, anthropology, community development, etc.)
- International investment in the above guided by bio-cultural conservation and reciprocity and the intention to support Gabonese and other African communities to benefit from the internationalization of this cultural treasure



C: Recognition and Evolution of Traditional and New Healing Approaches

C: Recognition and Evolution of Traditional and New Healing Approaches

Conclusions

1. Availability of pharmaceutical grade ibogaine for clinical use could lead to improved access to therapies, yet this opportunity comes with ethical, accessibility, and sustainability issues that need to be considered.

Governments in many countries are struggling to find solutions to the addictions and mental health challenges faced by their populations. Traditional iboga practices and clinical ibogaine therapies have shown promise for addressing these health challenges, thereby improving population health and ultimately saving governments money. The opportunity to expand the reach of therapeutic treatments has drawn interest by investors who are exploring avenues for increasing the production of ibogaine and the expansion of clinical availability.

Importantly, greater availability of high quality ibogaine at affordable prices has the potential to contribute to the expansion of access to therapies for people in need, rather than only to those who can afford them. Increased availability of quality ibogaine would also support increased research, which is required by governments who are considering expanding legal access.

However, there are concerns that must be taken into account in order for benefits to be maximized without having a negative impact on traditional Bwiti communities or the sustainability of wild *T. iboga*. Survey results from our Phase 1 report indicated that iboga is the primary source of the ibogaine alkaloid that is currently being used.[16] Unfortunately, the ethos of venture capital is often not conducive to transparency, shared benefit, and cooperation, but rather focuses on competition, patenting, and seeking profits over people and the environment. However, approaches to ibogaine product and clinical therapeutic model development could choose to take a different path, considering the health of the whole ecosystem from plant, to traditional community, to production, marketing, and clinical models.

While holding this vision of a wholistic, bio-culturally sensitive approach, it is important to outline some of the current risks. The first risk is that transnational corporations seek to patent production methods and protocols, ostensibly enclosing the knowledge developed within traditional communities and Western medical subcultures and concentrating benefits in the hands of a few. One of the critiques of patenting is that it is a form of biopiracy that does not take into account that *T. iboga*—and therefore its alkaloids—are native and endemic to the forests of Central Africa. Patent-holders serve to benefit from the intellectual property rights of Central African Indigenous communities, who have developed and safeguarded plant knowledge over generations. Patenting of substances or processes can also serve to slow down research and development, making it difficult for innovation and cross-cultural collaboration.

However, if ibogaine development follows typical Western models of pharmaceutical development where profit trumps the common good, access to therapeutic benefits would continue to be limited only to those who can afford them. This would be felt most significantly in countries, such as the United States, that do not have strong and universal healthcare systems or in places where governments have limited abilities to negotiate affordable access to newly approved drugs.

Incorporating ethical and sustainability concerns when expanding the production of ibogaine means widening the perspective and considering alkaloids as part of an ecosystem of interconnected social, ecological, and cultural elements that together have the potential for

supporting individual, community, and planetary healing. And, it is essential that approaches to expanding therapeutic care in Western countries also take into account ensuring that communities in Central Africa also stand to benefit.

Lastly, it is important to note that extracting alkaloids from iboga in order to produce ibogaine (or producing semi-synthetic or completely synthetic ibogaine) is an approach that is being pursued. However, not everyone agrees that "extracting" molecules is the best way forward. Traditional pharmacology has focused mainly on the study of isolated compounds. However, this approach has been increasingly challenged by the broader paradigm of polypharmacology, which is revolutionizing the way we understand pharmacological research in general and psychedelic drug research in particular. This perspective suggests that we may be missing something if we do not use the whole product in the case of psychoactive plants and fungi.[17] Additionally, to some traditional Bwiti practitioners, as well as others in the spiritual communities forming around iboga, this extraction leads to the loss of the spirit of the plant and therefore some of the greatest potential it holds for healing. For those with this perspective, seeking ways to treat addictions or other maladies with iboga would be preferable, as would maintaining traditional ways of working rather than moving into completely clinical approaches.

2. Clinical therapies with iboga or ibogaine for problematic drug use are highly valued for their effectiveness and holistic care models; however, standards of care vary widely and risky practices must be addressed.

The international survey we conducted in 2019[18] pointed to three elements that people valued most about services provided by treatment centers: (1) the effectiveness of the treatment, (2) the lack of social stigma they experience in dealing with the professional team, and (3) the feeling of protection and accompaniment during treatment. Although most of these respondents (78% of the total) were generally satisfied with the service and treatment they received at these centers, one third of them believed that services and conditions were not optimal, while the other 22% believed the service they received was inadequate. Participants attributed the success of the treatments directly to the therapeutic experience with iboga or ibogaine, rather than to the professional merits of some clinics.

An important consideration is also that in the current unregulated therapeutic context, adverse incidents, even deaths, occur too often. Several deaths have been associated with the administration of ibogaine, which appear to involve cardiac arrhythmias, prior cardiovascular disease, and the use of opiates/opioids or other drugs during the acute period of ibogaine's effects.[19] Within the report cited above, several troubling trends were identified.

- **Electrocardiograms (EKG).** While many providers are very careful about performing all types of medical tests pre-treatment, there are also some who shared that they never performed electrocardiograms (EKG) before administering iboga or ibogaine, from which we can deduce that they were therefore not aware of potential heart risks for the patient.
- **Blood tests.** Only about half of the treatment centers attended by online survey respondents had carried out blood tests, and most of them did not conduct urine tests before administering high doses of iboga or ibogaine; this indicates that treatment providers are not always aware of what substances might be in a patient's system prior to treatment.
- **Benzodiazepines and alcohol.** Benzodiazepines and alcohol are of particular concern because of the possible and even fatal withdrawal symptoms that can follow an abrupt cessation of their use.[20] Many patients seeking treatment for problematic use of opioids or cocaine also report using benzos and/or alcohol, indicating that screening for these substances is warranted prior to treatment in order to reduce the risk of adverse events.

» **The psycho-spiritual dimension.** While integration practices are increasingly seen as fundamental for sustaining the benefits of treatment, the psycho-spiritual dimension of the experience is still largely neglected by treatment providers. There is room for improvement in offering holistic care in order to support the individual to fully benefit from the window of opportunity provided by their experience with iboga and ibogaine. Integration can support further behavior change and the development of practices that will sustain and nurture their transformation with the individual's relationship with themselves, their family and community, and the environment.

These are areas where current services are falling short and which indicate a lack of common approach to client intake, quality of screening, services, and integration support. Furthermore, it is important to note that the current cost of such therapies and limited access are leading to an increase in the practice of self-administration of high doses of iboga or ibogaine, a practice that can be highly risky if done without screening, preparation, or adequate support.

3. Within Gabon, iboga is part of a complex bio-cultural traditional medicine system that presents opportunities for improving health care for local communities, and this knowledge could be applied internationally to improve mental health and addiction care systems.

In Gabon, a significant number of people—not only Bwiti practitioners—use traditional medicines and therapies. People from other countries are increasingly traveling to Gabon to seek healing through alternative routes to those offered within the health systems of their home countries. With the expansion of the acknowledgment of and interest in the potential of traditional, complementary, and alternative medicine (TCAM), there is an opportunity to move beyond perspectives that frame traditional psychoactive plant medicines as molecules and commodities and toward sophisticated engagements with bio-cultural knowledge systems in service to a true revolution in mental health care.[21]

The UN's 2030 Agenda for Sustainable Development foresees the development of actions that implement psychiatric models in low- and middle-income countries. In the same vein, the global mental health (GMH) movement is also working toward universalizing the right to mental health care around the world so that it reaches those who cannot afford treatment. This growing movement is based on the principles of respect for human rights and evidence-based treatments, particularly in low- and middle-income countries. Yet, however promising this approach, proponents continue to privilege Western psychological and psychiatric perspectives. The extension of the psychiatric models developed in Western countries toward other countries that have traditionally had their own models for the management of mental health are replete with post-colonial elements linked, in this case, to the imposition of particular cultural models of mental health over others.

Practices around iboga serve as an example for how TCAM practices are increasingly of interest in Western contexts. This is an interesting starting point for further dialogue and examination of the importance of traditional practices within their countries of origin and also what they may have to offer to the world.[22]

Recommendations

1. Develop and implement standards of practice and care within the international clinics offering iboga and ibogaine therapy to improve quality and safety of services.

Ibogaine therapies, in particular those aimed at treating problematic drug use, face a large task for improving services in several areas. They include:

- **Improving and certifying the quality of the ibogaine provided**
- **Training professional and non-professional staff**
- **Integrating peers in ethical ways**
- **Incorporating adequate preparation and integration components** that address psycho-spiritual dimensions, the sharing of protocols and follow-up of good practices, and cooperation at local and international levels

An ideal future for iboga and ibogaine treatment clinics may include regulation so that clinics can operate according to regional legislation and offer treatments at prices that are universally accessible and for all people who need them. Furthermore, because of the increase in the number of people who are self-administering higher doses (often due to the fact that therapies are financially and geographically inaccessible), providing accessible harm reduction information must be more readily available.

Until consistency in quality of care is achieved, the following important elements should be included within clinical programs in order to ensure safety:

- The iboga or ibogaine used within the clinic is of certifiable quality, and ideally are traceable, thereby ensuring that they were produced in ways respectful of the natural and cultural environment.
- The clinic has qualified, trained, and multidisciplinary professional teams with extensive medical and psychological training, and candidates for ibogaine-assisted treatment are carefully screened for psychological and physical health (provided various tests such as EKG, blood and urine tests, liver function panel, electrolyte panel, echocardiogram, thyroid function test, etc.).
- If providing treatment for addiction, it's important that the clinic professional team includes peers, is actively non-stigmatizing, and prioritizes patient dignity.
- The integration of the psycho-spiritual dimension and the whole experience is comprehensive and supported by trained and experienced professionals during various pre- and post-integration and support sessions.
- The clinic has comprehensive therapeutic and safety protocols, which are shared openly.
- The clinic is a healthy partner in local and global networks for collaboration, collective responsibility, and mutual support.

2. Official recognition of traditional, complementary, and alternative medicine (TCAM) at the local and international levels would contribute to the development of applications for the improvement of mental health and addiction care worldwide.

Exploring alternative epistemological models. Interest in plant medicines and other traditional forms of healing is growing, as is demonstrated by increased interest in iboga. While research and investment in so-called "psychedelic medicines" is growing, there are signs that the classical scientific method and the biomedical model may be insufficient, or at least have limitations. When these practices are carried out in their own cultural contexts, the texture of what happens is complex and includes spiritual elements and, importantly, community.

Promoting the official recognition of TCAM. Understanding how iboga works within a traditional healing system requires exploring this context beyond the plant itself. Traditional, complementary, and alternative medicine (TCAM) can play an important role in addressing health inequities, and advocacy will be required to ensure that these approaches to health are recognized and applied. At the international level, formal recognition could provide models and solutions to the global mental health crisis. At a national level, in countries such as Gabon, the acknowledgment of the value of and protection of TCAM would have several advantages, not only for the country's Nimas (experienced initiators) and Ngangas (spiritual practitioners), who see their work with iboga to be just one of the various existing medicinal resources for improving health through spiritual methods, but also for generating resources for the country and its peoples.

3. To fully understand the therapeutic potential of iboga and ibogaine, research needs to bridge science and the wisdom of traditional knowledge.

According to the Bwiti, iboga is a spirit plant that transmits knowledge about the origin of the world and humankind, connecting those who are initiated with the spirit world and ancestors with the help of music and teachings about unity, altruism, and the importance of the collective elements.

The dimensions experienced within traditional ceremonies are also experienced within other contexts, as was recently demonstrated by ICEERS research on the subjective effects of iboga.[23] This study illustrated that the effects of ibogaine (that are longer lasting than those provided by classic psychedelics such as psilocybin or LSD) go through four stages that match those identified by Bwiti practitioners. Regardless of their initial motivation for developing a relationship with iboga or ibogaine, most participants in the study describe the psycho-spiritual dimension as the one they valued most about their experience.[24] This insight is parallel to that described by traditional practitioners. In Bwiti communities, the spiritual dimension is inseparable from all other elements of the experience.

This example illustrates how the bridge between these two worlds—that of Western scientific research and traditional knowledge—is shorter than one might think, and there is much opportunity to create a dialogue between traditional knowledge, experiences with these practices in the global West, and approaches to scientific research.

The production of meaning in the Bwiti spiritual traditions conceives of health and illness as a spiritual balance in which the whole community is involved, and which is not related solely to a personality characteristic of an isolated individual as conceived from the biomedical model in force in Western medicine. This spiritual perspective leads to a holistic management of individual and collective mental health, in which the psycho-spiritual component of iboga and its possible positive impacts on the person and his or her community are inscribed.

There is a dynamic dialogue that is possible between traditional knowledge systems, science, and the knowledge generated within the ibogaine medical subculture. Through interweaving these ways of seeing, a greater possibility will emerge when we look beyond the molecules and even the plants themselves to seeing the interconnected social and cultural elements of traditional knowledge and nature and their potential for supporting individual, community, and planetary healing.

Endnotes

Endnotes

1 Communities outside of Africa are growing and comprised of individuals offering and seeking psycho-spiritual or psychotherapeutic experiences. Interesting to note is that within this category it is common to find individuals who seem to be generally interested in entheogenic practices—who first have an experience, for example, with ayahuasca, and then seek out an experience with iboga or ibogaine or vice versa.

2 See Ogden (2016) https://interactioninstitute.org/network-development-as-leverage-for-system-change [retrieved July 7, 2020].

3 The American Association of Chinese Medicine and Acupuncture (AACMA) was founded on January 11, 2015. It was formed by joining the California Certified Acupuncturists Association (CCAA) and United California Practitioners of Chinese Medicine (UCPCM). AACMA is committed to promoting Traditional Chinese Medicine (TCM) and protecting human health. AACMA also seeks to unite and serve its members, to advocate for their rights and benefits, and to ensure that patients receive safe medical services. For more information: https://www.aacmaonline.com/en

4 For more information on the Guild of Guides: https://www.guildofguides.nl

5 For additional information on mechanisms to compensate Indigenous and local communities for the use of their traditional knowledge in relation to the use of biological diversity: Secretariat of the Convention on Biological Diversity (2011). *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation.* [Retrieved December 7, 2020] https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf. See also: Silvestri (2017). Nagoya Protocol: Challenges Arising from a Complex, Ambiguous and Controversial Text. *Anuario Mexicano de Derecho Internacional, 17*, 697-716: https://absch.cbd.int/database/VLR/ABSCH-VLR-SCBD-208976

6 For more information on the First Nations Principles of OCAP developed in Canada: https://fnigc.ca/ocap-training

7 See Langlois (2020). *Exploring Sacred Reciprocity*. Psychedelic Psychotherapy Forum. https://www.psychedelicpsychotherapy.ca/exploring-sacred-reciprocity-by-andrea-langlois-ma

8 For instance, in 1984, Dr. Paul A. Cox worked in collaboration with traditional healers in Samoa, where they conducted a series of studies involving medicinal plants. The most relevant finding was regarding the *Homalanthus nutans* tree, used by traditional healers for the treatment of hepatitis. Cox and his colleagues isolated prostratin from the bark of the tree, which showed remarkable efficacy in the treatment of the human immunodeficiency virus (HIV) in a latent phase, after treatment with antiretroviral drugs. Due to interest in this substance, which for years could not be synthetized in a lab, an agreement was developed between the National Institutes of Health of the United States and local leaders. This agreement invested nearly half a million dollars in the building of schools, clinics, and water supply, as well as the protection of local forests in the small community where Cox had been working. Additionally, the agreement stated that if prostratin was eventually commercialized, 20% of the total benefits would be shared with the Samoan people.

For more information: Ona G & Bouso JC (Forthcoming 2021). *Toward the use of whole natural products in psychedelic research and therapy: Synergy, multi-target profiles, and beyond.* Bentham Publishers.

9 The organization Blessings Of The Forests has been denouncing this situation for many years. In 2019, the Gabonese government implemented the first step toward regulating *T. iboga* harvested from public land.

10 IUCN Red List for *Tabernanthe iboga* at: https://www.iucnredlist.org/species/120678584/143718006 [retrieved on July 7, 2020].

11 *T. iboga* has only recently begun to be cultivated in plantations in other tropical countries. In the wild, this plant is only found in the forests of Central Africa, particularly in the Congo basin, and more specifically in Gabon. Therefore, when we refer to *T. iboga*, we speak of Central Africa because this is where it grows wild, and we make a special mention of Gabon because it is the country where it grows most. Besides being the place where plants are the most prolific, Gabon is also important because of its historical and cultural connections to iboga; it is where the Bwiti traditions developed after knowledge was passed on from the Pygmy peoples to Bantu ethnic groups. This is why Gabon was chosen as the site for our fieldwork in September and October 2019. See: Faura & Langlois (2020). *The Future of Iboga: Perspectives from Central Africa*. Community Engagement Initiative Phase 2 Report. Published by ICEERS, at: https://www.iceers.org/iboga-community-engagement-initiative-phase-2-report

12 Blessings Of The Forest and Conservation Justice have been tracking illegal poaching networks and their links to the lucrative and growing illegal export market for iboga. They have been gathering evidence showing how—at least in a few documented cases—there are websites that sell Cameroonian-branded iboga that is actually illegally obtained from Gabon's forests.

13 See the *Iboga Community Engagement Initiative* Phase 1 and Phase 2 reports, respectively. Faura & Langlois (2019). *Visions of the International Community on Iboga/ine*. ICEERS. https://www.iceers.org/iboga-ine-community-engagement-initiative-phase-1-report; and Faura & Langlois (2020). *The Future of Iboga: Perspectives from Central Africa*, ICEERS. https://www.iceers.org/iboga-community-engagement-initiative-phase-2-report.

14 See: https://www.blessingsoftheforest.org/

15 Faura & Langlois (2019). *Visions of the International Community on Iboga/ine*. ICEERS. https://www.iceers.org/iboga-ine-community-engagement-initiative-phase-1-report

16 See pages 48-49 of Faura & Langlois (2019). *Visions of the International Community on Iboga/ine*, ICEERS. https://www.iceers.org/iboga-ine-community-engagement-initiative-phase-1-report

17 For more information, see: Ona, G., Dos Santos, R. G., Hallak, J. E., & Bouso, J. C. (2020). Polypharmacology or "Pharmacological Promiscuity" In Psychedelic Research: What Are We Missing?. *ACS Chemical Neuroscience*.

18 Faura & Langlois (2019). *Visions of the International Community on Iboga/ine*. ICEERS. https://www.iceers.org/iboga-ine-community-engagement-initiative-phase-1-report

19 For a review about the safety/adverse effects of ibogaine, please see: Alper, Stajić, & Gill (2012). Fatalities temporally associated with the ingestion of ibogaine. *Journal of forensic sciences, 57(2),* 398-412. See also Koenig & Hilber (2015). The anti-addiction drug ibogaine and the heart: a delicate relation. *Molecules, 20*(2), 2208-2228. For additional information on adverse reactions in a clinical setting, see: "Clinical Guidelines for Ibogaine-Assisted Detoxification," the Global Ibogaine Therapy Alliance (GITA, 2016).

20 Alper, Stajic & Gill (2012). Fatalities Temporally Associated with the Ingestion of Ibogaine. *J Forensic Sci, Vol. 57,* No. 2.

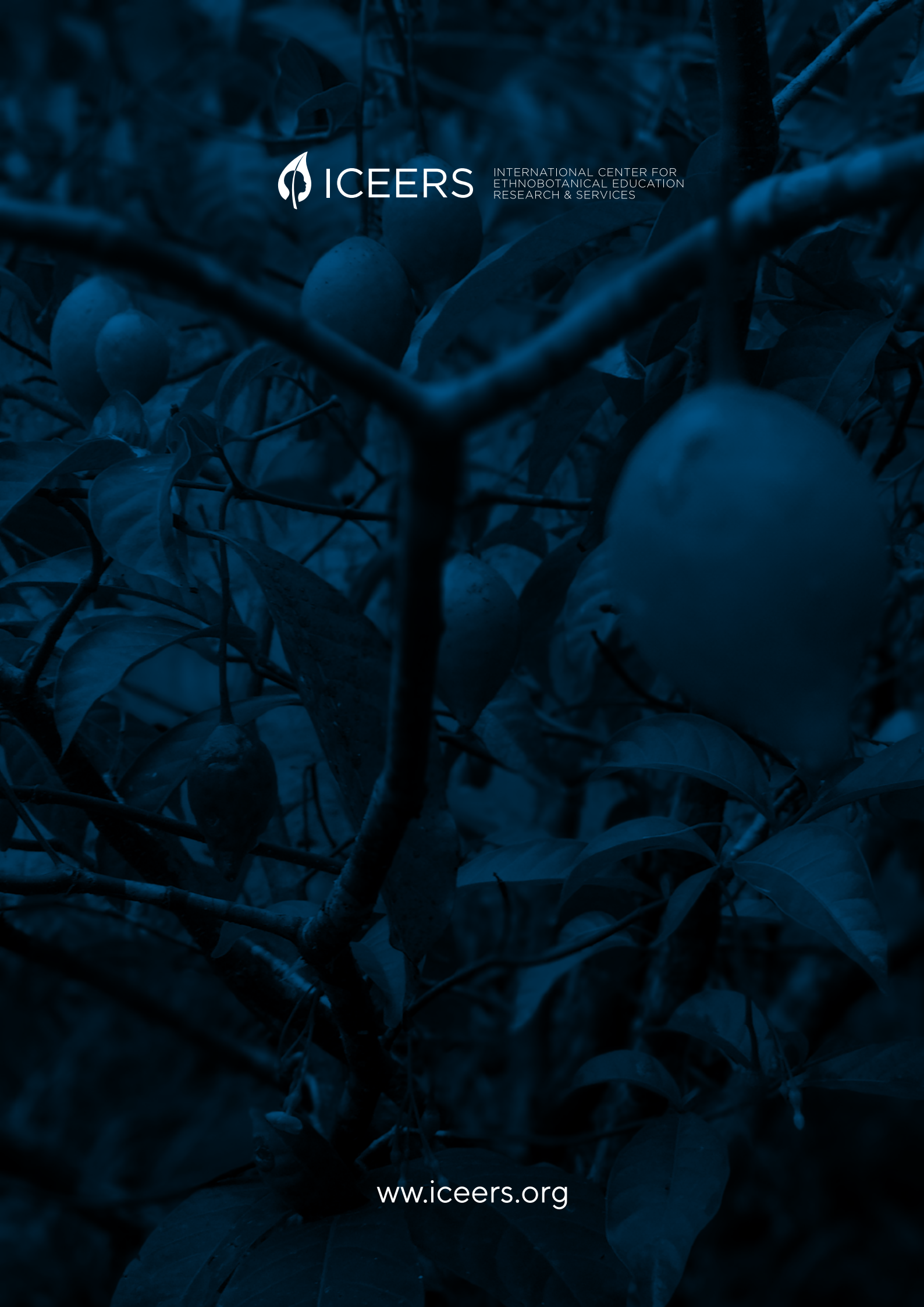
21 For more information, see: Faura, Langlois and Bouso (2020). *Expanding Ancestral Knowledge Beyond the Sale of Molecules: Iboga and Ibogaine in the Context of Psychedelic Commercialization*. MAPS Bulletin Spring 2020: Vol. 30, No 1. https://maps.org/news/bulletin/articles/439-bulletin-spring-2020/8133-expanding-ancestral-knowledge-beyond-the-sale-of-molecules-iboga-and-ibogaine-in-the-context-of-

psychedelic-commercialization

22 For more information: Bouso & Sánchez-Avilés (2020). Traditional Healing Practices Involving Psychoactive Plants and the Global Mental Health Agenda: Opportunities, Pitfalls, and Challenges in the "Right to Science" Framework. *Health and Human Rights Journal*. https://www.iceers.org/the-role-of-traditional-medicines-in-global-mental-health

23 For more information, see: Kohek, Ohren, Hornby, Alcázar-Córcoles & Bouso, JC. (2020). The Ibogaine Experience: A Qualitative Study on the Acute Subjective Effects of Ibogaine. *Anthropology of Consciousness, Vol. 31, Issue 1*, pp. 91–119, ISSN 1053-4202. https://www.iceers.org/the-subjective-effects-of-ibogaine-and-healthy-living

24 In Phase 1 of our engagement initiative, over 80% of respondents indicated highly valuing this part of the experience, even if their initial intent was to use iboga or ibogaine for the treatment of problematic substance use.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