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Paradisiacal Protection: Exploring Governance in Sustainable Spaces

Rylee Stanton

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By
Rylee Stanton

Under the mentorship of *Dr. William Biebuyck*

ABSTRACT

Biosphere reserves exist officially as "learning places for sustainable development," yet they also embody an attempt to bring together ecological governance with market-based and localized solutions to the problem of economic development (UNESCO, 2020). This thesis investigates the conditions under which biosphere reserves became reimagined as an all-encompassing solution to such a diverse set of global governance challenges. I explore the relationship between biosphere reserves and the evolving discourse on sustainable development within global governance. Drawing on Foucault-inspired literature on governmentality and "technologies of governance," I examine the practices, discourses, and subjects that have made biosphere reserves visible and governable in new ways while deconstructing this important space of transformation within global governance. In developing the empirical analysis, my research focuses on a unique case study – the Santa Marta Biosphere Reserve. My thesis employs as qualitative research design and utilizes methods including content analysis, semi-structured interviews, and narrative analysis. Following the case study analysis and interpretation, my thesis concludes with a discussion on the implications of this research for our understanding of biosphere reserves specifically and global governance at large.

Thesis Mentor: *Dr. William Biebuyck*

Honors Dean: Dr. Steven Engel

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Honors College
Georgia Southern University

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"*It takes a village to write a thesis*"

- Rylee Stanton

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Introduction

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After boarding a van at 5:00am to ensure our front place in line to experience what locals described as "paraíso" (heaven, paradise), by 6:30am I had paid 87,000 COP ($23 USD) to some men behind a plastic table that served as the boundary to the dense jungle ahead. By 6:45am I had bought two arepas from a local with a food stand outside of the "entrance." By 7:00am I was sitting with the other first 35 people to make it into the park at benches with a sign that said "Parque Nacional Tayrona." A park employee spent some time explaining (in Spanish) that we were in part of a larger "biosphere reserve"; he mentioned the word "sustainable development" (a common phrase in my international studies courses that I was growing tired of hearing); he made it very clear that we were not allowed to bring plastic or speakers into the park and that we were to leave no trace when it came time to leave in order to respect the environment and indigenous persons living within the reserve. We were handed life jackets, loaded onto dinghy boats and by 8:00am, I realized the locals were right, we were in paradise.

Upon stepping onto the secluded beach, I looked at the crystal blue waters ahead as the voices of one of the world's most biodiverse ecosystems chattered as background noise. The voices of nature were muffled by the louder sounds of myself, the students, the other tourists, the workers selling snorkeling packages, the waiters running back and forth, the women cooking our food in shacks, and the crackling of plastic bottles despite the signs that state, "no plastics allowed in the park." Perhaps that is just the irony of sustainable development; conservation practices and commercial markets coexisting with seemingly

little tension. By 9:00 am the juxtaposition of pristine nature and commercial enterprise had planted the seeds for my honors thesis.

Returning from my study abroad trip in Colombia, I began thinking more deeply about my experience in Tayrona National Park and the Santa Marta Biosphere Reserve. I decided to further interrogate the politics occurring within biosphere reserves. What nuances exist within the intersection of conservation efforts and commercial ventures in biodiverse ecosystems like Tayrona National Park?

Why study biosphere reserves?

In 2016, the United Nations adopted the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development (UNESCO, 2019). These goals tackle a wide range of interconnected global issues, including poverty eradication, environmental conservation, education, and economic prosperity, reflecting a new paradigm for "sustainable development'– one that is more holistic and relational. The SDGs provide concrete blueprints for policy priorities, compelling international organizations, governments, and private companies to reevaluate the sustainability of their practices and to prioritize collective action while doing so. Ultimately, the SDGs encourage societies to recognize the interdependence between human well-being and long-term planetary health.

Today, biosphere reserves are defined by the United Nations (UN) as "learning places for sustainable development," with each biosphere integrating three designated functions: conservation, economic development, and logistic support. Biosphere reserves operate under a framework known as the Man and Biosphere Programme (MAB) established by the United Nations Educational, Scientific, and Cultural Organization

(UNESCO). Biosphere reserves are integral to this agenda and align closely with the principles of the SDGs as they represent a unique amalgamation of sustainability, conservation, and market-based efforts. As part of the World Network of Biosphere Reserves, these sites facilitate international cooperation and knowledge exchange, further enhancing their role in advancing the SDGs and promoting sustainable practices on a global scale. Biosphere reserves serve as tangible examples of how the principles of sustainable development becomes translated into concrete action and programs at the local and regional levels. With 748 designated sites and counting, biosphere reserves evidently serve as crucial instruments in advancing sustainable development today.

Sustainable development is defined by the UN as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, n.d.). However, after further research on biosphere reserves and sustainable development, I realized that there was a longer history worth investigating. Moreover, this history revealed to me the conditions of possibility for biosphere reserves that I am studying in this thesis.

The concept of biosphere reserves was established decades prior to the introduction of the term “sustainable development" within the global and academic arena, and yet biosphere reserves exist today the poster child for sustainable development. How did this happen and when did these concepts first converge? I believe that by examining the historical, socio-political, and environmental contexts under which biosphere reserves have been imagined and reimagined, we can understand how biosphere reserves have become comprehensive frameworks for sustainable development. Further, this type of research is

important to reveal the often taken for granted mechanisms embedded within global governance.

Meta concepts like sustainable development, political economy, social justice, etc., are often taken-for-granted concepts accepted as common sense. Terms like these have become so embedded within society and social science research that we often forget to take a step back and question what we "know." The same occurs with the ongoing interplay between governance and society. While governance shapes society through laws, policies, and institutions, society likewise shapes governance through its discourses, norms, and problems. However obvious these relationships may seem; they often slide right under our noses.

To analyze the seemingly obvious sustainable development discourse and to situate biosphere reserves into this context, I utilize the work of Michel Foucault, a notable French philosopher and social theorist. Foucault introduced the concept of "governmentality," for the purpose of *not* examining power solely through the lens of the state, but also through the mechanisms of governance, or the regulation of behavior which he calls the "conduct of conduct" (Foucault, 1982). In essence, governmentality explores how various entities–from children in a family, to a crew of a ship, to institutions–seek to shape and control the actions of individuals, including self-regulation or governing.

By using Foucault's theory of governmentality (1982), I attempt to disrupt readers familiarity with the concept of sustainable development to reveal new dimensions relationships between man, governance, and the environment. I demonstrate the role of powerful discourses, knowledges, and political strategies.

Furthermore, as demonstrated by the research on global governance, a governmentality approach has become exceedingly important when addressing global issues on a policy level. Global governance is becoming more about marrying different objectives into one apparatus (i.e. SDGs, the Paris Climate Agreement, etc.). To understand governance more deeply, it is imperative to recognize that states are merely one actor and primarily just a consequence of other governance mechanisms, rather than the focal point of investigations on political power. My analysis of the sustainable development discourse and the transformation of the biosphere program using a governmentality approach demonstrates a more holistic and nuanced mode of analysis for addressing issues as they relate to global governance.

Research Question and Thesis

To further investigate this historical transformation, I ask the following questions within my study:

Under what conditions did the concept of biosphere reserves become reimagined as a solution to problems of sustainability and development? How was/is this new biosphere model being organized/governed today?

I explore the history of the sustainable development discourse by looking at the transformation of the biosphere reserve program and investigating the practices and narratives that make biosphere reserves spaces to govern. Within this context, I argue that contemporary biosphere reserves are made possible by transformations in discourse, expertise, visibility, and subjectification.

Literature Review

In the following section, I situate my research within governmentality studies and the relevant subset of literature on global governance.

Environmentality

Foucault's (1991) concept of governmentality has long been utilized in ecological politics, giving rise to the notion of "green governmentality" or "environmentality." According to Fletcher and Cortez-Vazquez (2020), environmentality studies seek to understand the ways in which various environmental discourses and practices shape human interactions with the natural world (p. 1). Environmentality examines the mechanisms through which environmental issues are defined, regulated, and managed, often highlighting the role of power relations, knowledge production, and technologies of governance in shaping environmental policies and practices.

Fletcher and Cortez-Vazquez (2020) observe that initially, scholars applied the concept of environmentality to analyze global environmental governance structures, particularly those established post-1992 Rio Summit. For example, Rutherford (2017) notes that in 1999, Eric Darier published “Discourses of the Environment” which expanded the relationship between governmentality and nature, asserting that “we are witness to the biopolitical management of all life, where nature is rendered into populations of resources to be mapped, measured, and managed. Humans are also arranged in various populations through environmentality, and as such, their interactions with the environment are framed as in need of management” (p. 2).

Since then, Rutherford (2017) explains that environmentality, or green governmentality, has been applied to a number of cases, including "global climate change negotiations (Bäckstrand and Lövbrand 2006), to biodiversity protection (Youatt 2008), to the American Museum of Natural History (Rutherford 2011) – and places – from the rural Philippines (Dressler 2014) to Amazonia (Cepek 2011)," to the Kumaon forest in the western Indian Himalaya (Agrawal 2005) (p. 2). Elements of environmentality are embedded within my analysis when I analyze the zonation of biosphere reserves and its impact on human-nature relationships, as well as when I address the making of subjects within the Santa Marta Biopshere Reserve.

Neoliberal Approach to Sustainable Development

Research on sustainable development and conservation often situates itself within the neoliberal discourse. In her highly referenced paper in socioecological studies, "Selling Nature to Save it? Biodiversity and Green Developmentalism," McAfee (1999) criticizes supranational environmental institutions like the Convention on Biological Diversity (CBD), the World Bank, OECD patent offices, and the Global Environment Facility (GEF) for their attempt to regulate international flows of natural resources through an approach she calls "green developmentalism." McAfee (1999) argues that green developmentalism shifts the burden of ecological crises –a burden created by neoliberal policies and industrialization–onto economically disadvantaged countries rich in natural resources, reinforcing hegemonic hierarchies and wealth gap. McAfee (1999) argues that this paradigm commodifies nature extensively and "pins the fate of diversity on the outcome

of competition among economically powerful bidders in the global market whose care for biodiversity is temporary and only stretches as far as its monetary worth" (p. 151).

Further, since the 21st century, there's been a lively debate in anthropology and geography and other social sciences about "neoliberal conservation." According to Apostolopoulou et al. (2021), "this reflects a wider consensus among critical scholars that conservation has been increasingly creating new spaces and territories for capitalist governance and accumulation through processes of demarcation, enclosure, privatization, marketization, securitization and land grabbing for green and un-green purposes" (p. 1).

In "Towards a Synthesized Critique of Neoliberal Biodiversity Conservation," authors discuss previous papers that argue that neoliberal conservation is part of a current "Sustainable Development Historic Bloc' (Büscher et al., 2012). A historic bloc describes a moment in which diverse groups who share particular interests come together to form a dominant class, which dictates society's understanding of the world (p. 5). With the Sustainable Development Historic Bloc, this marks a "historical moment in which a transnational class of corporate CEOs, professionals, government officials and bureaucrats, NGO leaders, merchants, and the media are working together to overcome the crises outlined above by offering easy consumption- based solutions to complex socio-ecological problems." (p. 18). These authors frame sustainable development almost as a cop out, as well as a "remaking" of nature from community-managed spaces into transnationally regulated capitalized lands.

Moving Forward

My research contributes to both governmentality and environmentality studies. While my research does investigate the ways in which discourses, practices, and institutions shape human interactions with the natural environment, I also utilize broader aspects of Foucault's governmentality approach. My analysis does not seek to vilify neoliberal policies or practices within biosphere reserves as previous studies have. While economics may have a more dominant voice within the sustainable development discourse and within the biosphere reserve framework (as I discuss in my analysis), I do not believe that issues of conservation and sustainable development have been entirely reduced to economic terms within biosphere reserves. I do not see neoliberal conservation as *the* casual mechanism for biosphere reserves or protected areas, but I also recognize that neoliberalism has played a role in shaping the contemporary biosphere framework. Capitalist networks and strategies have hijacked and overridden environmental efforts numerous times with land grabbing and green washing schemes, but this is just one part of the story.

Theory

Framing Governmentality

At a methodological level, the framework of governmentality "can be regarded as a somewhat loose set of analytical tools and concepts, rather than a substantive theory about the forces and dynamics transforming society" providing an especially flexible and adaptable approach to governance (Walters, 2012, p. 3). Using governmentality as a theoretical framework within the social sciences is helpful to notice "all manner of subtle

(and not so subtle) shifts in rationalities, technologies, strategies, and identities of governance– shifts that are often overlooked or dismissed by perspectives that focus all their theoretical attention on the so-called bigger picture" (p.3). This process requires going beyond mere organizational operations to develop an understanding of how a particular institution is situated in the context of larger society. Analysts must instead look for and restructure "a whole network of alliances, communications, and points of support" (Senellart et al., 2009, p. 117). I attempt to do this with biosphere reserves and sustainable development, restructuring the way the biosphere reserves are traditionally thought about within the context of sustainable development through deconstructing their governance structures, spatial structures, and the network of scientists, indigenous persons, private/public organizations, and visitors involved in the biosphere.

Moreover, the concept of governmentality assists us in interpreting an ever-evolving world. Because governmentality embraces a view of power that is dispersed and networked, "in which the state is not a necessary or logical center but one amongst many historical configurations of government," the framework is adept at analyzing the intricacies of contemporary governance (Larner and Walters, 2004, p. 5). In this context, it is important consider a similar argument could also be made about examining a complex transnational issue solely through the lens of an international organization like the United Nations. Reiterated by Bornemann and Strassheim (2019) in their publication analyzing temporal implications of sustainability governance:

> Broadly, *governance* refers to all attempts of organizing collective action to reach common goals, such as sustainability. The concept reflects the empirical observation that in contemporary societies, collective issues are no longer dealt

> with by governments and public authorities alone. Rather, collective problem-solving is increasingly spread across society as a whole (Kooiman 2007). Collective issues are dealt with by numerous actors from different social areas who interact in different ways, including markets, hierarchies, and networks. It is, therefore, insufficient to look at formal rules and material acts of governing to understand how collective action works in a "governancialized" world. Rather, numerous and diverse informal and symbolic aspects such as discourses, narratives, and practices that structure, coordinate, and orient collective action must also be included in the analysis (p. 3).

This quote suggests that governance encompasses all efforts to organize collective action toward common goals like sustainability. It highlights that in modern societies, addressing collective issues is not solely the responsibility of governments; instead, governance involves various actors from different sectors interacting through markets, hierarchies, and networks. Understanding governance requires looking beyond formal rules and actions to include informal elements like discourses and practices that shape collective action. In this way, governance can be viewed as an assemblage of discourses, practices, visibility, and other technologies of governance. To analyze governance in the way that Bornemann and Strassheim (2019) describe above, I apply Foucault's work on governmentality to the sustainable development discourse and biosphere reserves.

Governmentality Approach to Sustainable Devleopment

A governmentality approach to sustainable development within biosphere reserves helps us think of biosphere reserves not as detached spaces of science, but as socially embedded practices intertwined with expertise, history, and political strategy. I contribute to a lesser-studied area of biosphere reserves and sustainable spaces more broadly– the technologies of governance that constitute biosphere reserves as something governable. With this understanding, I ask the questions: Under what conditions did biosphere reserves

become reimagined as a solution to problems of sustainability and development? How is this biosphere model being governed today? What are the constitutive elements?

I explore the history of the sustainable development discourse by looking at the transformation of the biosphere reserve program and investigating the practices and narratives that make biosphere reserves spaces to govern. Within this context, I argue that contemporary biosphere reserves are made possible especially by transformations in discourse, expertise, visibility, and subjectification.

Mode of Analysis: Technologies

Rooted in Foucault's construction of governmentality is what Miller and Rose (2008) refer to as "technologies of government." Technologies

> were assemblages of persons, techniques, institutions, instruments for the conducting of conduct… this referred to all those devices, tools, techniques, personnel, material and apparatuses that enabled authorities to imagine and act upon the conduct of persons individually and collectively, and in locales that were often very distant (Miller and Rose, 2008, p. 16).

Essentially, technologies are the mechanisms through which governing takes place. In my research, I chose to investigate discourse, expertise, visibility, and subjectification within biosphere reserves and the larger sustainable development discourse.

Technology 1: Expertise

Central to Foucault's governmentality theory is the understanding that knowledge and power are inextricably linked. Problems, says Miller and Rose (2008), "came at some point, to be articulated in terms of a more or less formalized knowledge… In any event, we were particularly interested in those moments when a problem became a focus for analysis by those who claim expertise deriving from one or more of the developments of social and

human sciences" (p. 15). In simpler terms, experts dictate what becomes known about different populations. They make populations visible in particular ways, intelligible relative to specific problems This extends beyond just people, but also to economies, ecosystems, regions, and other subjects of governance. The "experts" have the ability to problematize new aspects of issues while also serving as "translation devices between 'authorities' and individuals, shaping conduct not through compulsion but through the power of truth, the potency of rationality and the alluring promises of effectivity" (Rose and Miller, 2008, p. 43).

Expertise includes the specific people and techniques that make possible new programs and governable spaces. Miller and Rose describe expertise as "that complex amalgam of professionals and quasi-professionals, truth claims, and technical procedures" (p. 33) which enable programs of government to act upon and intervene upon people, places, and populations of their concern. Indeed, experts show up in many forms. As of 2022, the White House recognizes indigenous expertise stating that "Indigenous Knowledge is a body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Tribes and Indigenous Peoples through interaction and experience with the environment" (The White House, 2022). In this way, expertise is not qualified only by degrees, but also lived experiences. In my project, this becomes relevant when analyzing UN technocrats as form of expertise in biosphere reserves in comparison to indigenous persons.

Technology 2: Visibility

Along with expertise comes visibility. The concept that making something visible renders it governable involves the act of bringing an issue or phenomenon into public awareness and transforming it into a subject of authority and scrutiny. Visibility draws attention, prompting the development of policies, regulations, and societal responses to engage with and address the issue at hand. In essence, visibility acts as a catalyst for the governance process, determining how an issue/phenomenon is defined, categorized, or situated into society. This in turn reflects how societies recognize, understand, and ultimately manage or govern issues.

Perhaps one of the most important forms of visibility that influences perception of the environment is via the lens of science. Rutherford (2017) writes, "the supposed impartiality, objectivity, and dispassion of science lend it an authoritative voice to speak for the wellbeing of life" (p.2). Through graphic representations, modeling, statistics, and forecasts, experts govern the public's understanding of nature, producing what Foucault coins as "regimes of truth." "Through their day-to-day conceptual and practical work, scientists classify and reclassify the subjects and objects of nature and society, carving up the world into distinct ontological types and occasionally creating entirely new taxonomic categories" (Miller, 2007, p. 338). With biospheres, scientific reports are produced categorizing species, measuring levels of biodiversity, and mapping the areas of core zones, buffer zones, and transition areas – all of which influence our understanding of the environment and our interactions with it. Each of these mechanisms contribute to a representation of what is to be governed and how it 'should' be governed (Miller and Rose,

2008). More broadly, the literature on biospheres transitioned as sustainable development and the concept of market-based solutions were introduced into academia. Though scientific reports still make up a heavy load of the literature, other publishings make visible biosphere reserves as a solution, not only to sustainability, but also as fulfilling the need for economic growth.

Technology 3: Discourse

Building from expertise and visibility, discourses are formed. Discourses provide a certain vocabulary that can be drawn upon, they harbor meta-ideas that can travel from one problem to another. Discourses tell a story and shape how we think of particularly abstract concepts. Miller and Rose (2008), understand discourse as "a technology of thought, requiring attention to the particular technical devices of writing, listing, numbering and computing that render a realm into discourse as a knowable, calculable and administrable object" (p. 30). For example, sustainable development was not just a new vocabulary word that entered the global scene in the 1980s, but with it came a new importance accorded to regulating the environment in such a way that was not an obstacle but rather an ally to economic efficiency. Further, discourses can be translated into specific domains and therefore become more empirical, consequential, and constitutive. Biosphere reserves can be governed as spaces of sustainable development in part because the discourse of sustainable development becomes more adaptive to allow for an economic/market dimension.

Technology 4: Subjectification

I will also be analyzing modes of subjectification within biosphere reserves. Miller and Rose (2008) explain the process of subjectification as the following:

> Governing operates through subjects… To the extent that authoritative norms, calculative technologies and forms of evaluation can be translated into the values, decisions, and judgements of citizens in their professional and personal capacities, they can function as part of the 'self-steering' mechanisms of individuals. Hence 'free individuals and 'private' spaces can be 'ruled' without breaching their formal autonomy. To this end, many and varied programs have placed high value upon the capacities of subjects, and a range of technologies have sought to act on the personal capacities of subjects– as producers, consumers… orienting them in the decisions and actions that seem most 'personal' (p. 42)

Foucault understood subjects to be influenced by the practices of government that they may be unaware of. Foucault explained that "there are two meanings of the word 'subject:' subject to someone else by control and dependence and tied to his own identity by a conscience or self-knowledge" (Foucault, 2000, p. 331). In other words, 'subject' involves both the notion of an object being acted upon (as it is influenced by discourse) and an actively aware subject. Within the Santa Marta Biosphere Reserve, I investigate the tension between the ecotourist subject and all-knowing indigenous subject. I demonstrate how stakeholders utilize the 'ecotourist' subject to further encourage consumption of the biosphere reserve and at the same time, sustainable development.

To reiterate this study examines the following question: Under what conditions did the concept of biosphere reserves become reimagined as a solution to problems of sustainability and development? How was/is this new biosphere model being organized/governed today? I explore the history of the sustainable development discourse by looking at the transformation of the biosphere reserve program and investigating the

practices and narratives that make biosphere reserves spaces to govern. Within this context, I argue that contemporary biosphere reserves are made possible especially by transformations in discourse, expertise, visibility, and subjectification.

Research Design

Case Study

I selected the Sierra Nevada de Santa Marta Biosphere Reserve and National Park for my study space due to my proficiency in Spanish and the availability of tourist experiences available. This choice was influenced by Georgia Southern University's inclusion of the biosphere reserve in its study abroad trips to Colombia. The Sierra Nevada was deemed a Biosphere Reserve in 1979. The reserve is 2,115,800 hectares, divided between the Sierra Nevada de Santa Marta and Tayrona National Park (UNESCO, 2019). This biosphere reserve includes sacred ancestral lands of four Indigenous Peoples: the Kogi, Arhuaco, Wiwa and Kankuamo. In general, biosphere reserves are organized into three zones– "a protected core, a buffer zone where only conservation-compatible activities like ecotourism and scientific research are tolerated, and a transition zone where the sustainable use and extraction of natural resources is permitted" (Doyon and Sabinot, 2014, p. 134)

The legal structure of biosphere reserves is networked, involving not only governmental authorities but also local communities, non-governmental organizations (NGOs), scientific institutions, and other stakeholders. Although the designation and maintenance process are state initiated, there are established criteria outlined in the UNESCO framework from 1995 that must be met to maintain the biosphere title. This

framework emphasizes the promotion of environmentally sustainable economic activities as a key element in advancing both sustainable development and environmental conservation (Doyon and Sabinot, 2014, p.134). In the Santa Marta Biosphere Reserve, ecotourism is the primary form of sustainable development.

According to the Colombian Natural National Park archives (2017), between 1995 and 2016, the number of visitors to Tayrona National Park increased. However, starting in 2005, the year the Tayrona Concession Union began operating ecotourism services in the park, a significant increase in the number of visitors is evident. Between 1995 and 2005, 713,345 visitors visited the protected area, while between 2006 and 2016, 2,922,489 visited, showing an increase of 307.9% between the described time periods. In 2019 alone, 458, 755 people visited Tayrona National Park (Parques Nacionales Naturales de Colombia, 2019). Despite small drops in tourist numbers in 2020 as a result of the pandemic, Tayrona National Park has since regained its tourists loads.

According to the Santa Marta biosphere reserve ecotourism plan, which conducted satisfaction surveys to consumers in 2013, 2014, and 2015 found that the motivations of highest demand identified by the visitors were chosen, namely: contact with nature, rest, ecotourism, history, and culture (Parques Nacionales Naturales de Colombia, 2019). The general profile of visitors to Tayrona National Natural Park consists mainly of individuals aged between 26 and 35 years old, with university or technical education. Most are employed with an income range of 1 to 4 times the monthly legal minimum wage. They prefer camping and hammocks for accommodation, stay for 2 to 4 days in the park. For visitors motivated by nature contact, rest, ecotourism, and history/culture, the profile remains similar, with slight variations in age range and specific interests. Generally, these

visitors are also individuals aged between 26 and 35 years old, with university education, employed, and with an income range of 1 to 4 times the monthly legal minimum wage. They typically stay in camping areas for 2 to 4 days (p. 66).

This data is useful to validate the relevance of my analysis, particularly the section on subjectification. The university students that I interviewed in 2023 hold similar profiles to that of 2013, 2014, and 2015.

Methods

Given the framework for the analysis of governmentality formation described in my theory, the methodological choice of this paper is both historical and present-oriented qualitative research on the construction and maintenance of Tayrona National Park as a UN designated biosphere reserve. The purpose of qualitative research is to "analyze how people understand, experience, interpret, and construct the social world" (Miller and Rose, 2008, p.1). Thus, the nature of qualitative research is interpretive and dependent upon the lived experiences of people. Rather than analyzing a "fixed, preestablished, predetermined, social reality," qualitative researchers view "the social world, knowledge, meanings, and notions of reality as contingent and dynamic" components that shape human experiences (Miller and Rose, 2008, p. 1). Qualitative analysis provides a set of tools for researchers to draw inferences and to interpret evidence from observation, interviews, and primary documents. This approach aims to offer a contextualized and interpretive narrative of a prominent transnational humanitarian concern.

I use Foucault's technologies of governance to analyze sustainable development within the biosphere reserve and the consequent subjectification of the 'eco-tourist.' After reviewing the limited amount of available secondary literature regarding tourist experiences in biosphere reserves, I collected testimonies from students through semi-structured interviews. The collected oral histories were put in context with help of an extensive review of secondary sources and comprehensive primary archival research. The outcome of this research is not to quantify evidence and code data, but to offer a contextualized and constitutive interpretation of sustainable governance, observed through experiences and reflections in biosphere reserves. Further, I analyze the historical context of texts discussing the biosphere reserve concept and sustainable development. My focus is on understanding how these concepts are put into practice within biosphere reserves. While ethnographic research for this topic would be invaluable to this kind of research, it is beyond my available means within my undergraduate research.

My research consists first of a deeply contextual reading of UN policy documents regarding biosphere reserves in general, Colombian policy documents regarding the Santa Marta Biosphere Reserve and Tayrona National Park specifically, as well as ecotourism packages provided by local tourism services within the park ("Travel Agency in Colombia | Indigenous Tourism | Wiwa Tours," 2015). I pay special attention to the strategic, organizational and narrative elements of policy formulation. I utilized the UNESCDOC Digital Library to find reports between 1970 to present regarding biosphere reserves, ecotourism, and sustainable development. I used the Colombian government's national park website and archives to find management and ecotourism implementation plans within

the park (Colombia, n.d.). I reached out to numerous tourism agencies within the Santa Marta Biosphere Reserve for the different services they offered. The UN documents and park plans allow me to see forms of political visibility; understand 'sustainability' and its operationalization; and the strategic rationales the UN presents for setting up programmes– such as the Man and Biosphere Programme. The ecotourism packages build on this analysis, while also providing a space to better understand the utilization of companies of the already existing 'ecotourist.' Through content analysis, I can identify forms of power within the biosphere reserve's structure and gain a deeper understanding about how the UN is producing knowledge about the sustainability discourse and making possible the subject-reality of the eco-tourist. I have chosen a content analysis because this research investigates the strategies of governance at play in biosphere reserves and society's complex relationship with the environment amidst the growth of the sustainable governance paradigm.

Interviews

Original research took place through semi-structured interviews with Georgia Southern students who visited Tayrona National Park during their study abroad trip in 2023. My interviews were approved by the Georgia Southern Institutional Review Board (protocol H24061). The purpose of student interviews was to understand the subjectification of 'ecotourist', how this occurs, and the extent to which it actually occurs or not. Their experiences demonstrate tourist encounters with sustainable development from a consumer perspective. Semi-structured interviews provide a flexible space for the researcher to consider new ideas, without being confined to a strict set of questions. There

exists freedom for research participants to elaborate on their experiences, offering perhaps previously unexamined facets of the research topic.

Within each interview, I utilize narrative analysis techniques to assess the lived experiences and transformations embedded in the stories of the research participants regarding sustainable governance. Narrative analysis allows for a dual interpretation: research participants are able to interpret their own lives through narrative and I, the researcher, can interpret the construction of that narrative (Valdivia, 2015, p. 470)

The timeline of this study was approximately four months (2023). Each interview was conducted using Zoom, a widely recognized and reliable video conferencing platform. Prior to the interviews, all participants provided their informed consent by signing a waiver that explicitly mentioned the recording of the video call. At the beginning of the interview, I reconfirmed verbal consent with the participant. All questions focused on gaining understanding of the management of the park and the takeaways from tourists as a result of this management.

Analysis

My approach to studying biosphere reserves is to see them as an assemblage of different elements of governance–visibility, expertise, discourse, and subjectification–coming together and shifting. This analysis does not seek to identify a single cause or feature of biosphere reserves that is most important, but I use this analysis as a case study to investigate complexity, tensions, positive and negative outcomes of the contemporary sustainable development discourse as well as contemporary governance within biosphere reserves. By tying together visibility, expertise, discourse, and subjectification, I provide a

more honest, holistic, and rigorous analysis of how these types of transformations take place. The following sections will take you through the different elements of governance, identify where they are seen in the construction of biosphere reserves, and implications/importance of governing this way.

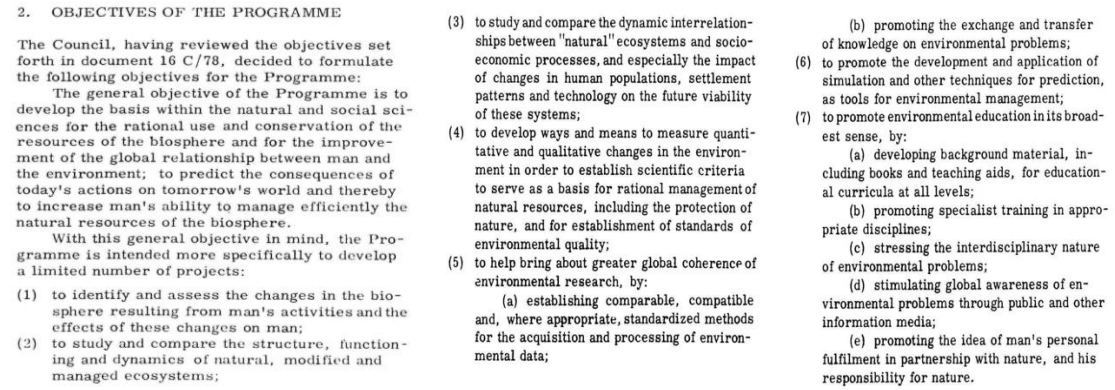
Genealogy of the Sustainability Discourse within Biosphere Reserves

The Man and the Biosphere Program was established in Paris in 1968, a product of the Biosphere Conference. Michel Batisse (1993)[1] declared that the initial purpose of the program was:

> to develop within the natural and social sciences a basis for the rational use and conservation of resources of the Biosphere and for the improvement of the global relationship between man and the environment; and to predict the consequences of today's actions on tomorrow's world and thereby increase man's ability to manage efficiently the natural resources of the Biosphere" (UNESCO, 1971, p. 7)

UNESCO urged its member states to establish MAB committees and initiatives within their borders and to identify specific sites (a.k.a. biosphere reserves) where these principles could be implemented. This led to the creation of a global network of sites representing each of the planet's 193 biogeographical regions, with the first designations of biosphere reserves in 1976. Today, this network is known as the "World Network of Biosphere Reserves." These designated areas were created to address conservation in a way that involved broader economic, social, and cultural contexts.

[1] Michel Batisse served as the Assistant Director-General of UNESCO for science from 1972 to 1984 and played a pivotal role as one of the architects of the 1972 World Heritage Convention. He is renowned as a key figure in the establishment of the MAB (Man and the Biosphere) Programme and the conceptualization of biosphere reserves.



2. OBJECTIVES OF THE PROGRAMME

The Council, having reviewed the objectives set forth in document 16 C/78, decided to formulate the following objectives for the Programme:

The general objective of the Programme is to develop the basis within the natural and social sciences for the rational use and conservation of the resources of the biosphere and for the improvement of the global relationship between man and the environment; to predict the consequences of today's actions on tomorrow's world and thereby to increase man's ability to manage efficiently the natural resources of the biosphere.

With this general objective in mind, the Programme is intended more specifically to develop a limited number of projects:

(1) to identify and assess the changes in the biosphere resulting from man's activities and the effects of these changes on man;
(2) to study and compare the structure, functioning and dynamics of natural, modified and managed ecosystems;
(3) to study and compare the dynamic interrelationships between "natural" ecosystems and socio-economic processes, and especially the impact of changes in human populations, settlement patterns and technology on the future viability of these systems;
(4) to develop ways and means to measure quantitative and qualitative changes in the environment in order to establish scientific criteria to serve as a basis for rational management of natural resources, including the protection of nature, and for establishment of standards of environmental quality;
(5) to help bring about greater global coherence of environmental research, by:
(a) establishing comparable, compatible and, where appropriate, standardized methods for the acquisition and processing of environmental data;
(b) promoting the exchange and transfer of knowledge on environmental problems;
(6) to promote the development and application of simulation and other techniques for prediction, as tools for environmental management;
(7) to promote environmental education in its broadest sense, by:
(a) developing background material, including books and teaching aids, for educational curricula at all levels;
(b) promoting specialist training in appropriate disciplines;
(c) stressing the interdisciplinary nature of environmental problems;
(d) stimulating global awareness of environmental problems through public and other information media;
(e) promoting the idea of man's personal fulfilment in partnership with nature, and his responsibility for nature.

Figure 1. (UNESCO, 1971. International Co-ordinating Council of the Programme on Man and the Biosphere (MAB), first session, Paris, 9-19 November 1971: final report– UNESCO Digital Library. https://unesdoc.unesco.org/ark:/48223/pf0000002070)

The following image from the 1971 MAB meeting in Paris demonstrates conservation as the initial priority of the biosphere concept. At this time, biosphere reserves served as platforms predominantly for research, information exchange on both regional and global scales, and the collaborative management of conflicting interests and multiple uses of a given territory. It is important to note that while these sites we perhaps ahead of their time regarding sustainable development, the term "sustainable development" had yet to enter the international area.

However, in 1987, the United Nations Brundtland Commission defined sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations, n.d.). Following the 1992 United Nations Conference on Environment and Development Rio Earth Summit, which produced Agenda 21[2], the intent of the MAB program shifted towards "interdisciplinary problem-

[2] Agenda 21 is a non-binding global framework for sustainable development created by the UN, aiming to address environmental, social, and economic challenges facing the world.

oriented research to facilitate decision-making for sustainable land-use and development" (Batisse, 1993, p. 111).

The shift towards sustainable development paralleled the protected areas paradigm to include a number of standard requirements (e.g., recognizing coastal and marine regions; delineating protected area boundaries; emphasizing prevention of ecological isolation and establishing interconnected networks of protected areas). In doing so, the biosphere reserve concept added a *transition area* to its model, which prior to the Seville Strategy in 1995, included only a *core zone*– "a strictly protected zone that contributes to the conservation of landscapes, ecosystems, species and genetic variation"–and *buffer zone*– which "surround or adjoin the core area(s), and are used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education" (UNESCO, n.d.). The transition area, as designated by the Seville Strategy (1995), is an area of "co-operation, which may contain a variety of agricultural actives, settlements, and other uses in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic and other stakeholders work together to manage and sustainably develop the area's resources" (p. 4).

The addition of the transition area is significant to the biosphere reserve model in the way that it openly connected protected areas to the greater landscape. As a result of the growing sustainable development discourse, the idea of protecting nature by means of strict preservation evolved into integrated, multi-use landscapes. This concept set the tone for the transition into "collaborative governance, where local stakeholders are empowered to play an active role in protected area management" (Pollock, 2009, p. 59)

At the international level, the Seville Strategy (1995) also called for the establishment of transboundary biosphere reserves (biosphere reserves that span across borders) and to link biospheres to one another, as well as other protected areas by means of green corridors and other ways that enhance biodiversity conservation. Member States were encouraged to ensure that these links were maintained, demonstrating the push towards more collaborative sustainable governance.

The Seville Strategy (1995) separates itself from the previous documents such as the Brundtland Commission and Agenda 21 with its heavy implementation of market-based language. Phrases like “survey the interests of various stakeholders, “evaluate the natural products and services,” “promote environmentally sound and economically sustainable income opportunities for local people” appear throughout its body with much more emphasis on economic potential of conservation and development than in previous efforts. From this point forward, the discourse of sustainable development began to intertwine more deeply with economic principles, shifting the focus towards market-oriented approaches within conservation strategies.

Beyond the Seville Strategy (1995), the Madrid Action Plan for Biosphere Reserves (2008- 2013), the international MAB Conference "For life, for the future: Biosphere reserves and climate change", with the Dresden Declaration (2011), the MAB Strategy (2015-2025), the Lima Action Plan (2016- 2025), and the Post-2020 Global Biodiversity Framework have continued to emphasize biosphere reserves as “learning sites” sites for sustainable development. These prominent documents build on the sustainable development discourse, urging collaborative governance through participatory approaches

to governance and management with stakeholders and rightsholders and stressing the importance of local and indigenous communities to implementing biodiversity conservation goals. I believe that these transformations in biosphere governing documents demonstrate not only the shifting narrative of the sustainable development discourse from the 90s into the 2000s, but also make biosphere reserve's increasingly relevant to sustainable development's agenda.

As sustainable development discourse evolves in the 21st century, new themes within biosphere frameworks have emerged, particularly focusing on strengthening the connections between cultural and biological diversity. This emphasis not only enhances the relevance and viability of biosphere frameworks in contemporary contexts but is now officially a designated function of biosphere reserves highlighted in UNESCO's recent planning documents. This includes cultural landscapes, sacred sites, biosphere reserves, and World Heritage sites. Many biosphere reserves share other international designations such as World Heritage Site, Ramsar site and UNESCO Global Geopark. This interconnectedness increases the visibility and support for biosphere reserves, allowing for greater collaboration and resources to be allocated towards their conservation and sustainable development efforts.

The Role of Science/Expertise

It is worth noting that between the 1970s into the early 90s, on an international level, the 'expertise' regarding how to advance in sustainable development and protect the biosphere was almost exclusively accredited to scientists and technologists. Agenda 21 (1992) states "Scientists and technologists have a special set of responsibilities which

belong to them both as inheritors of a tradition and as professional and members of disciplines devoted to the search for knowledge and to the need to protect the biosphere in the context of sustainable development" (UN Department of Public Information, 1993, p. 295).

In the following years, the concept of biosphere reserves was redefined to prioritize sustainable development, aligning with the trend of incorporating local populations into protected areas, conducting research both within and beyond core areas, and facilitating active international knowledge sharing.

The Seville Strategy (1995) acknowledges the 'wisdom' of rural communities, but once again gives hierarchy to scientists, stating that

> "The UNCED process laid out the alternatives of working towards sustainable development, incorporating care of the environment and greater social equity, including respect for rural communities and their accumulated wisdom…. The global community also needs working examples that encapsulate the ideas of UNCED for promoting both conservation and sustainable development. These examples can only work if they express all the social, cultural, spiritual and economic needs of society and are also based on *sound science*" (p.5).

Evidently, in the 1990s, the primacy of scientific knowledge in guiding conservation and development efforts remained in biosphere reserves.

However, in the recent document, "The role of UNESCO biosphere reserves in the implementation of the Convention on Biological Diversity's post-2020 Global Biodiversity Framework: policy brief" (2022), UNESCO writes, "envisioned as 'learning spaces', they [biosphere reserves] constitute ideal places to develop adaptive monitoring frameworks which are co-produced and integrate multiple forms of knowledge, from scientific understanding to Indigenous and local knowledge" (p. 6). In this quote, scientific and

indigenous knowledge are both given recognition as “expertise” on a much more even playing field than in the decades before. This is further supported in the Lima Action Plan (2016), stating the need to “Ensure processes for implementing, managing, monitoring and periodic review of BRs are open and participatory and take into account local and indigenous practices, traditions and cultures” (p. 6). The integration of scientific and indigenous knowledge in monitoring and managing biosphere reserves reflects a shift towards more inclusive and participatory approaches in environmental governance, emphasizing the need for collaboration and respect for local cultures and traditions.

I believe that this shift in the role of expertise to be more *inclusive* plays a large part in why biosphere reserves continue to function today and are supported by the international community at large. Moreover, UNESCO's explicit recognition of the significance of local knowledge in governance underscores the importance of community involvement and empowerment within biosphere reserves. By establishing a knowledge base on cultural practices that promote sustainable biodiversity use at the local level, biosphere reserves can effectively engage and benefit local communities, fostering a sense of ownership and stewardship over their natural and cultural heritage.

Visibility Within the Framework of Biosphere Reserves Today

Based on Article 3 of the Statutory Framework, biosphere reserves must fulfill three main functions:

1) *Conservation*: conservation of natural and bio-cultural diversity
2) *Development*: support for sustainable economic and social development and cultural diversity
3) *Logistic Support*: support and promotion of model projects, training and education for sustainable development, research and monitoring linked to

nature conservation and sustainable development at the local level, while taking into account national and global scales.
(UNESCO, 2022b).

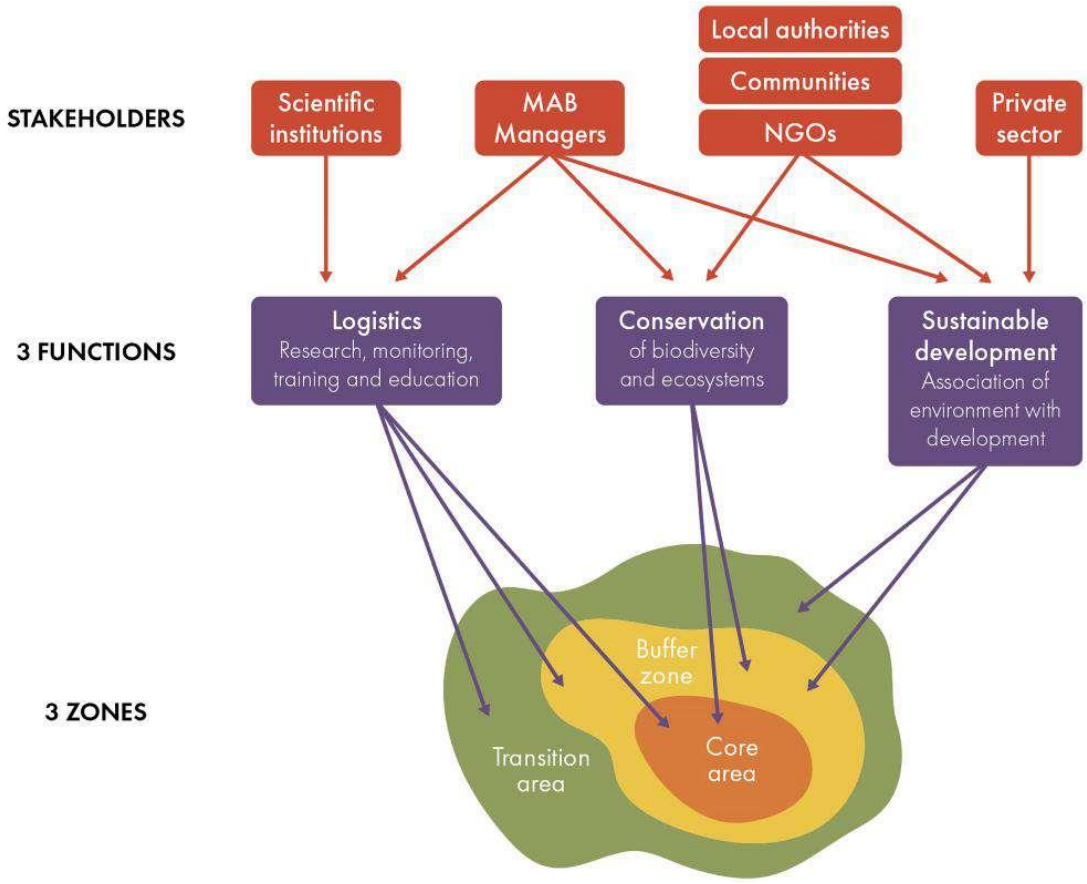


Figure 2. Hugé, J., Rochette, A.J., Janssens, I., Bocquet, E., 2022. Biosphere Reserves: Living laboratories for sustainable development, in: Guidance for the Assessment of Ecosystem Services in African Biosphere Reserves: A Way Forward to Sustainable Development. UNESCO.

This framework relies on visibility. For example, the zonation of biosphere reserves provides a very interesting and constitutive form of visibility and categorization being put into practice. Zonation makes visible the "value" of specific areas of land. Land within the core area is considered the most important to conserve and therefore must be legally protected by the state and human activities are to be controlled. Often, human activity is prohibited unless it is deemed non-destructive scientific research, monitoring, low impact

education, and now sometimes indigenous communities. On the ground, core areas are expected to visibly "provide an example of what a specific ecosystem would look in the absence of –or with only minimal– human interference, or the result of a long-term human-nature relationships, illustrating how ecosystems function without extensive human intervention" (UNESCO, 2022b, p. 35). Less ecologically significant zones however, such as the buffer and transition zones, can implement human activities. These zones really facilitate the integration of socio-economic development objectives. Transition zones typically have no legal transitions, "but all activities should eventually become sustainable with the help of the site's designation as a biosphere reserve" (p.40). Visibly dividing the reserve into distinct zones with different levels of protection and land use regulations mediates a sort of controlled environmental consciousness for those living in, working in, or visiting the biosphere reserve.

Further, the logistics function of biosphere reserves relies heavily on research and monitoring, to produce (and make visible) information at local and regional levels to advance conservation and development. Education, training, and professional development initiatives further supplement research and monitoring, providing knowledge to various stakeholders, whether it be local populations or tourists within the biosphere.

It is this localized knowledge being made "visible" that allows biosphere reserves to realize their potentials and the expectations held for them. As the United Nations produces documents like Agenda 21, the Millennium Development Goals, as well as the Sustainable Development Goals, biosphere reserves are expected to produce quantifiable (visible) results to achieve these goals, within a time frame. In this way, biosphere reserves

represent a concrete means of addressing international obligations. Individual biosphere reserves may also engage in producing environmental reports or conducting socio-economic surveys to develop comprehensive indicators of sustainability, which again make visible/dictate the current state of the environment and socio-economic factors within their respective regions.

This visibility informs decision-making and the formulation of policies and strategies for conservation and sustainable development. Introduced in Article 9 of the Statutory Framework in the Seville Strategy (1995), biosphere reserves are subject to a periodic review every 10 years. This process gave structure to visibility related to sustainable development as biospheres are required to demonstrate satisfactory management and improvement to the International Coordinating Council to maintain the biosphere title. In the UNESCO Report "Technical Guidelines for Biosphere Reserves" (2022), when assessing the functionality of biosphere reserves, evaluators are asked to reflect on how the biosphere:

a) Fulfills the technical requirements of the Statutory Framework of the WNBR
b) Provides *added value* for local communities
c) Works with various stakeholders within and beyond the biosphere reserve

(p. 98).

The sustainable development function of biosphere reserves also relies on visibility. It emphasizes the development of 'best practices' that can be shared globally. These practices involve various strategies such as adding value to local resources to boost local employment and community investments, marketing local products and services,

supporting small businesses in emerging markets, and attracting eco-tourism based on local landscapes and cultural heritage.

The connection to "visibility" lies in the emphasis on branding, marketing, and promotion of local products and services. By enhancing the visibility of these offerings, such as agricultural products or crafts, and promoting eco-tourism based on the area's unique features, these initiatives aim to increase awareness and attract attention from potential consumers and tourists. Additionally, the focus on participatory decision-making and knowledge-sharing networks enhances the visibility of local communities and their involvement in sustainable development efforts. This increased visibility can lead to greater recognition, support, and investment in these communities and their initiatives, ultimately contributing to their socio-economic development and conservation goals.

Subjectification: Santa Marta Biosphere Reserve

As a result of the sustainable development discourse morphing into a sort of "sustainable economic development," ecotourism/tourism has naturally become a primary output driving economic development within biosphere reserves, including in the Santa Marta Biosphere Reserve (Wilson et al., 2023). As a reminder from my Research Methods section, since the introduction of ecotourism initiatives and strategies in 2005 in Tayrona National Park, tourism numbers have jumped immensely. Based on my interviews with Georgia Southern Students who visited Tayrona National Park in the summer of 2023, as well as analyzing different ecotourism packages offered within the biosphere reserve, I have noticed two comparable subject formations.

Firstly, there exists a framing of the ecotourist as a responsible global citizen and active participant in sustainable development. This framing emphasizes the role of tourists in contributing positively to the environment and local communities through their choices and actions. Secondly, there is a depiction of indigenous peoples as holders of valuable knowledge, sometimes portrayed as distant or unattainable. Additionally, there is often a portrayal of indigenous communities as impoverished and in need of assistance, thus positioning them as beneficiaries of tourism revenue.

Many respondents highlighted how tourism serves as the primary source of income for both local and indigenous populations, with indigenous communities relying on these funds for their livelihoods. Multiple respondents mentioned how the indigenous people "genuinely take care of the land," leaving it looking as if it was "untouched," "a movie," and "truly the wilderness." Even the UNESCO courier referred to indigenous persons as "informed custodians of biodiversity" (Bates, 2021).

This subject-making is further supported by the language in eco/indigenous tourism packages offered within the biosphere reserve. Within these packages, the authors write "The indigenous people will make you feel at home; they are all very friendly and helpful, showing you how they have been living in harmony with nature for many years" (Agencia de Viajes Indigena Wiwa Tours Colombia, 2023, p. 44). At the end of the packages, checklists are shown (Figure 3) which emphasize an indigenous guide, interaction with indigenous culture, as well as how this tour contributes to indigenous communities and peasant communities. I believe this further poses the tourist as making a socio-economic

difference in the biosphere reserve, a true participant in sustainable development, simply by choosing this type of a tour.

Figure 3. Agencia de Viajes Indigena Wiwa Tours Colombia, 2023. Portfolio Wiwa Tour.

Furthermore, the pricing of sustainable ethnotourism packages within the biosphere reserve reflects the exclusivity of these experiences, with prices ranging from $170 USD for a two-day hike to $560 USD and $620 USD for longer expeditions. While these prices may be justified by factors such as financing tourism companies and providing fair wages to workers, they effectively limit access to these experiences for certain individuals,

potentially excluding national populations. Overall, the framing of ecotourism within the biosphere reserve portrays tourists as agents of positive change and indigenous communities as both recipients of support and repositories of valuable knowledge, creating a narrative of sustainable development through tourism.

Conclusion

My research demonstrates how transformations in discourse, expertise, visibility, and subjectification contributed to the creation of the Man and Biosphere program and how these shifts continue to make biosphere reserves necessary today. Further, I explored the history of the sustainable development discourse by looking at such transformations of the biosphere reserve program. Through using Foucault's theory of governmentality, I now have a better understanding of how sustainable development transformed into a literal programmatic space. My research revealed the importance of biosphere reserves as facilitators of networked global governance.

The introduction of the United Nations term "sustainable development" to the global and academic arena changed the way society viewed and governed the environment, therefore impacting human interactions with the environment. Protected areas shifted from spaces with the strict mission of conservation to spaces involving interdisciplinary problem-oriented research, market- and community-based initiatives, as well as participatory approaches to governance (a.k.a. biosphere reserves). This was reflected within the policy documents outlining frameworks for biosphere reserves over the past six decades. At the same time, the sustainable development discourse continues to make biosphere reserves relevant today as it frames them as a solution to a global

issue. Today, the biosphere reserve model continues to shift as more emphasis is placed cultural value of these sites, strengthening connections between cultural and biological diversity.

Shifts in the perception of who is considered an expert also shaped how biosphere reserves were once governed and how they are governed today. Formerly governed exclusively by scientists and technologists–as evidenced by the restrictive language in policy documents and the limitation of access to the core zone to only scientists–biosphere reserves have now evolved to incorporate indigenous knowledge into decision-making, management, and research processes. The importance of indigenous knowledge is now recognized in policy documents outlining the new structure of biosphere reserves. Further, in parks like the Santa Marta Biosphere Reserve, indigenous persons can close tourist access periodically if deemed necessary for the environment.

Visibility within the framework of biosphere reserves remains essential for determining human relationships with the environment. Zonation designates the "value" of a particular area of land, and with this designation follows a certain set of regulations regarding how humans can or should interact with nature. Periodic reviews make visible the environmental and socio-economic statuses of biosphere reserves, as well as the state of the environment in relation to meeting the SDGs. Periodic reviews and initiatives focused on branding, marketing, and promotion of local products and services continue to validate the need for and value of the biosphere reserve label.

Within my research I found ecotourism to be a natural outcome of the sustainable development discourse embedded within biosphere reserves, which fulfills the economic

development portion of the discourse. With multiple decades of the implementation of ecotourism in the Santa Marta biosphere reserve, I noticed the formation of two subjects, including the responsible ecotourist and the indigenous unattainable knowledge holder. The creation of these contrasting subjects further promotes the sustainable development agenda as both appear dependent on the other to receive something, whether it be economic gains, knowledge, or feeling good about making 'responsible' choices. However, the exclusivity of sustainable eco- and ethnotourism packages raises questions about accessibility and inclusion within these initiatives.

Overall, my research demonstrates one example of how sustainable development and sustainable governance has become translated into a concrete global program. However, there exist additional programs and initiatives that have emerged as a result of the sustainable development discourse worth studying. These include REDD+ (Reducing Emissions from Deforestation and Forest Degradation), the Sustainable Devleopment Goals, Payments for Ecosystem Services (PES), UNESCO World Heritage Sites, etc. As global governance becomes centered around marrying different objectives into one apparatus, it is important to continuously contextualize, analyze, and deconstruct these efforts. Moreover, as new challenges emerge and global priorities shift, ongoing evaluation and adaptation of existing programs, such as biosphere reserves, are essential to ensure their continued relevance and efficacy in addressing evolving sustainability issues. Researchers and policymakers can turn towards the creation and evolution of the biosphere reserve model when considering advancing sustainable development, especially when addressing networked problems that require networked solutions. I

believe future research investigating the impact of zonation in biosphere reserves on local and indigenous populations' relationship to the environment over the past few decades is an unresearched area. Further, as the sustainable development discourse maintains its dominance in global governance, additional investigation of the tension between sustainability and economic development should be carried out.

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Appendix

Consumers:

Can you describe your experience at Tayrona National Park? What stood out to you? What was the environment like around you?

How did you feel about your role as a tourist? Did you feel like a consumer? A participant? Can you explain?

After your visit to Tayrona National Park, what do you think about biospheres now? How did this experience impact you?