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**CONSERVATION COMMUNICATION AND LOCAL GOVERNANCE
OF *XENCONSERVATION*: A PEATLAND IN JIMENEZ,
MISAMIS OCCIDENTAL, PHILIPPINES**

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CONSERVATION COMMUNICATION AND LOCAL GOVERNANCE OF XENCONSERVATION: A PEATLAND IN JIMENEZ, MISAMIS OCCIDENTAL, PHILIPPINES

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Biographical Sketch

Xenia Caryl Dando was born in Oroquieta City, the capital of the Province of Misamis Occidental. After completing her schoolwork at Jimenez Bethel Institute in 1992, Xenia entered college and graduate studies in the cities of Ozamiz and Oroquieta, Misamis Occidental. She received a Bachelor of Science in Accountancy in 1995; Master in Business Administration in 1998; Bachelor in Elementary Education in 2002; and Master of Arts in Guidance and Counseling in 2009. In 2006, she was a guidance coordinator at DepEd School District of Jimenez, Misamis Occidental. She received a With Distinction Award in UPOU's Continuing Education Program - Caring for the Child with Special Needs in 2015. In 2017, she passed the Guidance Counselors Licensure Examination in a self-review mode. Her experience crafting mental health programs and policies for the district made her pursue conserving a 2,880 square meters agricultural-residential lot bought in 2002 in a former central business district where she is currently working. The grounding techniques on nature and inspiration from a Supreme Court decision in the *Oposa V. Factoran* case in 1993 on the ecological duty to refrain from impairing the environment made her an environmental advocate in her little way. The alignment of events from 2016 UPOU Student Orientation in UPOU Laguna towards contributing something to the country, her parent's conservation effort of the area, and as a school's stakeholder through pro-bono counseling service started *XenConservation* in 2020.

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Dedication

To Yahuah, the Almighty Father, Yahusha, His Son, Holy Spirit, my Spirit Guide/s, my grandparents, great grandparents, ancestors, relatives, and close friends in the afterlife, and my family in the afterlife, this dissertation is dedicated to you.

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Abstract

This study focuses on *XenConservation's* revelatory conservation communication in local governance, a small matrix of lowland freshwater mangrove wetland situated in Jimenez, Misamis Occidental, southern island of Mindanao, Philippines. A qualitative exploratory single case study in criterion-i purposeful sampling was employed to examine the nature of the conservation communication of the locale. The study revealed a transformative conservation communication in local governance continuum of care in private type governance alongside protected areas (PAs): convergent care, ancillary care, and diversified care, in a gradation of polarities within conservation communication in its conservation actions. In conclusion, the study theorizes in a constructivist and transformative worldview as a hobbyist in the *in-situ* conservation of threatened species. Tacit minority practice of affordances in a conservation communication's ancillary view of convergent-ancillary-diversified continuum of care encompasses a criterion-i conservation communication. Hence, a better protection policy and improved governance management for seasonal wetland and peatland of local conservation sites' agro-biodiversity and tree count status need to be strengthened.

Keywords: Conservation communication; Affordances

Chapter I

INTRODUCTION

Background of the Study

Conservation of protected areas is further strengthened with changing climate conditions and deterioration of biodiversity. However, other areas like peatlands, wetlands, or mangroves are governed by the Ramsar Convention work in a win-win solution to support the recovery of threatened species for enhanced connectivity of protected areas and conserved areas regarding widespread wetlands deterioration (Convention on Wetlands, 2021). Thus, the International Union for Conservation of Nature (IUCN) has put the other effective area-based conservation measures (OECMs) as a conservation designation for “areas that are achieving *in-situ* conservation of biodiversity of protected areas in peatlands and the like.” An OECM is defined as “*a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values* (CBD, 2018, as cited in IUCN-WCPA Task Force on OECMs, 2019, p. 3).” Usually, communities-managed OECMs.

Protecting OECMs largely depends on communication within the area’s community. The Housing and Land Use Regulatory Board (2017) strengthened the support for biodiversity conservation in its National Urban Development and Housing Framework 2017-2022. The zoning ordinance is influenced by the urban development position of a municipality.

Conservation Communication from Fleming's (2019) conclusive statement

has been definitive on conservation communication's collaboration activities (p. 56, par. 1). Its preservation is a responsibility that the local government should support in protecting and maintaining natural assets.

XenConservation highlights *Carallia brachiata* or Bakauan-Gubat, an uncommon tree in this locality that could bring forth novel conservation for wetlands. Local tree cutters and lumber yard owners identify the trees as miscellaneous trees and as a tree with low economic or selling value, less in value than Bakan, Narra, or Molave trees, for they are unfamiliar with freshwater mangroves. It is a hardwood and an excellent fuel source or firewood. Sadly, the tree is not known to them as Number 961 of the Philippine threatened plant species (Department of Environment and Natural Resources, 2017, p. 28).

Carallia flourished in rivers of evergreen forests of the tropical Old World (Schwarzbach and Riclefs, 2000; Shi et al., 2002, as cited in Qiang et al., 2015). Freshwater mangrove trees usually thrived in highlands, uplands, or coastal zones. Some researchers recently identified it as found in the Philippines' mountain range habitat in Cebu (Supsup et al., 2016; Alburo, 2017), in the upland in Leyte (Mukul, Herbohn, and Firn, 2016), and in the upland in Cavite (Medecilo and Lagat, 2017). These accounts Visayas and Luzon sites' presence. Sarmiento (2018) noted that *Carallia brachiata* or freshwater mangrove tree in Hinatuan Island, Tagana-an, Surigao del Norte. The study site is recorded as part of the coastal mangroves in the area. It is 24 km East of Surigao City, yet it needs access to a boat to reach the place. In 1999, Bakauan-Gubat trees still existed in Baliangao, Misamis Occidental in Northern Mindanao (Amoroso et al., 2004). However, in 2017, it was not among the listed mangrove trees in Baliangao in the Baliangao Protected Landscape and Seascape Updated General Management Plan (UNEP-WCMC and IUCN, 2021).

Mangrove range within 4km from the coastline is distinguished (Songcuan, Baloloy, Blanco, and David, 2015). This distinction means that mangroves are remnants of the ancient ecosystem and remains of an ancient ecology. *XenConservation* is 2.3 km from the coastal area. Definitively, *XenConservation's* mangrove trees purport a conservation communication value connected to the governance lens of care.

A revelatory case is *XenConservation*, a local [privately-owned] small habitat matrix (SHM) conservation site advocacy in an assisted natural regeneration (ANR) or *in-situ* conservation. It is a promising Potential OECM or Candidate OECM in a rightsholders and stakeholders' relationship in the western part of Barangay Nacional (IUCN-WCPA Task Force on OECMs, 2019, p. viii; Borrini-Feyerabend et al., 2013, p. 15). A high value in intrinsic biodiversity is a small matrix of 2,880 square meters. It secures a lowland freshwater mangrove seasonal wetland since 1914 in its northern part, in the Municipality of Jimenez from Misamis Occidental Province in the southern island of Mindanao, Philippines. It is part of the lowland areas of Mount Malindang, a Protected Area (PA), by Proclamation No. 228, s. 2002 in the National Integrated Protected Areas System (NIPAS) Act of 1992. On its east is the Jimenez Municipal Reserve in a coastal area is a forest reserve under Proclamation 2152, s.1981, owing to its coastal mangroves (Protected Areas and Wildlife Bureau–Department of Environment and Natural Resources, 2013, p. 2). The position of the conservation efforts of *XenConservation* advocates rightsholder-stakeholders' collaboration of the constitutive of care in its local governance. Remarkably, *XenConservation's* case of the wild (not cultivated) Bakauan-Gubat, or freshwater mangrove trees as an SHM in a local private lowland area, serves as a distinctive exploration of conservation communication.

Admittedly, a vision of finding an undiscovered treasure of significant value in a lifetime can be a one-off. It contributes to the freshwater mangrove trees in a wetland leading to a cul-de-sac called *Harianan and Quilo Streets*. The ancestors in this place relate much to Jimenez as Heritage Town in Misamis Occidental. Along this vein, this study examines how a remnant of Old-World Forest, *in-situ* conservation of biodiversity, provides meaningful conservation communication purposes regarding freshwater mangrove trees in seasonal wetland in converging OECMs and governance. It asserts a validation regarding conservation communication in private governance in a local conservation site. It regards the converging care on small habitats in the walkability of the so-called urban development as an ancillary wetland – freshwater mangrove wetland (seasonal wetland). The study hopes to give valuable conservation communication concerning SHM in a would-be Possible or Candidate OECMs in areas of lowland freshwater mangrove habitat in a would-be Peatland. Collaborative private governance care is springing from searched - available published online materials on conservation communication of the Bakauan-Gubat.

Statement of the Problem

Communication plays a significant part in conserving and protecting *XenConservation*. It affects the actionable solution that a local conservation site should be protected. Through communication, the focus is the foresight of goodness, an optimism of possible opportunities for small habitat matrix (SHM) in OECMs to work with nature, not against nature, that is better for nature.

The OECMs have critically complemented PAs in a deeper protectionist or conservationist care consciousness (UNEP-WCMC and IUCN, 2021; Miller, Minter, & Malan, 2011). Conservation communication has highlighted natural resources

conservation actions communication (Pinchot, 2018; Brown, 2018) and consumptive and productive value orientations surrounding the social conflict (Fleming, 2019). The value orientations could point to what has been done and what could be done in conservation. In that case, it creates a conservation belt message across ages and practices on native species in its most natural conservation implicit dealings. Then more information needs to be known about how affordances in conservation communication in local governance in SHM works in the open spaces network in urban development as a buffer zone (Housing Land Use and Regulatory Board, 2017).

Affordances allow accessibility of the Conservation Communication concepts (Brown, 2018, Evans et al., 2017). Capturing the functional aspects of visibility and persistence regarding the possibility of an action in OECMs technology, it passionately navigates and validates the conservation communication in local governance care in its continuity in a municipal governance level's conservation communication, the *XenConservation's* rightsholder and stakeholders. Accommodation of a more profound issue about Critical Conservation Communication's scope from Grelock-Yusem (2019) on the grounded theory of Critical Conservation Communication in contemporary wildlife conservation has revealed the need to address the conservation communication risks of the deeper protection issues.

Overall, the central question is: What is conservation communication in the context of local governance? Specifically, the study highlights to answer the following sub-questions.

- I. How is conservation communication integrated and validated in existing literature?
- II. How do concerned stakeholders like Municipal Planning and Development

Coordinator, Municipal Environmental and Natural Resources Officer Designate, and the academe view conservation communication?

- III. Why is conservation communication essential in the results of cases reviewed and views gathered applied in *XenConservation*?

Objectives of the Study

The general objective is to describe the role of conservation communication in the local governance of *XenConservation*. It secures the impact of OECMs governance authority [governance diversity characteristic] in OECMs governance quality [conservationist and protectionist care direction] and OECMs management [governance vitality]. These are the following particularities.

1. To contribute to the interaction of conservation communication convergence in OECMs governance authority and management through qualitative affordances or possible environmentally available actions.
2. To examine the views of care in conservation communication in local governance of *XenConservation* as a contemporary phenomenon in SHM of ancillary wetland distinctiveness.
3. To examine the application of conservation communication in local governance [small-area private governance] in its continuum of care [affordances] in *XenConservation* on the theory-building as an essential offshoot inspired in Conservation Communication.

Propositions of the Study

Agenda 2030 relates to OECMs (Ng et al., 2021). With conservation

communication in SHM's *in-situ* conservation, the accessibility to CBD Aichi Biodiversity Target 11 of PAs is realizable. Through the propositions that pressed the Social Construct of Knowledge in Communication Theory, the sustainability pushes on the Theories of Pro-Environmental Behavior (Corral-Verdugo, Aguilar-Luzón, and Bernardo, 2019). Optimism in conservation actions energizes the conservation communication's role as a bridge for discovery in the local governance of *XenConservation's* peatland. Hence, the study's propositions are:

1. Convergence in conservation communication precursors the 'care continuum' from SHM in OECM;
2. Local governance extends care to wetlands that also protect peatlands in privately governed SHM; and
3. SHM's conservation communication on normal minority retains private local governance and exemption from Local Government Unit (LGU) ownership in the continuum of care through local conservation site status.

Significance of the Study

The contemporary phenomenon of freshwater mangrove in seasonal wetland conservation communication is a new lead for OECMs, as it complements PAs (Swindles, Jones and Rushworth, 2016; CIFOR, 2017, Rueda, 2021). The lowlands in a PA are key to finding recent developments for ancillary conservation management. The advocacy supports the socio-cultural phenomenon in an environment upholding the value of a normative case (Popov et al., 2021). As governance in all types is considered in small legitimate conservation advocacy for private land, it addresses the conservation gap (Gooden and 't Sas-Rolfes, 2020). It attributes a conservation communication phenomenon (Lock et al., 2020). Further, the study educationally

benefits the locals passively and directly the stakeholders as the Bakauan-Gubat tree outside a PA, where SHM in OECMs could be Candidate or Potential for those alongside PAs. In this manner, the term OECMs is a new next thing in the locality through some involved persons in the project. Social media through Facebook promotes educational and informational conservation information as the project developments are publicly posted.

Conservation applies to forests and extends beyond the natural resources that demand common-sense application to common problems for the common good (Pinchot, 2018, p. 16, par. 1 and p. 18, par. 4). Communication for advocacy in biodiversity conservation is an active response to changing circumstances that leverage and build support for critical actions in addressing current and emergent threats that promote proactive action (CANARI, 2012, pp. 15-16). Recent trends in communicating conservation are in biodiversity outlook. Government conservation communication informs outreach efforts by helping tailor effective, targeted conservation strategies (Varble et al., 2016, p. 318). Conservation communication strategies for culturomics can promote public understanding of a conservation issue (Ladle et al., 2016, p. 270). The common sense for conservation reconnects the converging care of governance in the SHM of OECMs.

Knowing the extent of care that OECMs are set forth to provide could facilitate conservation communication's soundness for a profound understanding of its deliverables. The said premise is significant to *XenConservation* in Jimenez, Misamis Occidental, as the local site's mangroves are remnants of the ancient ecosystem, remains of an ancient ecology. Thus, the study's conservation communication is significant and vital to an improved analysis of conservation communication as it applies to the normative minority, the hobbyists on threatened species in peatlands or wetlands. Further, it can stimulate new research. It redirects existing conservation

communication research in SHM that can impact policy implications regarding local conservation sites in its practical crux of seasonal wetlands and peatlands. The theoretical significance of normative minority invaluablely contributes to a more comprehensive critical conservation communication knowledge base.

Scope and Limitation of the Study

The study intentionally seeks to examine and document the conservation communication in local governance as a local conservation site in Jimenez, Misamis Occidental, a third-class municipality-heritage town. It addresses the more profound issues on OECMs to accord environmental protection and maintains an ecological balance in its convergence, implicit of the constitutive of care. The case relates to Bennett et al. and Grelock-Yusem's studies as it identified an apparent knowledge gap on the convergence of governance in conservationist or protectionist stand. Moreover, conservation in environmental governance depends on people's relationships and the environment that may focus on local conservation initiatives (Bennett et al., 2017). The deeper issue on implicit care can be about the practicality and de facto consideration for long-term sustainability conservation. A foremost of a rightsholder on private property level of governance in a sub-unit of a protected area that may constitute SHM related to OECMs. A case testing in *in-situ* conservation can fill in the gap for a meaningful connection as conservation advocacy on *in-situ* conservation on private type governance will be highly notable as to the recency of OECMs alongside PAs. Since Misamis Occidental province has two (2) PAs, the Mount Malindang Range and Baliangao Protected Landscape and Seascape, the published studies on these areas can be linked with new information on the nearby towns or corridors.

The drawback of the study remains that it could not be certified as the remaining freshwater mangrove trees in the province for the tree inventory/survey are yet to be completed. The site's peatland status is in a preliminary assessment verified (Susilawati et al., 2016; *XenConservation* Jimenez Misamis Occidental, 2021). Further assessment is needed to qualify as a confirmed or suspected peatland area (DENR-Biodiversity Management Bureau, 2021). *XenConservation* cannot be classified as a local conservation area to be a Potential or Candidate OECMs. Only through a local conservation site can the safety of land security be preserved.

Operational Definition of Terminologies

The ground of the study is a hobbyist's signature in a quality protectionist-conservationist care. It appeals to a new landscape in conservation communication.

Conservation communication is of natural resources conservation actions communications of a few Philippine Red List flora species in a wetland in collaboration with local stakeholders. These are Molave (431), Pahutan (448), Anahau (861), Lunai (870), and Bakauan-Gubat (961), native indigenous trees of the Angiosperm tree taxonomic group (National List of Threatened Flora, No Date). Natural conservation is an ANR or *in-situ* conservation as the indigenous native trees resurfaced in their natural state. The Bakauan-Gubat reflects an Old World Forest as peatland archaeologically preserves past vegetation in its surviving landscapes with few boulders, 2.3 km from the coast (Qiang, et al., 2015; Gearey et al., 2010). *Carallia brachiata* is found in primary or less often secondary forests, freshwater swamp forests, and mostly on peat soil in Karnataka, India (Kumar et al., 2015) and Indonesia's heath forest and peatlands (Rahajoe et al., 2016; Sundari et al., 2020).

Governance is on governance diversity Type C of private governance. The

governance quality is in the direction of protectionist-conservationist care as it protects biodiversity and co-exists as an agro-biodiversity. The governance vitality is in the empowerment of a meso as small in spatial scale for SHM local conservation site. SHM in OECMs communicates conservation optimizers for coconut monoculture (Ng, Payne, and Oram, 2021). Agrobiodiversity of less than half a hectare is titled land in this case.

XenConservation Local Conservation Site is a peatland as validated in preliminary assessment result from the Regional Soils Laboratory of the Department of Agriculture of 5.66 to 5.7 soil pH, which is within the peat pH of 2 to 6 (Susilawati et al., 2016) and forest soil pH of >3 to < 6 (O'Neill, Amacher, and Perry, 2005) with a seasonal wetland in its northern side. Interestingly, *XenConservation's* soil fertility range of 2.2 to 3.9% organic matter status is comparable close to the 2.5% organic matter of Liguasan Marsh soil fertility (Department of Environment and Natural Resources, 2004).

Chapter II

REVIEW OF RELATED LITERATURE

This qualitative study aimed to navigate and validate conservation communication in local governance of a local conservation site, *XenConservation* in Jimenez, Misamis Occidental. The literature related to the study's significant concepts served as part of the validation data for *XenConservation*. The conceptualization was from the literature on OECMs, conservation communication, the conservation care on social conservationists and nature protectionists in governance diversity generalist, and the affordances. The 12 primary literature on OECMs were by Alves-Pinto et al. (2021), Fajardo et al. (2021), Farella et al. (2021), Geldmann et al. (2021), Maini (2021), Ng et al. (2021), Castillo et al. (2020), Cortés-Capano et al. (2020), Mackinnon et al. (2020), Maxwell (2020), Talty et al. (2020), and Donald et al. (2019). The six (6) mixed grey and scholarly literature on conservation communication was by Church et al. (2020), Fleming (2019), Grelock-Yusem (2019), Brown (2018), Ladle et al. (2016), and Varble, Secchi, & Druschke (2016). The four (4) mixed grey and scholarly literature on governance were of IUCN-WCPA Task Force on OECMs (2019), Borrini-Feyerabend and Hill (2015), Borrini-Feyerabend et al. (2013), and Roth and Dressler (2012).

A Protected Area (PA) is a geographical space for long-term conservation with ecosystem services and cultural values (Borrini-Feyerabend et al., 2013). The Philippines has recorded 273 Protected Areas (UNEP-WCMC, 2021). Other Effective Area-Based Conservation Measures or OECMs complement protected areas (IUCN-WCPA Task Force on OECMs, 2019) outside of PAs for effective *in-situ* conservation of biodiversity. OECMs is a relatively new concept (Alves-Pinto et al., 2021).

The Philippines is Under Review by UNEP-WCMC for its recorded OECMs, while the world database has recorded 143 OECMs (UNEP-WCMC and IUCN, 2021). It was under OECM, yet unspecific as to the type of governance it has been categorized. It continued that OECMs include those not historically recognized for their conservation values. Thus, it has been pretty challenging to identify and support them long-term.

In 2018, the UN Convention on Biological Diversity had recently adopted the OECMs definition. Both PAs and OECMs are in a diversity of governance, such as governance by the government; shared governance; private individuals and organizations; and governance by indigenous peoples and/or local communities; or Type A: Governance by the government; Type B: Shared governance; Type C: Private governance; or Type D: Indigenous peoples and local communities governance (Borrini-Feyerabend et al., 2013, pp. xiii and 29); or governance authority (IUCN-WCPA Task Force on OECMs, 2019, pp. viii and 5).

In the study of Roth and Dressler (2012), market-oriented conservation governance has keyed in [command and control] conservation continuity reconciling environmental conservation and rural livelihood needs. Borrini-Feyerabend and Hill (2015) have emphasized the needed balance in governance conservation of nature to resolve conserved areas' overlap and protected areas that OECMs (IUCN-WCPA Task Force on OECMs, 2019) had addressed in its recency.

True enough, understanding the worldview of governance and conservation communication has proved constitutive in a constructivist approach regarding care in OECMs. OECMs have proactively been set to deliver quantitative and qualitative elements of the Aichi Biodiversity Target 11 and its potential successor (Jones et al., 2020, as cited in Maini, 2021). OECMs' future opened the soundness of amplifying

care as things are yet to unfold in the mid-process. Conservation Communication as communication solely to promote conservation actions (Brown, 2018, pp. 19, 20, 21) synchronized the governance aspect in its deliberate process towards OECMs.

The recency of OECMs has convinced the author that it is in the purposeful conservation actions that share a critical conservation communication's connectedness serving different conservation needs. The perspective has served as a new consideration for governance and management through a wide lens (Grelock-Yusem, 2019, p.125-126). Remarkably, the Convention on Biological Diversity (CBD) finalized the global biodiversity framework for adoption last May 2021 (Maini, 2021, p. 3), strengthening a glad welcome to nature, back to the people's lifestyle.

Other Effective Area-based Conservation Measures (OECMs)

This part discusses the governance and management dynamics in OECMs. It figures on applicable particularities of protectionists and conservationists' care.

Governance as a lens of communication. Governance authority in OECMs has focused on the governance characteristic of governance diversity. Both PAs and OECMs have mentioned governance diversity - Types A, B, C, and D. In addition, the communication side that the local or limited governance that this purport is on the conservation communication's work in progress. The governance mechanism permeated as a working mind towards communicating conservation in its accessible management distinction. Forest landscapes have laid down conservation communication in their natural state, further noting previous studies and discoveries.

The OECMs governance authority [governance diversity characteristic] has converged with governance quality [conservationist and protectionist care direction], prompting an empowered OECMs management [governance vitality]. The governance

has retained an imprint that would never go away that has the information on the sustainability of conservation. Thus, the communication it contains increases the governance's role in conservation. Assured forest protection in small ways has extended the grip to small areas in private governance.

There are four (4) governance authorities in OECMs which also holds in Protected areas: (1) *Type A: Governance by the government*; (2) *Type B: Shared governance*; (3) *Type C: Private governance*; and (4) *Type D: Indigenous peoples and local communities' governance* (IUCN-WCPA Task Force on OECMs, 2019; Borrini-Feyerabend and Hill, 2015). Accordingly, governance characteristics are governance quality (heart) for voice and direction, governance diversity (mind) for authority category, and governance vitality (spirit) for adaptive management.

The principle of subsidiarity in governance has adhered to functional connectivity care for sustainability and social justice (Berkes, 2004, as cited in Borrini-Feyerabend and Hill, 2015, pp. 194 and 195). In this study, governance characteristics correlated to governance diversity as governance authority, governance quality as the voice of care, and governance vitality as adaptive to OECMs management in a transformative network. Table 1 shows the schematic summary of governance characteristics (CSIRO, as cited in Borrini-Feyerabend and Hill, 2015, pp. 195).

Table 1. A schematic summary of governance characteristics



Care as a lens in governance. The governance quality that speaks of the heart has considered the direction of care in the governance. There are two (2) broad fields in eco-social sustainability on conservation. First are nature protectionists (NP) for conservation scientists and their scholarly allies in a preservationist mission and Protected Areas (PAs) defenders (Redford, 1992; Katz and Oechsli, 1993; Kramer et al., 1997; Redford et al., 1998; Oates, 1999, 2006; Terborgh, 1999, 2000, 2004; Rolston, 2001; Sanderson and Redford, 2003, as cited by Miller, Minter, and Malan, 2011, p. 948). Second are social conservationists (SC) for environmentally-oriented social scientists (e.g., anthropologists, political ecologists, and rural sociologists) and development professionals.

These professionals are in a conservation-oriented development and welfare-oriented goals and pro Integrated Conservation and Development Projects (ICDPs) (Schwartzman et al., 2000; Chapin, 2004; Roe and Elliot, 2004, 2006; Brockington et al., 2006; West et al., 2006; Sachs et al., 2009, as cited by Miller, Minter, and Malan, 2011, p. 948, 950). The conservation polarity has been mapped, yet; it noted a somewhat loose and conceptually porous endorsement of either pole to understand conservation values better.

Noting the side of development economics for conservationists made it closely taking the educative side in environmental communication updated and more doable. On the other side, nature protectionists or protectionists have provided an opportunity for cases that need natural selective care where humans are restrictive at some point. A conservationist has been more comprehensive in embracing the support of care. Table 2 provides a helpful framework (Miller, Minter, and Malan, 2011, p. 951).

Table 2. Mapping the new conservation debate

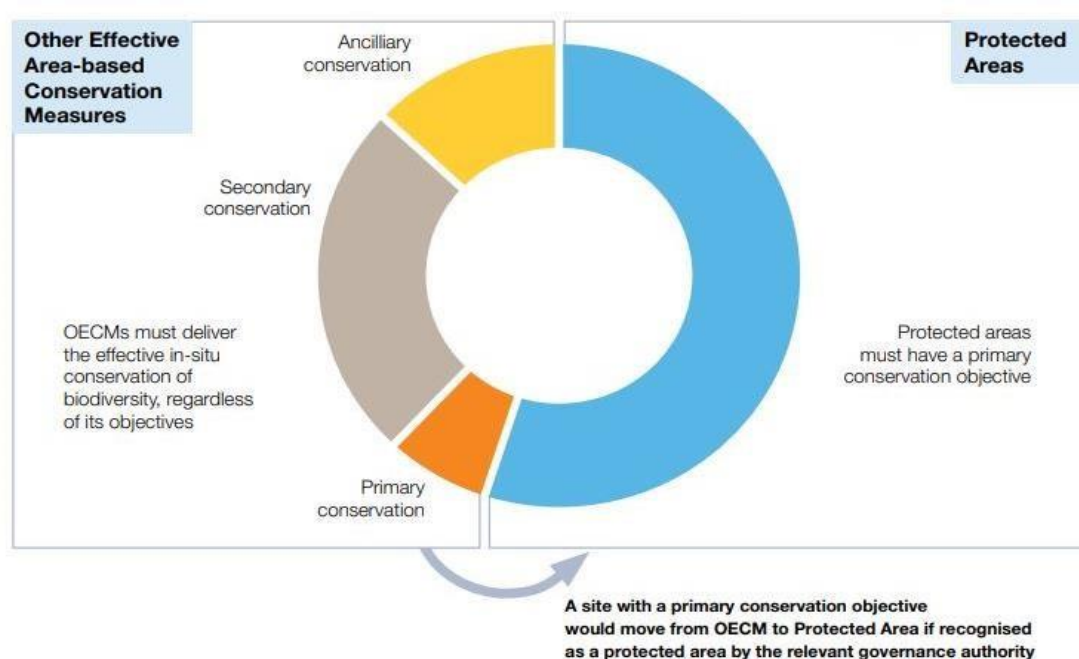
	Nature protectionists	Social conservationists
Policy goal	Protection of biodiversity	Sustainable development/conservation with poverty alleviation
Policy instruments	Protected areas (PAs) – esp. "people-free parks"	ICDPs, extractive reserves
Empirical claims	• PAs are the most effective means to protect biodiversity • PAs can bring considerable benefits to local people • the human presence is a threat to biodiversity conservation • KDPs fail to protect biodiversity • conservation must focus on biodiversity protection to succeed • the goals of conservation and development are often, if not inherently, incompatible	• PAs often fail to protect biodiversity • social costs of PAs are real and substantial • human and biodiversity can co-exist productively • KDPs will work if properly reformed • conservation will fail unless poverty is addressed • human livelihoods can improve with effective conservation efforts (e.g., ecosystem services)
Normative claims	• conservation should focus primarily on biodiversity protection • biodiversity should be protected for intrinsic value • in some cases, biodiversity conservation is more important than poverty alleviation	• conservation should be focused on human welfare • biodiversity should be protected for its instrumental value to humans • poverty alleviation rightly trumps biodiversity protection as a conservation goal
Ethical foundations	Nonanthropocentrism, preservationism	Enlightened anthropocentrism, social justice
Primary disciplines	Conservation biology, environmental philosophy	Anthropology, political ecology, development Economics

Conservation management outlook. The governance vitality that speaks of spirit in its empowered nature relates to governance management. There are three (3) types of governance management or approaches that deliver effective conservation in OECMs regardless of nature conservation objective: (1) Primary conservation that is

not officially designated that preferred to be unrecognized or unreported as PAs (Figure 1) in government PAs databases [in governance authority] and may meet all elements of the IUCN's PAs; (2) Secondary conservation that is on a secondary management objective of a functional biodiversity outcomes management of an area in ecological connectivity between PAs or other areas of high biodiversity; and (3) Ancillary conservation that are not on biodiversity conservation as management objective and yet on *in-situ* conservation as a by-product in management towards coincidental protection of associated habitats (IUCN-WCPA Task Force on OECMs, 2019, p. 4). The governance management is for positive and sustained long-term biodiversity conservation outcomes with relevant authorities, rightsholders, and stakeholders in a direct causal link that may leave the area untouched. It is consistent with the ecosystem approach that can manage emerging threats through legal measures, customary laws, or binding agreements with the landowners (IUCN-WCPA Task Force on OECMs, 2019, pp. 3, 4, and 5).

Figure 1. The relationship between OECMs and protected areas

(Note: sizes of segments are illustrative only and not based on actual data).



OECMs in diverse communication. The sensitivity toward distinct conservation communication related to OECMs lends to accepting and appreciating differences and recognizing uniqueness. There are 12 primary literature works in OECMs related to conservation communication in this research on conservation management. The literature research serves to conceptualize the continuum of care on conservation views.

1. ***Effectiveness of OECMs from protectionist care to conservation communication.*** Over 15,000 Key Biodiversity Areas (KBAs) were identified, of which the Potential OECMs in KBAs were on a survey assessment. The Philippines was one of the countries in the study. It was for the Haribon Foundation. The data showed 1.3 percent or one (1) unprotected KBAs with no OECM compared to 74 unprotected KBAs with OECM. However, the data outlook on the ten (10) selected countries showed that forest loss is significantly higher on both KBAs outside protected areas, with or without a potential OECM. Being mindful that protectionist care supports PAs fully, the conservationist care in OECMs through governance gradually embraced PAs for their long-term sustainability or other management forms. In addition, it does reaffirm the opportunity for the varied conservation governance and management forms constitutive in the KBAs through the post-2020 Convention on Biological Diversity (CBD). It draws implications for negotiations as OECMs management primarily shared governance for preserving ecosystem services, and private landowners hit the third spot. More than half of the former on ecosystem services conserve nature for income generation, drawing on what can be done in conservation communication (Donald et al., 2019).

Governance in conservationist care. The OECMs governance of the selected countries enabled shared governance and privately governed, extend to management from spiritual interests, business or corporate, multiple management or other forms of management, NGOs, and private landowners. Local communities, indigenous groups, and government remain the same (Donald et al., 2019, p. 6). Private landowners are also in OECMs governance, as noted here.

The OECMs' primary management objective checking is dominated by preserving ecosystem services and conserving nature for income generation. On average, the checking was on multiple objectives or other objectives, conserving nature for other purposes, and government activities. Business activities, preserving indigenous livelihoods, and preserving religious and spiritual values complete the less gradient checklist (Donald et al., 2019, p. 6).

2. Opportunities and challenges of OECMs in conservation

communication. The updated 'zero draft' on the post-2020 Global Biodiversity Framework includes OECMs (Open-Ended Working Group on the Post-2020 Global Biodiversity Framework, 2020, as cited by Alves-pinto et al., 2021). The 'zero draft' is the potential for the deliverables of conservation communication actions. Aichi Biodiversity Target 11 2020's goal was more than 17% terrestrial conservation areas in which the protectionism view acted as a precursor for OECMs in effective conservation of diversity (Diz et al., 2018; Borrini-Feyerabend, 2010; Juffe-Bignoli et al., 2016; CBD, 2018 as cited in Alves-Pinto et al., 2021).

Governance in conservationist care. The act embraces the

governance system providing increasing support to biodiversity monitoring and rule enforcement. Empowerment strengthens the sense of responsibility for national or international funding fluidity (Alves-Pinto et al., 2021). Positive impacts on nature and people contributed to that re-work in OECMs could provide (Figure 2). Complementarity benefits are depicted in a chord diagram as effective as complement PAs (Figure 3).

Figure 2. Flowchart showing the positive impacts for nature and people of recognizing areas as an OECM

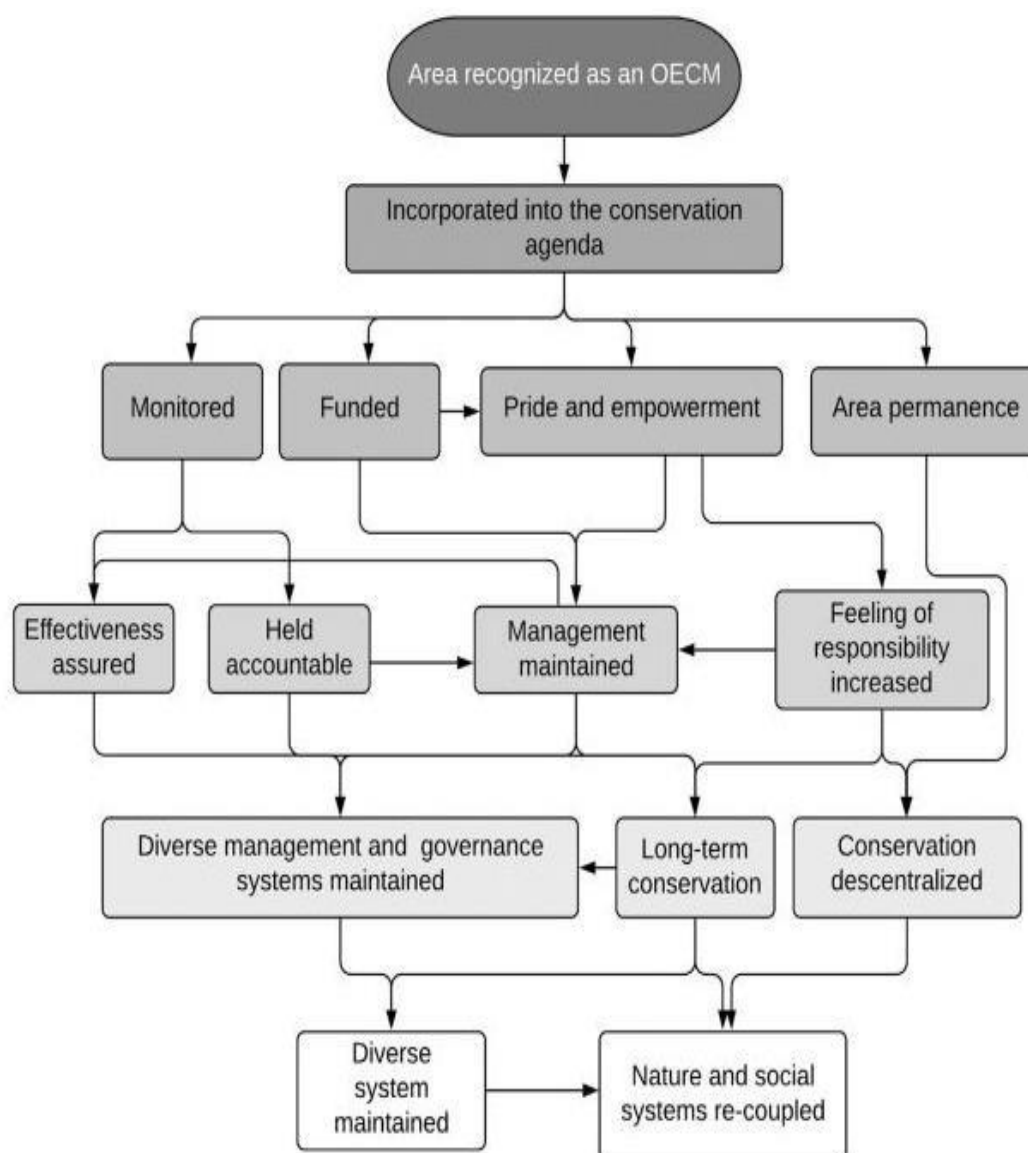
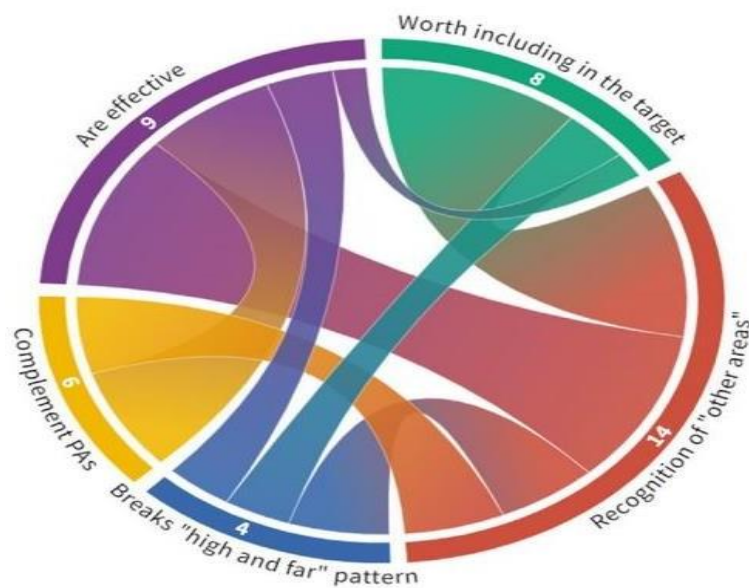


Figure 3. Chord diagram for potential benefits of OECMs



Governance in conservationist care. Too strict guidelines could be a holding back that might result in a trade-off (Figure 4). It is also an unwelcome intervention that could be considered for long-term effectiveness (Alves-Pinto et al., 2021, p. 3).

Figure 4. Chord diagram for challenges of OECMs



3. **Special Areas of Conservation (SAC).** Multi-level governance is one of the priorities for long-term sustainable fisheries for an improved organization and management of fishing activities from the Marine Spatial Planning (MSP), a conservation communication of what has been done for SAC for better conservation actions. Protectionists converged with conservationists for biodiversity protection, and operators' livelihood guarantees could enhance concerned areas (Farella et al., 2021, pp. 14, 15, and 18).

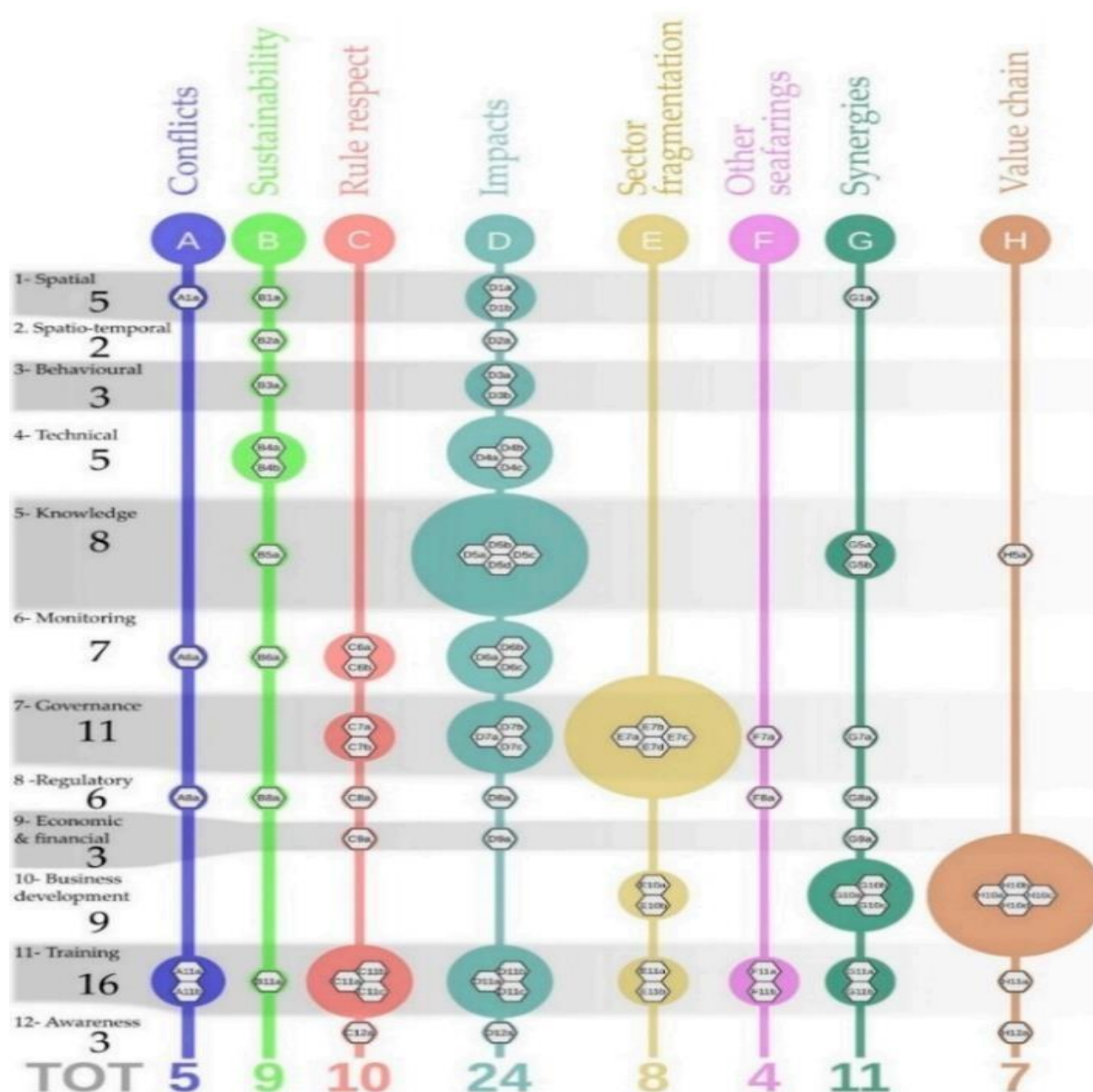
Governance in conservationist care. The node of governance typology covered five (5) issues and 11 measures:

1. Measure on Rules enforcement favored co-management schemes and operation centers.
2. On Impacts of Fisheries on Vulnerable Species and Valuable Environmental Components Measures were on a transnational action for concerted measures, collaborative governance, and a permanent consultation table.
3. Fragmentation of the Sector's Multi-level governance measures was on fisheries observatory (also for joint consultation and lobbying), compartmental consortia, regional institutional mechanisms, and periodic renewal of one representative of each fishing sector in management.
4. Relationships with Other National and Foreign Fisheries and Common Rules of multi-level governance measures were effective local and supranational management levels integration for a shared definition of rules among fisheries from different countries.

5. Synergies between Fishing, Aquaculture, and Other Uses of the Sea
Multi-level governance Measure on multi-use development of institutions and operators' organizations (Farella et al., 2021, pp. 20-24).

Typology as a node, issues as a polnode, and measures as a subnode. The graphical synthesis of the management issues on governance was depicted as a vector diagram. The magnitude of its impact differs in size that the node on typology was portrayed. Figure 5 diagram expresses a representation that includes the other 11 management issues' typologies. The 12 typologies were spatial, spatio-temporal, behavioral, technical, knowledge, monitoring, governance, regulatory, economic and financial, business development, training, and awareness (Farella et al., 2021, p. 16). Each polnode in governance are the issues that cover the polarity of approach to varied situations involved apart from synergies and seafarings issues that each had one measure track only and no polnode for conflicts, sustainability, and value chain. The subnodes in rule respect, impacts, and sector fragmentation were a variety of two, three, and four measures, respectively, and chronologically (Beefink and van der Meijs, p. 5, 1996; Farella et al., 2021, p. 16). The diagram shows differing impacts on fluidity.

Figure 5. Graphical synthesis of proposed measures



4. **Dynamism in area-based conservation efforts coverage.** In area-based conservation efforts of PAs and OECMs, dynamism is management's foresight. It may expand or enhance protected areas with restrictive regulations through protected area downgrading, downsizing, and degazettement (PADDD) and protected area gazettement, expansion, and enhancement (PAGEE) for OECMs. The increasing growth of global PAs on marine and terrestrial from 2010 to 2019 as an ecologically representative of biodiversity's persistence in a

protectionist view relates to equitable governance and management. The conservation communication meets a dynamism in biodiversity conservation coverage in transparency decisions for an improved utility of data tracking (Maxwell et al., 2020, pp. 219, 223, and 224).

Governance in conservationist care. The convergence of PAs and OECMs towards area-based conservation in the twenty-first century unite the protectionist and conservationist view. It points to a new lens of conservation care towards increasing the core growth for an increased conservation coverage. The governance harmonizes PAs and OECMs while the management in PAs embraces OECMs towards conservation progress, thereby attaining a new momentum in the conservation communication. Meaningful long-term conservation actions for 2050 provided the essential deliverables as Potential actions to address challenges (Table 3). Thus, the potential actions enable sustainable biodiversity (Maxwell et al., 2020).

Future-proofing area-based conservation is pro-outcome-orientated evaluation techniques monitoring programs—both ex ante to help site areas and ex post to report on outcomes—a standard reporting requirement for all organizations involved in area-based conservation. For a climate-smart and mainstreaming biodiversity across national policy frameworks, governments and communities' pro-engagement in citizen science initiatives with techniques such as camera traps, drones, and acoustic monitors can maximize biodiversity data. Accuracy and reliability through in situ reporting of protected area management capacity and biodiversity trends such as Spatial Monitoring and Reporting Tool (SMART) would be remarkable (Maxwell et al., 2020, p. 224).

The challenge to progress from protectionist care toward a reasonable conservation goal is a substantial conservative estimate that needs adequate funding for its realization in Table 3 (Maxwell et al., 2020, p. 224). The move is to ensure that it would not compromise area-based conservation management. However, realistic conservation plans scaffolds safeguarding and restoring ecological connectivity. Climate-smart is a reconciling thing to support a long-term conservation goal's success adequately. It brings on mainstream trajectories that align with emerging biodiversity-impact protocols. The critical conservation concern would then be subservient to environmental and economic development as it eases the strain on accountability. With improved transparency of area-based conservation decisions, governments and conservation communities could actively engage with global protected area downgrading, downsizing and degazettement' (PADDD) tracking platforms. It could aid global reporting efficiency in integrating PADDD tracking data with World Database on Protected Areas (WDPA). Dynamism for improved resourcing and management or enacting more restrictive regulations to incentivize better and track the continuum of changes to protected areas characterized collectively as 'protected area gazettelement, expansion and enhancement' (PAGEE) events could improve the ability to conserve biodiversity. Both PADDD and PAGEE tracking could address timely, an area-based conservation concern (Maxwell et al., 2020, p. 223).

Table 3. Acting on key challenges to improve progress towards targets for area-based conservation in the twenty-first century

	Challenges to improve progress	Potential actions to address challenges
Immediate discrete priorities	To make the dynamism of area-based conservation more Transparent To make OECMs contribute substantively to biodiversity Conservation To introduce more impact-orientated evaluation of area-based Conservation	Use PADDD tracking platforms and integrate with WDPA Better track PAGEE events Engage with OECM reporting platforms Mobilize support for OECMs to overcome reporting and resourcing Issues Ensure that OECMs are managed by a diverse set of actors Collect better temporal biodiversity data, including through citizen science Initiatives Make robust impact evaluation a standard reporting requirement
¹ Overarching preconditions	To secure adequate Resourcing To be climate-smart To make biodiversity conservation mainstream	Fund the contribution of area-based conservation to national economies Better harness industry and philanthropic Contributions Safeguard ecological Integrity Use decision-support tools to make robust decisions Adopt a bold overarching goal for biodiversity Adopt biodiversity accounting protocols that align compensation with desired trajectories for imperilled species or Ecosystems

¹Overarching preconditions require action by governments to ensure the long-term success of area-based conservation strategies.

5. *PAs and OECMs indicators of effectiveness.* Creating digital infrastructure in data-capture for PAs and OECMs is towards effectiveness for 2030 and beyond. It meets the documented ecological objectives that the communication

is set to achieve. The effectiveness message is a fit-for-purpose for the essential elements of Aichi Target 11 on particular importance for biodiversity and ecosystem services. The proposed plan replacing former indicators on focused management is a critical conservation communication where the protectionist lens in PAs diversifies to OECMs and updates the thread of biodiversity area-based conservation's global significance (Geldmann et al., 2021).

The reckoning streamed from governance connecting to management authority. PA areal coverage and spatial attributes data on the World Database Protected Area (WDPA) are for PA extent data. GD-PAME or Global Database on Protected Area Management Effectiveness, the official repository for reporting on PA effectiveness to the CBD, lacks information on the site's effectiveness in its management processes and biodiversity outcomes, such as trends of biodiversity and guidelines on measuring and reporting the effectiveness of PAs and OECMs (Geldmann et al., 2021).

Governance in conservationist care. Future assessment of the effectiveness of the prudence in PAME assessments' reporting is of a subset by countries to all countries in the scope of growth from the usual simple reporting under protection. The reporting in management effectiveness under Aichi Target 11 with this improvement foresight is on the efficacy in the post-2020 framework. The shared advantage of governance and management authority would gain reasonable grounds for integration explicitly in improving conservation responses. Biodiversity values and management inputs work with management effectiveness for an ecologically ready plan, resource availability and capacity, and governance equity in different governance types (Geldmann et al., 2019, pp. 3, 6).

The data collation shifted from nothing to something in the global repository supports or up-scales facilitation of local knowledge integration and national sovereignty preservation for a digital infrastructure assessment process. It has not worked then and is up for work in the future to redefine the assessments with informed consistency for comprehensive reporting. Checks and balances on ground-based consistency are up on cheap, robust data for strengthening management toward good governance. SMART Tool network monitoring could be the precursor for real-time monitoring. Standardization awaits that funding would be another consideration to count on this virtuous change (Geldmann et al., 2019, pp. 3, 6).

6. **Conservation impact.** There is an immediate impact on conservation that will take decades for restoration efforts (IPCC, 2019, as cited in MacKinnon et al., 2020, p. 290). Conservation responses work toward protecting Earth ecosystems (Woodley et al., 2019, as cited in MacKinnon et al., 2020, p. 287).

Maintaining natural carbon sinks and stores as well as carbon-rich ecosystems such as wetlands, rangelands, peatlands, mangroves, forests, blue-carbon ecosystems, and native grasslands (MacKinnon et al., 2020, p. 290) in nature conservation and protected area efforts are cited keys of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). This move minimizes biodiversity loss, such as over 85% of wetland (by area) has been lost (Diaz et al., 2019, as cited in MacKinnon et al., 2020, pp. 285, 290).

Conservation communication is on the immediacy of conservation responses and results are drawn from the PA of protectionist care that includes other natural conservation efforts. Enhanced connectivity between conserved

areas calls for a more sustainable management combined approach (Hilty et al. 2020, as cited in MacKinnon et al., 2020). Protectionist care accelerates the development of needed OECMs care from its successful governance diversity and the management streamlining potential in adding protected areas or expanding existing ones ((Hehmeyer et al., 2019, as cited in MacKinnon et al., 2020).

Governance in conservationist care. The expanding thread in conservation opened views in strengthened protection of KBAs and Ecologically or Biologically Significant Areas (EBSAs) for improved quality and effective management of biodiversity outcomes. The expansion works towards more excellent ecological representation, ecological connectivity, ecological restoration, and better spatial planning (MacKinnon et al., 2020).

Effective area-based conservation targets of 30% to 70% or even higher for both land and sea need sustainable ecosystem services. The services such as carbon storage, water security, and disaster risk reduction are for a secured natural ecosystem in halting biodiversity loss by 2030 (Woodley et al. 2019, as cited in MacKinnon et al., 2020). Conservation overlaps on areas of importance for biodiversity, such as carbon stores, which is also possible (Dinerstein et al., 2019, as cited in MacKinnon et al., 2020). Local biodiversity conservation objectives could co-benefit from the global percentage target set, which raises a key implementation challenge. Mainstreaming sustainable practices' driving force prompts cooperative measures' ecological integrity initiatives.

7. *OECMs outlook in holistic biodiversity conservation.* In the biodiversity

crisis, the Indigenous Peoples and Local Communities (IPLCs) as rightsholders are central players in biodiversity conservation in coastal and terrestrial areas. Aichi Biodiversity Target 11 includes OECMs on Indigenous and Community-based Marine Conservation and Protected Areas (CB-MCAs and CB-MPAs).

Loss of biocultural diversity due to displacements of IPLCs, traditional biodiversity knowledge (TBK) of CBD relevance, holistic community-based conservation was considered for the Post-2020 Global Biodiversity Framework on the "Perspective Paper" priority actions crafted through the creation of an International Biodiversity Conservation Fund (IBCF), a permanent multi-donor and culturally ad hoc grant funding and capacity development approach for effective communication in the receipt of direct funds for IPLC local, national, and regional organizations and participation with effective bottom-up conservation initiatives and an inclusive IPLC Global Biodiversity Outlooks (GBO). The Perspective Paper explores more collaboration in conservation actions for compelling conservation communication calls (Fajardo et al., 2021). It is an inclusive and holistic rights-based community conservation approach as a cost-effective strategy to ensure the long-lasting preservation of the remaining biodiversity-rich and ancient ecosystems with very low human intervention.

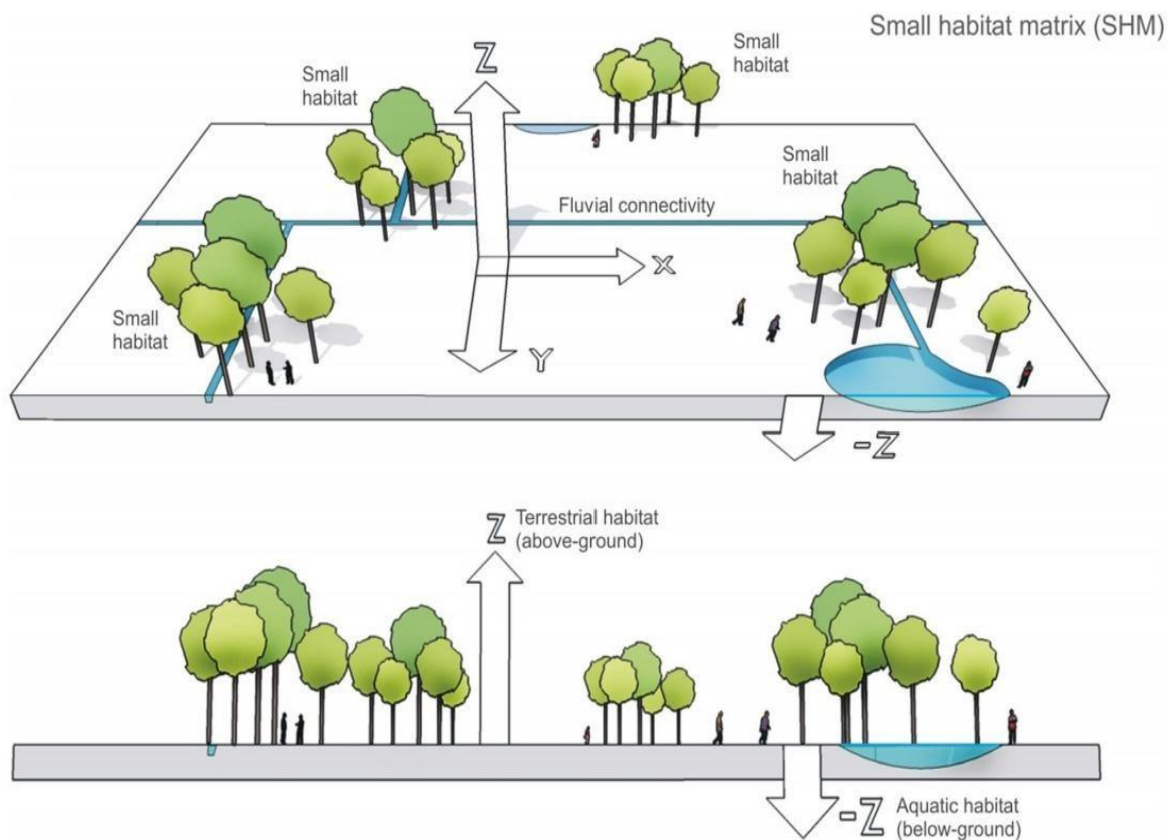
8. ***Conservation critical juncture.*** The major research paper (MRP) in a Delphi Technique of time commitment with an expert group of the Science for Nature and People Partnership (SNAPP) was able to have a consensus on the opportunity to mainstream biodiversity conservation in natural resource management. It is with the legitimacy of OECMs for an increased governance collaboration and balanced biodiversity benefits and socioeconomic benefits. It leverages timely realization on the full scope reporting with other forms of conservation on Aichi Target 11 in the CBD Targets.

The conservation efforts pull on finding win-win solutions to mobilize enough resources for a better balance environment against short-term economic gains and implement social safeguards in global conservation targets against lack of OECMs' recognition and support. Local marine conservation referred for recognition were customary marine management tenure (CMT), Indigenous management systems including conserved [territories and areas] by indigenous peoples and local communities (ICCAs), locally managed marine areas (LMMAs), and community-based natural resource management (CBNRM). The opportunity corresponds to restorative ecology in a transformative process of effective coordinated or integrative governance efforts for the post-2020 biodiversity framework (Maini, 2021).

9. ***OECMs for PAs in small habitat matrix.*** Small spaces are valued on the plausibility of biodiversity enrichment connectivity to large reserves' benefit (Volenec and Dobson, 2020, as cited in Ng, Payne, and Oram, 2021). A Small Habitat Matrix (SHM) is economically affordable and a complementarily global conservation optimizer (Figure 6). The approach is from a ground zero perspective from the 'grounded reality' in Sabah, Malaysian Borneo (Ng, Payne, and Oram, 2021, p. 4).

Small Habitat Matrix (SHM) could optimize monoculture landscapes for the vitality of aerial, arboreal, terrestrial, and aquatic wildlife communities. This frame would surely help understand how to communicate about issues of conservation that arise from small geographical space *in-situ* conservation.

Figure 6. Small habitat matrix approach



10. **Protected-Connected-Land (ProtConn) indicator.** An improved PA connectivity calculation with the ProtConn studies toward international conservation target on biodiverse regions in a geo-database and standardized to the Mollweide geographical projection supports the Aichi target 11, or the upcoming post-2020 30% target. In the implementation effort to report subnational conservation areas (legally protected or not), the PAs and OECMs provide complete management, representation, and connectivity. It counts in better local support, benefiting many users. OECM recognition by Tropical Andean Countries (TAC; Bolivia, Colombia, Ecuador, Perú, and Venezuela) governments need upkeep to reinforce conservation initiatives for OECMs criteria (Castillo et al., 2020).

11. ***Conservation value towards OECMs in a traditional cultural landscape***

stewardship. Traditional cultural landscape as an agriculture and biodiversity conservation connecting nature and people to co-exist may minimize agricultural conflict and could be for potential ecotourism. Cultural landscapes where the majority of landowners play a crucial role in agriculture and biodiversity conservation need protection from the local and global socio-economic pressures that co-existence remains on environmental stewardship. A collaborative place-based approach to understanding landowners' local stewardship of the cultural landscape for long-term sustainable production could be integrative in social and rural development goals with existing local environmental stewardship established.

The traditional management practices served as a conservation value towards OECMs, a fair and sustainable way to strengthen existing links between people and nature, preserving ecosystem services and cultural and spiritual values. The study's potential policy instrument results are accessible educational capacitation, functional linkages and technical assistance, incentive-based cost-share implementation, knowledge management, and sustainable ecotourism advocacy (Cortés-Capano et al., 2020).

A collaborative place-based approach will be viable since Uruguay's status is approximately 96% privately owned land. The viability of voluntary private land conservation potential for long-term sustainability in nature conservation could benchmark the integrative governance and management authority approach.

12. ***Inventoried roadless areas (IRAs), an OECMs eligible upgrade.*** For at

least 80 years, it was IRAs on United States Department of Agriculture Forest Service lands conservation goal was under Roadless Rule protection, a non-legislative protected status (Marshall & Dobbins, 1936, as cited in Talty et al., 2020). Roadless Rule protects against road building and commercial timber harvests. IRAs remain vulnerable to removing protections afforded by the Roadless Rule from the potential threat posed by downgrading, downsizing, and degazettement of protected areas (Golden Kroner et al., 2019, as cited in Talty et al., 2020) unless formally safeguarded by legislation.

The assessment result was National Forest IRAs' unique qualities.

Their conservation value is a valuable addition to PAs in OECMs for their effect on their quality in delivering total carbon capture. Its size increases between PAs for connectivity ecosystem services protecting watersheds (Talty et al., 2020). These undeniable potential conservation values for IRAs potentially fit OECMs that could not be compromised. This right is not something to be passive for upkeep but keeps.

Governance and Conservation Communication

Conservation to protect forests and their biodiversity prompts a governance quality commitment and communication in action. This part discusses the governance diversity [and minorities] in its interaction with conservation communication. In furtherance, it gives a brief synopsis of some conservation communication towards empowered governance vitality.

Levels of governance. There are nine (9) levels of governance that interact with each other in a manner of consecutive power or acts that implement or oversee in either horizontal (voluntary, collaboration, or exchanges) or vertical (hierarchy)

interactions formally (by law) or informally (relationships or trust). They are global (global agreements such as Convention on Biological Diversity, Ramsar Convention, and many others), multilateral/transnational/regional (such as Barcelona Convention), bilateral (such as China Australia Migratory Bird Agreement), national (NIPAS), sub-national (provincial or municipal or city ordinances), protected area system, protected area, sub-units of a protected area, and socio-ecological unit (Borrini-Feyerabend et al., 2013, pp. 24-25).

Governance diversity. The four (4) types of governance in OECMs are in the same category as PAs. The range sometimes would find an overlapping or nested array and may transcend boundary. In its economic form, I included an economic-responsive lens.

Type A. Governance by government. These are government ministries or protected area agencies reporting directly to the government or a sub-national or municipal government that can declare protected areas. The responsibility and accountability for managing a protected area (some cases are delegated to NGO, private operator, or community) and determining its conservation objectives as military reserves are in their authority. The governance may or may not be in a legal obligation to inform or consult local rights-holders and stakeholders before establishing the protected area and/or making or enforcing management decisions (Borrini-Feyerabend and Hill, 2015, p. 181).

Type B. Shared governance. Institutional mechanisms and processes where authority and responsibility are shared among two or more actors widely adopted for PAs (adoption of specific laws, policies, and administrative arrangements) and conserved areas are customary institutions. The subtypes

of shared governance are collaborative and joint governance (Borrini-Feyerabend and Hill, 2015, p. 181).

Type C. Governance by private actors. In private governance, the landowners are in authority to manage the land, and natural resources rest (land parcels owned by individuals or NGOs and conserved de facto), determining the conservation objectives and the rules to be respected. Conservation recognized by the national government or an international agency is regarded as privately protected areas under the IUCN definition, which may be of poor conservation visibility and may be lacking and limited societal accountability yet negotiable (Borrini-Feyerabend and Hill, 2015, pp. 181-183).

Type D. Governance by indigenous peoples (IPs) and local communities. It is the oldest form of land governance and natural resources governed and managed collectively by a community of people, settled or mobile. It fits local ecological conditions to use, manage, conserve, and enrich nature. Collective relationships' identity maintains ecological integrity for a functional community institution of sound governance (Borrini-Feyerabend and Hill, 2015, p. 183).

Nested and overlapping governance types. Government governed the PA containing a private reserve is nested with another governance type. Overlapping governance could mean that the government could impose a community or private landowner who would be left to accept a protected area's imposition upon their land. The situation may result in their eviction or living continuously within the protected area, maintaining their governance and management practice, and sharing the burdens and benefits of conservation (Borrini-Feyerabend and Hill, 2015, pp. 186-188).

Trans-boundary conservation governance. Trans-boundary conservation areas (TBCAs) are complex governance involving distinct levels of cooperation, from minimal to formal state decisions with informal approaches like local knowledge in gradation that evolves out of negotiation, adaptability, and collaboration. A unique model for trans-boundary conservation governance includes appropriately fitting formal or informal arrangements, networks, partnerships, or committed functional institutions (Borrini-Feyerabend and Hill, 2015, p. 182).

Market-oriented conservation governance. Financing conservation did bring the emergence that nature is assigned a monetary value for efficient and effective conservation (McAfee, 1999, as cited in Roth and Dressler, 2012). State-controlled conservation is a neoliberal logic on a win-win, part of the common-sense solution in conservation, which is a departure from the old-style command and control conservation governance reconciling conflicts between conservation and local livelihoods. Local livelihoods, economies, and environments are reconfigured, not at odds with conserving valued species and ecologies towards biodiversity offsets, ecosystem services, and tradable quotas for local social relations, livelihood strategies, and landscapes over time and space (Roth and Dressler, 2012).

Governance of PAs and OECMs. There are four (4) governance types considered in this research concerning OECMs guidelines in recognizing and reporting. However, it will connect its evolution from understanding governance in an IUCN definition for PAs in Table 4 (IUCN-WCPA Task Force on OECMs, 2019, p. 176). The questions deconstruct the definition of a PA and explore decisions *de jure* (in law) and *de facto* (in fact). OECMs can be on *de facto in-situ* conservation IUCN-WCPA Task Force on OECMs, 2019, p. iv).

The IUCN adopted PAs is simplified by the national legislation and policy that explicitly deal with the governance types that the government can formally recognize. Voluntary conservation practices may be recognized, promoted, and regulated outside PAs (Lausche and Burhenne 2011, as cited in Borrini-Feyerabend and Hill, 2015).

Governance issues. These are vital questions for a good understanding on addressing the implications on who will decide involving matters of PAs. The above terms are lifted from the IUCN in their Protected Area definition. Each term is clarified in improving governance as the heart of effective conservation, a focus of attention of the CBD's Programme of Work on Protected Areas (PoWPA) that includes private actors' involvement in this matter as among the relevant sectors of society (Borrini-Feyerabend et al., 2013).

Clearly defined geographical space. The implication of 'clearly defined' is on agreed and demarcated borders of specified three dimensions. Specific conservation rules may apply to a space that includes land and inland water noted here could directly bear the study's lowland inland seasonal wetland topography. Their physical features may move over time like riverbanks and seasonal wetlands or negotiated decisions like agreed and physically demarcated no-take zones declared by tribal chiefs (Borrini-Feyerabend et al., 2013).

Dedicated. It implies long-term conservation commitment such as by voluntary landowners through customary laws or supporting national, provincial, and local law. It could also be a decision imposed by law through international conventions and agreements and Supranational agreements or covenants of NGOs or private trusts and company policies or certification schemes (Borrini-Feyerabend et al., 2013).

Recognised. The governance is declared by the people or identified by the Conservation Communication and Local Governance of *XenConservation*:

government. It is done through legal or other effective means, such as listing on World Database on Protected Areas (WDPA) formally or informally, such as self-declared by a village council or indigenous community (Borrini-Feyerabend et al., 2013).

Managed. It is a range of strategies from inviolate an area to proactive on issues. Resource use, habitat use, and restoration are active management developed by indigenous authorities and the national government. Community organizations or NGOs could be implementors appointed by the government in its collaboration to maintain the natural resource biodiversity (Borrini-Feyerabend et al., 2013).

Legal or other effective means. Legal means could be gazetted recognized under statutory civil law enforced by the government as in Republic Acts or presidential proclamations of which the rules are implemented in their grassroots – provincial or local. The government also enforces recognition through an international convention or agreement, such as CBD. The rules are formed by the parties of the international cooperation of various countries or else managed through other effective means by a landowner or traditional rules for a conserved community area, or policies of non-governmental organizations (Borrini-Feyerabend et al., 2013).

To achieve. The level of effectiveness is implied among PA managers.

There are cases where management effectiveness assessments are from the decisions of the CBD. The WDPA records the progress of management effectiveness. It will identify and recognize protected areas as time unfolds as change is needed in the management plan and practices. It would still correlate to the management objective's management category for its implementation (Borrini-Feyerabend et al., 2013).

Long-term. Countries differ in their ways of 'long-term' management. It could be in perpetuity, such as in Colombia, or 25 years such as in Switzerland. The Philippines NIPAS Act of 1992 in Section 7 on Disestablishment as Protected Area implies perpetuity like a particular protected area to be withdrawn or disestablished, or boundaries modified could be for other priority programs of national interest. Presidential Proclamation for the Philippines' Malindang Mountain is bound by NIPAS Act perpetuity and other provisions where the administrative jurisdiction is from the Department of Environment and Natural Resources (Borrini-Feyerabend et al., 2013).

Conservation. The context of conservation-focused in this review refer only to *in-situ* maintenance of ecosystems and habitats and sustainable flora species in their natural surroundings. It cares for the World Conservation Strategy of 1980 on the preservation, sustainable use, restoration, and enhancement of natural environments. The point on who will decide what to conserve in anyhow could stem from landowners' possibility of assisted natural regeneration. Traditional knowledge could follow in the conservation with the conservation objective that it would thrive. This level goes well for private rightsholders if they intend to pursue *in-situ* conservation (Borrini-Feyerabend et al., 2013).

Nature, associated ecosystem services, and cultural values. In this context, nature always refers to biodiversity, which might overlap with spiritual significance. Associated ecosystem services could be regulating services like flood regulation related to nature conservation that does not interfere with it. Cultural values are meant not to deter conservation outcomes; even those under threat, such as grazing grounds, are protected through eco-tourism alternatives for economic benefit to the affected community (Borrini-Feyerabend et al., 2013).

Nature conservation in local governance. As social topography suggests small-scale regimes, connectivity is for well-functioning governance (Murphree, 2000, as cited in Borrini-Feyerabend and Hill, 2015). Governance is on landscape and seascape coherence, social units' strength for area-based and OECMs, and interactive connectivity-fit. As it is considered for OECMs recognition from area-based and non-area-based ones, governance authority determines as it qualifies from the terms of guidelines (Table 4). It applies to all four (4) governance types as PAs. Governance in OECMs is progressing, from Potential OECMs to Candidate OECMs to (declared or recognized) OECMs. Governance makes the gradation difference (Dudley, 2008; Borrini-Feyerabend et al., 2013, as cited in IUCN-WCPA Task Force on OECMs, 2019).

Potential OECM is identified as having OECM-like characteristics, but the 'governance authority' has yet to decide. The Candidate OECMs are identified as potential OECMs by the governance authority. It identifies one of the four (4) governance types stated for PAs yet applicable to OECMs with the authority and responsibility as decision-makers (Dudley, 2008; Borrini-Feyerabend et al., 2013, as cited in IUCN-WCPA Task Force on OECMs, 2019).

Table 4. Understanding governance in the IUCN definition of protected areas

Terms	Governance Issues
Clearly defined geographical space	Who defines the geographical space that is to be 'protected'? Who traces and demarcates the borders? Who can modify that, and how?
Dedicated	Who 'dedicates' the land and resources to conservation? How? Through legal means? Through customary laws and rules? Is the decision imposed by law? Is it voluntary? Who will solve controversies among conflicting objectives and priorities?
Recognised	How is the protected area recognized? By whom? Consider informal and formal recognition modalities and different levels of recognition, including • by local peoples and communities • by society in general • by local customary and/or legal authorities • by national authorities • by multi-country governmental bodies
Managed	Who develops and approves the natural resource rules or the management plan, where it exists? Who appoints the managers in charge of implementing the rules and/or plan? What is the managers' scope of decisions in interpreting the rules and/or plan?
Legal or other effective means	Are the authority, responsibility and accountability concerning the area codified in legislation? Are they regulated by specific agreements or customary processes, institutions and means? How are rules formed and enforced?
To achieve	Who decides how to implement the management plan or rules? Who decides what is 'effective'? Who defines the indicators? Who is in charge of monitoring and evaluating the results? Who decides about eventual needed changes in the management plan or practices?
Long-term	Who developed the vision of what the protected area should be like 'in the long term'? What does 'long term' actually mean? What guarantees are in place that the protected area will actually exist in the long term? Who will be accountable for this?
Conservation	Who decides what should be considered and how? Who defines the conservation priorities?
Nature	Whose definition of 'nature' is applied? Who interprets the definition for application to specific policies, mandates or sites?
Associated ecosystem services	Who benefits from ecosystem services? Who carries the burden of maintaining them, including the related opportunity costs?
Cultural values	Whose culture? Who benefits from the conserved 'cultural values'? How are decisions taken to conserve or promote certain cultural values instead of others?

Sensing Conservation Communication

A few conservation communication works of literature relate to the governance authority/diversity, quality, and vitality. Varied views in keeping nature conservation in better perspective are on track with the conservationist care that power through from the protectionist better connections. Grounded in optimism, it pulls forth sources that could not decimate good chances.

1. Systems thinking (ST) otherwise. As the national leader of cover crop production, Indiana was on a systems approach to conservation planning and farm management. The recent study focused on crop adopters with a different result, which is something for ST in its interconnections and long-term thinking consideration. It says on an exception that not all farmers found ST compelling as it referred to yet-to-be-implemented conservation.

Cover crop adopters of Indiana, a state in the US (a producer survey in three (3) Indiana watersheds favored ST. Cover crop adopters were systems thinkers than non-cover crop adopters linking the whole farm systems approach to success to a subset of farmers (Church et al., 2020).

The conservation communication seemed uncomfortable for non-systems thinkers even in the state's governance authority concerning cover crop farmers who have implemented conservation that found ST on qualitative sustainability. The acceptability of ST needs to get rooted in conservation effectiveness before it is appreciated. Governance direction in the conservation of ST may be effective to some.

2. Binary conservation polarity. Successful conservation sees resilience in the diversity of trans-boundary conservation governance beset by conflict and contradiction. The 16 land trust websites' distinct diverse land conservation

audiences were on a binary polarity as the former are environmentalist supporters (donors and volunteers). Private landowners make a living by ranching, farming, or logging.

The study had provided that amidst contentious relationship of differing values and conservation strategies. It moves beyond polarizing that supports private lands' conservation projects. It transcends and eases conflicts, thereby bridging the gap between the two dominant audiences. The unifying vector is where land trusts share values and goals, demonstrating likeness and commonality in a consumptive value orientation that transcends boundaries in conservation governance (Fleming, 2019). Empowered governance is the conservation communication in easing polarities.

3. Critical conservation communication. Critical could mean crucial for conservation communication that speaks of caring views as a reflective challenge for social change and optimism for conservation. Grelock-Yusem (2019) summed up various ways crafted from the artist's crucial learning participation in research. It had developed guidelines that contributed to Critical Conservation Communication.

It was a five-point guideline from the emerging themes on wildlife conservation that the study had found. Grelock-Yusem (2019) on Critical Conservation Communication formulated guidelines (p. 125) that recognized communication risks and complexity (Table 5) on governance quality and diversity as stakeholders with indirect impact could still be for balance views in trans-boundary conservation within the offshoots in governance authority.

The study was on artists for a long-term conservation win, potential for future research recommendation. It was definitive for conservationists and

ecopsychologists to look towards artists for insight into human-wildlife coexistence by combining art exhibits and community dialogue. A more lasting impact for a better communication engagement as a collective concern re-envisioned could depth-based community psychology and ecopsychology work towards improving public understanding of conservation issues that are conjoined opposites.

It is hopeful to address fractured connections that do not reinforce problematic diagrams as reconnection to other species seeks balance (Grelock-Yusem, 2019). It is transformative in its view of empowered governance as a conservation communication that could expand its scope and understanding. It considers the depth in the direction that could give better protection.

Table 5. Critical Conservation Communication Guidelines

- Reclaim beauty and emphasize the connection between beauty and life
 - Incorporate the arts and work that goes beyond explaining our connection to the more-than-human with just fact-based or scientific arguments.
- Utilize a wide lens, sharing place and context
 - Provide context in messages and story-telling, so that messages foster community and use the same holistic, ecological approach that is needed to solve fundamental conservation issues.
- Value authenticity and avoid the inclination to just sell an idea
 - Provide platforms that allow for what is present (including voices at the margins) to emerge.
- Reclaim contemporary or popular tools – consciously
 - Use social and digital tools consciously, so that they do not undermine larger objectives (i.e., creating a more holistic, ecological culture)
- Be playful and open to what dances through
 - Allow for work that loosens cultural boundaries between humans and other species.

4. Photography conservation communication governance. Taking images, and using them empowers intricate conservation. Those are more than pictures that further conservation message in an occupation, hobby, activity, and purpose for tangible gains related to conservation photography. There were eight (8) interviews with marine conservation photographers. Each has personal websites considering marine conservation photography. It garnered five (5) emergent themes: money, work, love, education, and positivity that work in neutrality for decision-makers. The audience affects the needed policy change for better conservation governance.

It was the study of Brown (2018) that the concept of this dissertation is rooted. The tendency is that governance overlaps in market-oriented conservation governance with trans-boundary conservation governance or governance types, and in rare cases, the nested or overlapping governance types. It reflects its relation to conservation communication's overall goals. These concerns are conservation actions: lists data stories (what has been done), visions (seeing nature for conservation), lead (the leads to conservation actions), suggestions (what will be done), and recommendations (a subset of environmental communication) across cultures, spaces, time and practices. Governance vitality fuels the conservation communication thread that would infuse new soundness in a pragmatic model dynamism, possibly easing conflicts.

This research focuses on marine conservation photos as academic literature that does not devalue conservation photography. The images resemble an occupation, hobby, activity, and purpose in marine conservation and marine affairs. Conservation communication stimulates meanings and

feedback shared within the context and acknowledges a fascinating communication that could shed light on an ethological field. Marine photography could significantly raise awareness and an educative campaign that might do well for fundraising.

5. *Culturomics in market-oriented conservation governance.* Their use in drawing an increase in public participation in nature and conservation as conservation emblems strategy prompts a sense of nation and place narratives that link market-oriented conservation governance. The cultural visibility offered in culturomics is insightful in internet salience in its potential to inform conservation communication. Though geographically and taxonomically limited, it is global in scope in conservation fund-raising narrative, which could be formal or informal, international or regional or local collaboration or partnerships that can enhance technical support.

Its appropriateness in a multi-scalar approach in mapping geographic similarities and discontinuities and measuring cultural ecosystem services frameworks like cultural identity would help map cultural values. It is from nature at macro-scales networks solution on cultural values' conservation communication. In understanding conservation potential misconceptions and context, societal impact information on consequences of conservation failure needs to be identified to counter intervention or contingency measures (Ladle et al., 2016).

Culturomics' promising ability to shape the digital mediate on the societal change can provide closer ties with what conservation is hoped to achieve. Conservation communication in its governance vitality at an empowered level would be viable across space and time with this measure.

6. Government conservation communication. An Iowa corn belt survey of

agricultural operators in the Clear Creek watershed results emphasized the importance of government conservation communication. The operators could either be full-owners (farmers who own the land they farm) or renters (both tenant and part-owner farmers who own 99% and below their farmland. The survey result was renters in their conservation tillage practice were attributed to the amount of highly erodible land (HEL) cultivated, which is conservation compliance from government subsidy.

Sourced differently, the renters sourced the primary conservation information from the federal government employees' information through Natural Resource Conservation Service and Farm Service Agency. However, the full-owners source was on farmer-to-farmer networks such as neighbors or friends and County Extension. It is best to weigh the tradeoffs of boosting production and profits for maximum government support or governance benefit. It balances or maintains economic and environmental factors for an effective conservation strategy. Coupling conservation compliance with subsidy or incentivization could increase conservation practice adaptability. This conservation method ensures stable revenues and fewer energy tilling fields (Varble, Secchi, & Druschke, 2016). A better subsidy scheme from the government as a conservation policy could provide the target audience with more contextual and consequential information in conservation communication to better financial and conservation success and a novel governance direction.

Affordances

This part considers the qualitative affordances concisely. The concentration

is the conservation core of care [conservationist and protectionist fusion] expression and the Conservation Communication Concepts of Brown (2018). It will also present the ‘visibility and persistence’ affordances of governance diversity and vitality in OECMs. The persistence quality that the study can inspire for the conservation communication is an affordance on an environmental possibility of caring attributes.

It is on protecting lowland freshwater mangroves that owe to ancillary management form of a conservation action that can be done either by private individuals or by local government units for long-term sustainability. It supports how ancillary works in OECMs visible in its governance authority and management, and the geographical type of wetlands that it is terrestrial, yet the coastal wetland as a “mangrove” comes as a distinctive feature of strength sums up the mix. IUCN-WCPA Task Force on OECMs (2019) lives up more as a guide on OECMs governance and its management as it had served more than its purpose for the discovery of Potential OECM or Candidate OECM. It works to develop a new model of care inspired by the OECMs’ saliency in its ancillary type.

Valuing affordances. Affordances, a Gibson term, is an environmentally available action possibility popularized by Norman (Gibson, 1979 and Norman, 1988, as cited in Evans, 2017). Three (3) criteria confirm affordances that are neither the object nor a feature of the object, not an outcome or variability (Evans, 2017).

Some parallelism in affordances. Locating a photograph is the goal or outcome. The goal is attainable through visibility and searchability, yet are no outcomes. The built-in camera is a feature in a smartphone where the affordance is recordability. The outcome could be documenting a particular violation. An object such as a table referring to the number of legs could have its affordances like eating, storing, or hiding (Evans, 2017).

Affordances of the study. There are two (2) qualitative affordances which are of conservation core of care expression and conservation communication qualities. The conservation core of care expression in the visibility and persistence affordances qualities is well-worth (Evans, 2017). Visibility can be with Types A, B, C, D, or nested-overlap governance as governance authority [governance diversity] listing in an OECMs. Persistence can be on recordability terms with primary, secondary, or ancillary conservation as governance management [governance vitality] of OECMs technology (IUCN-WCPA Task Force on OECMs, 2019).

It is on technology that the gradation of the types of governance authority and types of conservation management links with OECMs. Terrestrial or marine is the object, and the outcome or goal is locating conservation sites. The conservation communication qualities are conservation actions: list data stories (what has been done), visions (seeing nature for conservation), leads (the leads to conservation actions), suggestions (what will be done), and recommendations (a subset of environmental communication) across cultures, spaces, time and practices.

Analysis and interpretation of OECMs in conservation communication and governance. OECMs' practical integrity is woven from proper monitoring of the guidelines set. OECMs complement marine PAs or terrestrial PAs for biodiversity targets in a creative conservation solution in a legitimized position. Marine conservation conjures to establish marine PAs niche in conservation—the OECMs in both marine and terrestrial needs a new momentum in meeting the demands for mainstreaming.

Further, OECMs as a new standard other than PAs are still in their neophyte stage. It is more like an offshoot in the PA classification for those

unrecognized and unreported ones given a name with a distinct feature. OECMs are a new conservation communication to explore; it opens various possibilities that could count on deriving other ways that categorical uniqueness acceptability would be a new leap. The comforting thing in OECMs distinct acceptability characteristic prompts that any exception to the rule could have a space to fill in as it satisfies to promote a creative conservation solution needed. The mapping that recognizes this exception from the governance holds to OECMs. It supports how governance diversity in its four types of governance, shared governance, private actors and indigenous people, and local community have 'nested and overlap' and trans-boundary from the main types.

It is warming to note that care focuses on 'exceptionalities' acceptance for nature to thrive and humans to support conservation care. The constitutive of care is in the OECMs characterization core. The context agrees with Ng, Payne, and Oram (2021) that SHM concepts directly boost the OECMs' count in a country. The discoveries of areas with threatened species could account for the SHM search in the terrestrial landscape in any locality. Their study is realistic enough to target patches of land nearest to declared PAs in a region. The PAs landscapes have already been established in data banks, so exploring the OECMs from this premise would consider the adjacent lands with high biodiversity discoveries.

Plant bioindicators could help find these more miniature and disturbed landscapes that maintain a reasonable level of biodiversity. As the oldest ecosystem, the rainforest could be the key in the conservation communication to connect in conserving high biodiversity areas that could be Possible OECMs or Candidate OECMs. National Urban Development and Housing Framework 2017-2022 (2017) noted that within an urban development framework, a

national open space network could link the National Integrated Protected Areas System (NIPAS), which could work with small habitats.

Connecting this to conservation communication would contribute to seeing nature as a place to protect; that is another division of environmental communication. It sets the tone on undocumented areas and still conserves their high biodiversity. This approach relates to shared governance, a collaboration that would work well for private conservation areas that sees long-term conservation that coordinates with local government for technical assistance. As the governance extends to market-oriented governance and nested governance, it also hinted at synchronizing conservation communication in management to OECMs. It would open another orientation to accommodate settings that could provide parallelism with portmanteaus in categorizing responsive and proactive conservation communication.

There are Republic Acts and presidential proclamations for PAs; however, there are no presidential proclamations yet for OECMs for the recency of OECMs since 2018 as defined by the CBD (IUCN-WCPA Task Force on OECMs, 2019, p. 3). Presidential proclamations and other directives implemented by the Philippines Department of Environment and Natural Resources take their strength from the Philippines NIPAS Act of 1992. A long list of promising new issuances of OECMs declaration to follow will be the exciting next big thing for conserving natural resources as a new bucket.

A starter OECMs declaration issuance is a foresight of empowered governance that could interest lawmakers to craft and push legislative matters. It only needs a starter declaration for more than a dozen declarations to follow. On a positive note, it is encouraging for OECMs of its defining conservation acceptability. It would be a new interest to explore for lawmakers and discover

the areas that could fit for OECMs endorsement in their localities.

Noteworthy for OECMs is a de facto conservation that gives buffer zones that are unrecognized as PAs the chance to achieve a better place in conserving natural resources. Conservation that happens in practice in formal or informal processes of decisions will now have a possibility that better incentivization could be on the way.

Synthesis on conservation communication in OECMs. Governance authority and management in OECMs need to be sensitive for a practical application of conservation work. Knowing the de facto conservation opportunity in OECMs outside PAs means full freedom to engage in the best possible means. The private sector could participate in diverse governance management and governance authority. Any private-owned conservation site with land ownership title can benefit from urban development.

From the definition of a PA and the recognition of OECMs, the fusion of the practice could start from dedicated care in conserving natural resources, eventually moving the local levels of governance to support the conservation goals. Voluntary involvement could begin to form a collaboration with the government. The recognition would not be as difficult for OECMs. Indeed, it is a de facto consideration that could affect conservationist and protectionist care coverage for privately owned conservation sites. It takes coordinating with local stakeholders to start appreciating conservation efforts. This way, it helps track any remnants of century-old natural resources and opens new doors to an improved local database.

The SHM for OECMs correlates to conservation communication in local governance. It could leverage private conservation advocacies to promote a de facto *in-situ* conservation regardless of the hectares involved. It could start

as self-declared as some PAs' self-declaration were, yet governance authority is in coordination with the government in a long-term conservation commitment.

OECMs made a trajectory fusion for nature protectionists and social conservationists. It makes the conservation on a broader landscape. Owing to its ecologically representative dimension, it is rhythmic towards those who value nonanthropocentrism and the enlightened anthropocentrism blending both worlds gracefully. It addressed the growing concern of poverty while preserving an intact habitat where unrecognized and undeclared buffer zones could now have a niche for market-oriented governance. This momentum upheld the governance management and authority conservation that may have overlapped or nested governance or trans-boundary.

With the ancillary management and secondary management governance, unreported and unrecognized intact natural resources will now be weighed against long-term security, resulting in neither PA nor OECMs if security is at risk. Nevertheless, a secured one will allow for OECMs. Secured conservation actions will enable or constrain care in conservation in an optimistic spectrum for the greater good.

Chapter III

FRAMEWORK OF THE STUDY

In meso or small-scale OECMs, a small habitat matrix (SHM), the study accords its perspective in the conservation communication bridging discovery.

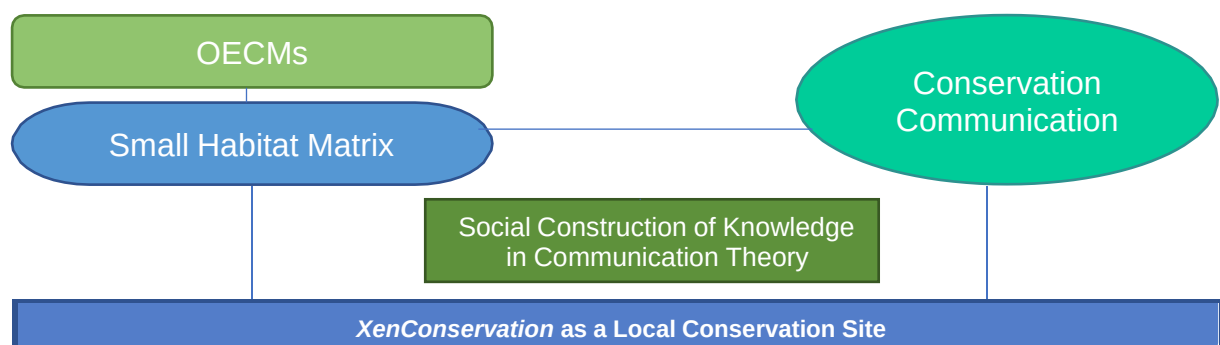
The Theoretical Framework of Study

The study depicted a rich historical case in *XenConservation*; although unrecognized as a local conservation area, and was functional as a local conservation site. It was a concept from the OECM in the strand of private local governance practice highlighted *in-situ* conservation SHM. Theoretically, the conservation communication on SHM was made possible by the bakauan-gubat as other threatened plant species of the Philippine Red List that qualified it summed up the rich biodiversity of the geographical situation of *XenConservation*, 2.3 kilometers from the coast. It is anchored in the premise of conservation communication adapted from Brown's (2018, pp. 19, 20) conservation actions concept on a subset of environmental communication in Shannon and Weaver's communication theory (pp. 9, 10). It is furtherance in the coverage of the conservation communication of Brown (2018). It is notably the normative minority that *XenConservation* conveyed.

Assuredly, Conservation Communication is approached in Social Construction of Knowledge in Communication Theory. It validates interviews of research participants regarding *XenConservation* as the subject during open-ended interviews (Jadina, Flor, Jamias, and Querijero, 2016). Through social construction of knowledge, conservation communication focuses on the communicative value of the *in-situ* conservation. Its care affordances reflect the undeclared and unrecognized bakauan-gubat tree species. It had once existed in 1999, yet no records in 2017 in the Conservation Communication and Local Governance of *XenConservation*:
A Peatland in Jimenez, Misamis Occidental, Philippines ... 57

province of Misamis Occidental. As a local conservation site, it holds a historical record of seasonal wetland in reference to a 1914 land history document. The rich biodiversity as a small habitat matrix reflects a plant bioindicator in the place with the bakauan-gubat tree species. The presence of care in the bakauan-gubat makes it highly informative for a conservation communication phenomenon as an independent variable that OECMs in a small habitat matrix work as dependent variables (Figure 7). Conservation Communication in *XenConservation* focuses on exceptionalities acceptance as SHM in OECMs in the immediacy of conservation action response in a local rightsholder-stakeholders' collaborative sustainability care. It is an ancillary - local conservation site governance care serving the expansive depth of critical conservation communication.

Figure 7. Ancillary Conservation Communication Framework

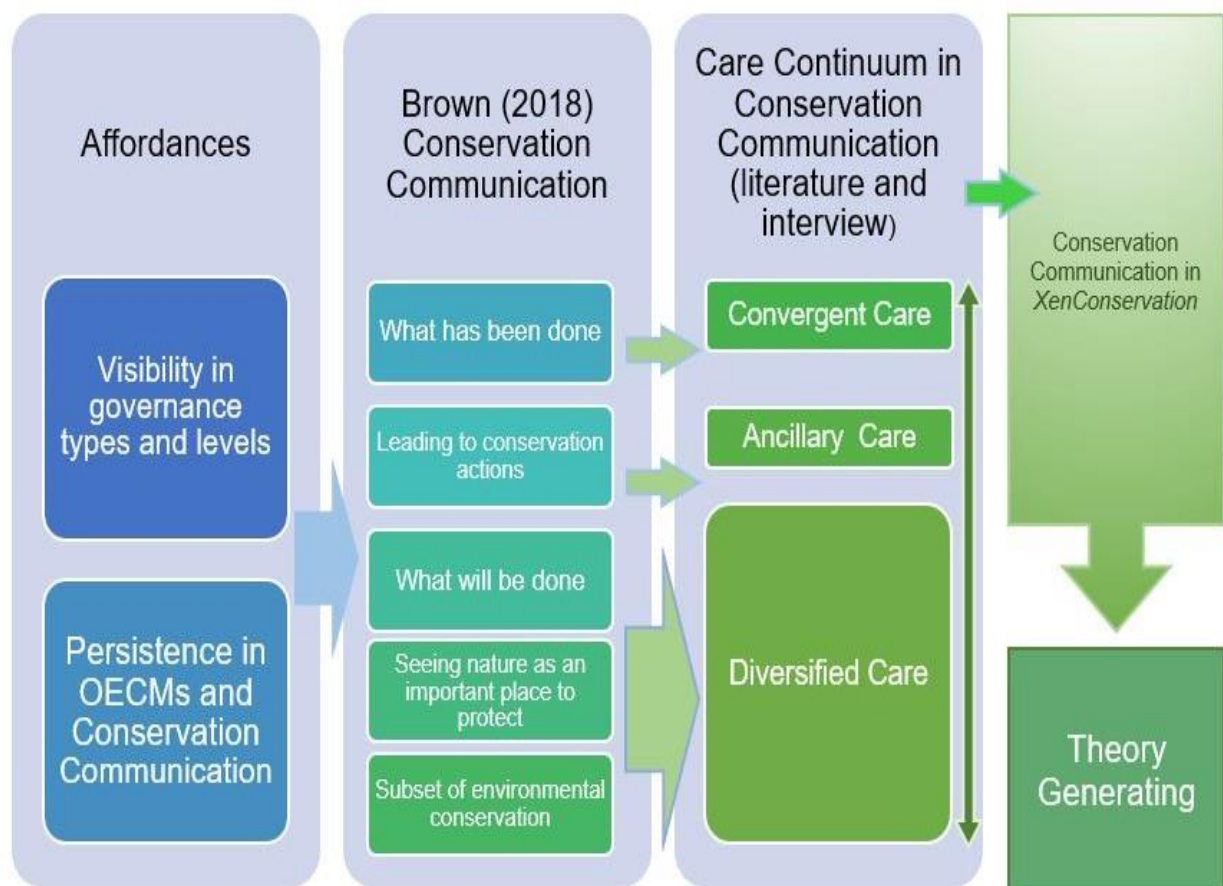


The operational framework of the study. It utilized an inductive logic the methodological assumption within its context in an emerging design within a constructivist and transformative worldview (Creswell, 2007; Grover, 2015). Besides, it applied a rightsholder - researcher as an “insider” epistemological assumption, quoted words to themes from participants’ interview ontological assumption, one’s voice rhetorical assumption, and values of care as a narrative axiological assumption. It is in understanding the essence of conservation communication in the local governance of *XenConservation*, a local conservation site that encourages collaboration through a transformative lens (Creswell, 2007). As a single case study,

the inductive mode of reasoning emerged in its theory-generating generalization from the facts of the case (Johansson, 2007).

Assuredly, interviews of research participants validated the conservation communication regarding *XenConservation* as the subject in the open-ended interviews. The study's premise was on the conservation communication adapted from Brown's (2018, pp. 19, 20) viewed and narrowed as promoting conservation actions, a subset of environmental communication in Shannon and Weaver's communication theory (pp. 9, 10). Conservation actions worked with what has been done or will be done, seeing nature as an important place to protect and those leading to conservation actions. *XenConservation's* conservation communication in local governance stemmed from Brown's conservation concept and the interviews' theme that served how conservation communication was applied in the case (Figure 7.1).

Figure 7.1 Operational Framework of Study



Chapter IV

METHODOLOGY

The study's context deals with the propositions in conservation communication that set the study's theoretical framework. The previous chapter substantiates conservation communication's phenomenal catalyst role.

Research Design

The study's consideration was qualitative exploratory (Swedberg, 2018) in an interpretive case study – linear-analytic structure research design to theory development (Sy Diop and Liu, 2020; Yin, 2003). It was inductive from primary and secondary qualitative data collection, three (3) stakeholders' interviews, and *XenConservation* Facebook Page as the rightsholder's narrative. The conceptualization was from the six (6) mixed grey and scholarly literature on conservation communication, the 12 primary literature on OECMs, and four (4) mixed grey and scholarly literature on governance of the IUCN-WCPA Task Force. The constitutive of care in it will be validated by interviews and applied in *XenConservation* with the government's help.

Locale of the Study

XenConservation is an ANR or in-situ conservation local conservation advocacy of lowland freshwater mangrove trees in a century-old seasonal wetland that started in 2002. It is in the now Barangay Nacional where the old name is Poblacion; that is situated in a residential area in the Comprehensive Land Use and Planning of the Jimenez Municipality. Only a portion of Barangay Nacional is within

the Central Business District of Jimenez, but not the conservation site. Facing the east, it is 600 meters from the Jimenez Municipal Hall, Barangay Santa Cruz, yet 400 meters from Jimenez Central School, Barangay Nacional, where the old highway lies and is in a central business district category.

The study's location was in the cul-de-sac of Harianan (east) and Quilo Streets (south), Purok 4, Barangay Nacional, Jimenez, Misamis Occidental Province. Geographically, it is 8°20'13"N, 123°50'7"E in coordinates and 45 m in altitude for the seasonal wetland. It is 2.3 kilometers from the coastal mangrove trees facing Iligan Bay in the east, the Municipal Reserve Coastal Wetland in Purok 1, Barangay Butuay, Jimenez, Misamis Occidental. Mount Malindang covers the western part, a Key Biodiversity Area of Protected Area (PA) status next to some few highland barangays of Jimenez. It lies in between the two (2) PAs of the Province of Misamis Occidental – Mount Malindang Key Biodiversity Area (KBA) and Baliangao Protected Landscape and Seascape (BPLS). The former is common to both Jimenez and Baliangao as the mountain range of the province. The latter is a municipality north of Jimenez Municipality and north of the Province of Misamis Occidental.

Participants of the Study

The stakeholder participants-interviewees were three (3) locals or natives of Jimenez. The Local Government Unit (LGU) was from MPDC and MENRO, and the public school was from Jimenez Central School Principal. Jaime B. Baldomero is the current Municipal Planning and Development Coordinator (MPDC) and the Focal Person of international-funded projects like PALS, PACAP, and WorldFish. Interestingly, this key person knew the "Zoning Ordinance" of the municipal Comprehensive Land Use Plan (CLUP). He graduated from UPOU in Environment and

Natural Resources Management and the Swinburne University of Technology-Australia in Entrepreneurship and Innovation.

Meanwhile, H.A.S. is the present Municipal Environmental and Natural Resources Officer Designate, a graduate of the University of San Carlos-Cebu in Commerce Major in Accounting. This key person had assisted the researcher for *XenConservation's* technical assistance as a conservation-fit site with DENR-CENRO District I. Ramgima Gonara, DepEd-Jimenez Central School Principal, was a graduate of the La Salle University-Ozamiz in Education. This key person lived in the same barangay as the conservation site, and the public elementary school is 400 meters from the conservation site.

As an interviewer of the research participants, I was a learner making sense of the interviewee's responses. As a rightsholder of *XenConservation*, the study connects to SHM in OECMs for Jimenez is one of the lowlands of Mount Malindang.

Sampling Procedure

A non-probability sampling - a purposeful sampling type of Criterion-i (Palinkas et al., 2015) summed the six (6) theses, dissertation, and scholarly articles on conservation communication, four (4) mixed grey and scholarly articles on governance, 12 journal articles on OECMs, and two (2) journal articles on conservation care and affordances. Further, the purposeful sampling in the study were people from the public who are direct stakeholders as a governance type in a local community setting.

In a case study of *XenConservation* through a semi-structured phone interview in aide memoir, theoretical confirmatory sampling was from three (3) interviewees of two (2) questions predetermined before the interview. The role of a

rightsholder [the researcher-interviewer] was in this study. It was also a conservation advocate - *XenConservation's* owner since 2020 and ANR or *in-situ* conservation since 2002 since the parcel of land was purchased. It necessitated validating advocacy from the stakeholders who were primary stakeholders (MENRO and MPDC) and a secondary stakeholder (public elementary school principal) that engaged them on small-size conservation advocacy until October 2021, the potential for an environmental buffer (Hesselink et al., 2007, p. 162).

Data Gathering Procedures

The study's consideration used a qualitative conceptualization of the OECMs, governance, conservation communication, affordances, and conservation care works of literature in an inductive approach from primary and secondary qualitative data collection, which also reviewed related literature for the study (Williams and Moser, 2019). Key informant interviews from stakeholders strengthened the *XenConservation* Facebook Page as a rightsholder. Vivo 1906 android phone's call "Record" feature was the source of documentation for conducting the case test interview. The recorded phone interviews were uploaded in an audio file using Microsoft Edge Windows 10 that required internet connectivity and was transcribed.

It safeguarded that complied with a formal request through UP Open University's Participant's Informed Consent Form of the three (3) stakeholders. The MPDC agreed to his full name Jaime Baldomero in the research. Name initial H.A.S. was opted by MENRO. One preferred to be on a pseudonym - Ramgima Gonara for Principal. Ramgima Gonara is a TIMORI or BINALI word, a local language or jargon in Barangay Santa Cruz, Jimenez, since the 1950s, aside from Cebuano, where every alphabet has a corresponding letter in place of it.

The first interview question was a job-related perception. Is it alright in your capacity as an MPDC/MENRO/Public Elementary School Principal that my area (facing east is the house of Architect Chiong, and beside the site on its right side is Dr. Chu's house) that I want to conserve in my life will be there? What are your reasons? This lens considered the geographical side; it is a few minutes' walk from the portion of Barangay Nacional's Central Business District. The second interview question linked the present and future conservation activities their office invests in and their views on this habitat conservation. What are your views of a parcel of land that is a few minutes walk from the Central Business District (CBD) in a barangay (yet a walking distance from the Municipal Hall of 8 minutes or 2-minute ride and Jimenez Central School of a 5 minutes' walk or 1-minute ride)?

Grammarly Premium was the plagiarism checker used in this research. The case as conservation advocacy on a Facebook page of XenConservation with a Facebook page link of <https://www.facebook.com/xen.con.10> contained private documents. It provides valuable insight into the site's rich biodiversity and legal compliance as reliable data from government institutions' assessment results or proof of claim.

Data Analysis

The study utilized a holistic, single unit of analysis for *XenConservation's* rightsholder and stakeholders in a categorical aggregation on governance [type], OECMs [particularities] in conservation communication [distinctiveness], and conservation care affordances towards theory development (Sy Diop and Liu, 2020; p.10). It was a direct interpretation analysis of the sources in 12 OECMs, six (6) conservation communication, four (4) governance, three (3) key informant interviews

from stakeholders, and *XenConservation*'s Facebook page as rightsholder that relates the study's theoretical constructs or propositions and its theoretical framework. The conservation communication status as applied in each OECMs case in the works of literature through persistence and visibility affordances established the open coding (Williams and Moser, 2019). It concerns governance and the interview themes (Creswell, 2007; p. 164) to theory generating, an inductive way of generalization from facts in a case to theory (Johansson, 2007).

XenConservation's Facebook Page posts upheld the construct validity and reliability of evidence. It is regarded as a revelatory case-nature contribution to conservation communication. Brown (2018) on conservation communication in this single case study supported its external validity (Yin, 2003). The ocular visit of a representative from the City Environmental Natural Resources Office in *XenConservation* vindicated the conservation communication claim. The certified status of the remaining threatened species – Bakauan-Gubat in a wetland in the province exists in a 1999 literature; however, no data in a 2017 report unfolded the recency status.

Chapter V

RESULTS AND DISCUSSION

Governance and conservation communication are two concepts closely linked and dependent on an authority-management view. OECMs governance in its conservation communication offers SHM pro-protectionist or pro-conservationist stream in *XenConservation*. These paths in the constitutive lifeblood of care can unite both courses that could simultaneously provide an optimistic way foresight of determination.

Convergence in Conservation Communication from Literatures

The governing care in OECMs in the visibility (Borrini-Feyerabend and Hill, 2015) and persistence affordances qualities (Evans, 2017) connected the conservation communication qualities. These conservation communication qualities are conservation actions: list data stories (what has been done), visions (seeing nature for conservation), leads (the leads to conservation actions), suggestions (what will be done), and recommendations (a subset of environmental communication) across cultures, spaces, time and practices (Brown, 2018) which is present in any care, diversified or ancillary or convergent. In conciliation with conservation actions, persistence in primary, secondary, and ancillary management in OECMs governance management [governance vitality related] (IUCN-WCPA Task Force on OECMs, 2019) brought us closer to the governance framework. Considering the constitutive of care, it is on care that categories could converge to conservation communication and new paths for rightsholders.

Table 6. Themes on showing the visibility affordances and persistence affordances.

Common Theme	Visibility Affordances	Persistence Affordances
	Governance Authority and Offshoots Qualities	OECMs Literature on Conservation Communication Qualities
Diversified Care	Governance diversity: Type A for government, B for shared governance, C for private actors in individual or partnership or corporations, and D for the local community or indigenous people, Nested and Overlapping, and Trans-boundary conservation of Borrini-Feyerabend and Hill (2015) Governance levels: Horizontal (voluntary, collaboration, or exchanges), Vertical (hierarchy) interactions formally (by law) or informally (relationships or trust), Global (global agreements such as Convention on Biological	Conservation in systems thinking (Church et al., 2020). Conservation actions on critical conservation communication guidelines that loosen boundaries on communication risks and complexities (Brown, 2018; Grelock-Yusem, 2019) Balanced conservation communication (Fleming, 2019)

	Diversity, Ramsar Convention, and many others), Multilateral/transnational/regional (such as Barcelona Convention), Bilateral (such as China Australia Migratory Bird Agreement), National (NIPAS), Sub-national (provincial or municipal or city ordinances), Protected area system, protected area (PA), sub-units of a PA, and Socio-ecological unit of Borrini-Feyerabend et al. (2013) Market-oriented conservation of Roth and Dressler (2012) Primary, Secondary, and Ancillary Conservation of IUCN-WCPA Task Force on OECMs (2019)	Conservation 'Culturomics' in a multi-scalar approach (Ladle et al., 2016) Government conservation communication (Varble et al., 2016) Unwelcome intervention is considerable for long-term effectiveness (Alves-Pinto et al., 2021) Special Areas Conservation (SAC) for better conservation actions (Farella et al., 2021) Critical conservation communication in updated OECMs of global biodiversity conservation (Geldmann et al., 2021)
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		Win-win solutions for post-2020 biodiversity framework (Maini, 2021) International conservation target for OECMs (Castillo et al., 2020) The immediacy of conservation responses in natural carbon sinks such as wetlands and peatlands in nature conservation (MacKinnon et al., 2020) Increasing the core growth for an increased conservation coverage (Maxwell et al., 2020) Potential OECMs in KBAs (Donald et al., 2019)
Ancillary Care	Type C Private Actors Governance diversity of Borrini-Feyerabend and Hill (2015)	Ancillary Conservation of IUCN-WCPA Task Force on OECMs (2019)

	Voluntary-Horizontal Governance levels of Borrini-Feyerabend et al. (2013)	Conservation actions on critical conservation communication guidelines that loosen boundaries on communication risks and complexities (Brown, 2018; Grelock-Yusem, 2019) Balanced conservation communication (Fleming, 2019) Conservation 'Culturomics' in a multi-scalar approach (Ladle et al., 2016) Ensure long-lasting preservation of the remaining biodiversity-rich and ancient ecosystems with a very low human intervention that explores collaboration in conservation actions for effective
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		conservation communication (Fajardo et al., 2021) OECMs in small habitat matrix (SHM) on conservation communication issues (Ng, Payne, and Oram, 2021) Private OECMs in traditional cultural landscape stewardship conservation (Cortes-Capano et al., 2020) Non-legislative protected status OECMs conservation values (Talty et al., 2020)
Convergent Care	Governance diversity of Borrini-Feyerabend and Hill (2015) Governance levels of Borrini-Feyerabend et al. (2013) Primary, Secondary, and Ancillary Conservation of IUCN-	Conservation actions on critical conservation communication guidelines that loosen boundaries on communication risks and complexities (Brown, 2018; Grelock-Yusem, 2019)

	WCPA Task Force on OECMs (2019)	Balanced conservation communication (Fleming, 2019) Conservation ‘Culturomics’ in a multi-scalar approach (Ladle et al., 2016) Ensure long-lasting preservation of the remaining biodiversity-rich and ancient ecosystems with a very low human intervention that explores collaboration in conservation actions for effective conservation communication in an inclusive and holistic rights-based community conservation approach (Fajardo et al., 2021) SAC for better conservation actions (Farella et al., 2021)
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Convergence in Conservation Communication from Interviews

The external validity in a single case study as OECMs in SHM was upon care on the persistence and visibility affordances. The Open Codes concepts in the online literature on diversified-ancillary-convergent care themes were listed as affected paragraphs or quoted sentences in the interview as highlighted (Williams and Moser, 2019). Direct interpretation analysis of stakeholders' interviews in connection with personal information and the concepts of conservation communication were considered.

Diversified care. The conservation actions: lists data stories (what has been done), visions (seeing nature for conservation), lead (the leads to conservation actions), suggestions (what will be done), and recommendations (a subset of environmental communication) across cultures, spaces, time, and practices. The mentioned actions were conservation communication concepts that can ease conflicts in the expanding constitutive of care (Brown, 2018). It transcends spaces from microsite to real-world as a strong point of the impact of the reality of facts, not just from a printed form, yet an accessibility check. From the Facebook Page of *XenConservation*, the information provided the conservation done.

The conservation's strength featured the *in-situ* conservation of freshwater mangrove trees in seasonal wetland. This threatened Philippine Native tree lies in lowland with a century-old natural seasonal wetland, 2.3 km from the coastal mangrove forest reserve in Butuay. The plant bioindicator bridges the visions, lead, suggestions, and recommendations from this point forward. Locally, the western part is Mount Malindang, and the eastern part is the coastal mangrove forest reserve.

“In my capacity as a Public Elementary School Principal, it is good that the area you conserve in your life will be there. I see it as a source of strength for the Education sector that could provide environmental awareness and care for nature for our learners in first-hand information not from a microsite as in a Press Release last March 8, 2021, of the Department of Education. As a resident of Barangay Nacional, neighbors as we are, your conservation site connects the creek in my neighborhood where we could get freshwater mudfish since my childhood and at present. Hopefully, creek conservation as a natural disaster risk reduction would be prioritized and be at large by the local government” (Gonara, R.).

“With that being in a distant, in the urban area it is still part of the program we want to promote ecotourism in our municipality. No issue with that” (Baldomero, J. B.).

“As a MENRO of Jimenez, it is okay that you will pursue your conservation advocacy. I am happy to know about your unique way of responding to the conservation interests of the municipality. I appreciate your efforts of submitting to us in a letter a listing of the names of the threatened plant species that are present on the conservation site; that was an environmentally compliant letter of your conservation advocacy. I learned about freshwater mangrove trees other than the lunai, pahutan, anahau, and molave. Although lunai is rare nowadays, as a medicinal plant, I am familiar with it. However, it is not so famous for freshwater mangrove trees, and I am thanking you for the information regarding this threatened tree status. The only

common knowledge is only mangrove trees in the coastal area, mostly conservation campaigns. It is a new knowledge that there exists something different that Jimenez is gifted with this tree for it survives and thrives well.

With the information you shared in the XenConservation FB link, you did good research to appreciate how the tree is in its topography compared to whether it naturally or usually grows. Aside from a walking distance from the municipal hall, it is 2.3 km from Purok 1, Barangay Butuay, at the tipping point from the National Highway, a few meters away from the Barangay Hall of Butuay. I also noticed that you had a registered business name for your advocacy with the Department of Trade and Industry as it is a sole proprietorship. The BGCI logo is reminding me of Singapore's Botanical Garden. You did well in your advocacy as you leveled up a small area conservation advocacy to an international level. I find it interesting to note how you could have it as an institutional member when you are starting up only. Anyway, you have records or proofs, so we could not be faked by a claim as such. I am glad to note that you ask technical assistance from our very own Agriculturists Pino and Lusing that the area could be assessed by a technical staff regarding soil acidity and the peatland you identified. Though the Philippines ' Peatland map is on extensive areas, I appreciate your initiative of finding the possibility in the small matrix. Your curiosity was informative for us as stakeholders. Yet, we need to have this inspected adequately with the CENRO team for proper endorsements.

Under the leadership of the Committee Chair in Environment and Agriculture is Sangguniang Bayan Councilor Dick Palangan, there could be possibilities that an ordinance regarding the conservation be crafted. Since 2014 as he started serving our town as an SB Councilor, he confided that there was never any conservation site where they worked for an ordinance on it. SB Councilor Palangan is a Learning Site for Agriculture (LSA) program recipient himself. And there are quite LSAs here in Jimenez. Conservation activities mainly focus on tree planting, mangrove tree planting in coastal areas, or upland indigenous tree planting activity.

Then, it could work towards crafting an ordinance that your site as an alienable and disposable land could be declared as conservation one. Still, you won't be allowed anymore to cut the threatened plant species thereon, for the ordinance will be binding your use of the resources on the site. Yet, the land will still be yours just like the heritage houses were declared, yet the improvements thereon are bound by the heritage conservation binding agreement. Habitat conservation within walking distance would be a good eco-tourism, significantly if it preserved an ancient ecosystem.

In summary, it would be a new leaf for our future conservation activities with your parcel of land as a conservation site. XenConservation is worthy of being an ordinance potential, and we look forward to personally see Bakauan-Gubat with Committee Chair on Environment and Agriculture SB Councilor Palangan. To see how it differs from the Bakhaw in Butuay personally would be interesting to find out. The

seasonal wetland and peatland as site preservation and the Bakauan-Gubat as the point of interest could be another eco-tourism potential. It is the opposite of coastal mangroves.” (S. H. A.)

Ancillary care. Varble, Secchi, & Druschke (2016) noted conservation practice adaptability, and it can speak for government conservation communication as a junction to address the local government’s climate change mitigation ventures. Local conservation provided novel ways that stakeholders will consider in its valuation of untapped resources yet considerable value.

“In and on behalf of the education sector, I am open to local conservation sites. Walking distance conservation sites would not take us long rides to experience natural conservation practice. The collaboration is less stressful as it would save us traveling expenses. It would also promote local conservation tourism, aside from the Barangay Butuay’s Mangroves. The Jimenez LGU had partnered with the Jimenez District Administrators last July 2013 when we did mangrove tree planting activity. Your conservation site would be something to look forward to after the pandemic for the school’s partnership in providing freshwater mangrove awareness to learners and teachers. It is about diversified mangrove trees. Only coastal mangroves are famous, so introducing freshwater mangroves would be new for everyone, both learners and teachers alike” (Gonara, R.).

“One of the visions of the Municipality is to promote environment and natural resources that by maintaining its legacy and tradition to harmoniously blend the century-old and urban development by keeping in place protected habitats and preservation of ecological balance. So,

your program may connect the vision of the municipality” (Baldomero, J. B.).

“Again, freshwater mangrove tree planting is not part of the list since this is not known. Had it not for you, the identification of this tree species would not come up as existing in our locality. It will remain to be regarded as otherwise, a miscellaneous tree for lumber cutters and the community.

Perhaps this could be something to look forward to for conservation and strengthen its value. I visited Ma'am Gema of DENR-CENRO yesterday. I requested her to arrange for an ocular inspection. This arrangement would mean that the CENRO team would validate the place as a stakeholder of your conservation advocacy. Their only problem is the transportation, so in the meantime, I am still in the process of arranging with the Municipal Engineering's service car. Hopefully, we could arrange a schedule in the soonest time for the CENRO's team to conduct an ocular inspection.” (S. H. A.).

Convergent care. The need to ensure long-lasting preservation of the remaining biodiversity-rich and ancient ecosystems with very low human intervention distinguished a collaboration in conservation actions for effective conservation communication (Fajardo et al., 2021). The growing concern was addressed in the education sector as stakeholders in environmental education.

“The future conservation activities are in line with the Department of Education’s Climate Change Education. The moves would relate to the School Improvement Plan, a 3-year plan, and Annual Procurement Plan, a 1-year plan. The latter is an extract from the former. The SIP

was until December 2021, so the possibility of local collaboration for School Improvement Plan 2022 to 2024 is planning to be incorporated next year and Annual Procurement Plan 2022, yet the potential to be realized will be for years maybe. The pandemic consideration significantly affects. The fight towards climate change partnership possibility would be after the pandemic. Habitat conservation views of a parcel of land are minimal compared to Mount Malindang. Most of the time, the humidity in our place ranges in an average of 70 to 76 percent, and with 30 degrees Celsius, an extra caution range. It is good to know that there are mangroves in Nacional, not only in the coastal area of Butuay. This conservation site is comforting for the residents in our barangay that we have mangroves a few meters from the school. Hopefully, in other barangays in Jimenez, a local find like the freshwater mangrove would be protected by the community and the school as an advocate. The tree is not that well known; unlike Molave or Narra or Mahogany, it is an endangered one like Molave or Narra not allowed to be cut” (Gonara, R.).

“Technically, we have to promote safe and healthy environment so with the preservation of the flora and fauna in our locality. We are very much thankful for your endeavor to help. It will harmoniously blend with our locality having a tree planted by our national hero, Rizal within your barangay. Until now, it is still part of the heritage of our locality so there is no issue with that” (Baldomero, J. B.).

“At present, we discontinue our tree planting activities due to the pandemic. It would be wise for you to attend an SB Session Meeting

or Municipal Councilor's Meeting for the information, comments, and recommendations regarding your conservation site. It will be good for you to attend that the Local Council Committee Chair and Members of the Environment and Agriculture could hear first-hand from you about your conservation site. You could explain how a conservation site works since we are only familiar with community gardens and botanical gardens. It is a new frontier in conservation activities.” (S. H. A.)

Constructive Convergence

Conservation communication in care constructivism sustained the understanding of OECMs in SHM. It was a transformative view to withstand an active collaborative take of private governance for its philosophical worldview in a direct interpretation analysis. Further, it holds from the governance framework within visibility affordances and the conservation communication framework within persistence affordances. The education officer, MENRO, and MPDC interviews and the conservation communication of the documents of *XenConservation's* distinctive conservation accomplishments citing online reference sources validated the continuity. It was fluid from the convergence of the governance and affordances.

This qualitative exploratory purpose research provided a foundation for ancillary care. It was focused on the significant value of the geographical location of freshwater mangrove trees, which are neither near coastal areas nor in uplands which is the usual location of forest mangrove trees. The discovery of an unusual natural habitat for freshwater mangrove trees in a seasonal wetland, not along rivers and coastal areas is a conservation communication on ancillary care. It is in a continuum of convergent-ancillary-diversified care.

The purposeful sampling on Criterion-i preference was distinctive of the geographical location. It was once an existing freshwater mangrove tree species in a river nearby in the protected landscape and seascape – the BPLS in the Province of Misamis Occidental. Forest mangrove tree species are back to get documented though they missed out since 2017; besides, it is a full-grown tree verifiable on-site as *in-situ* conservation. Though the *XenConservation's* Facebook page is not that popular, it provides a reserved awareness of the existence of freshwater mangrove trees. Freshwater mangrove trees existed in the lowland in Mount Malindang in Barangay Landing, Baliangao, as documented, and the study made aware local public elementary central school, MENR, MPDC, PENR, CENR, and its officers. Further, it can bridge future research undertakings in which the once inhabited area is gone.

The consistency of the interview's context is a plausible yet credible sense of a subtle or restrained conservation communication in private governance. It could still provide awareness or information modestly. Jimenez is a heritage town and is still open to collecting published or unpublished research on the town's treasures. It could also be a promising in-house reference item that this dissertation study can serve the locality's heritage discoveries' collection reference. *XenConservation's* seasonal wetland supports forest mangrove trees' habitat conservation and dates back to 1914. It is a historical record from the Jimenez Municipality's Assessors Office files. The conservation site is the epitome of enabling and converging conservation care through the years with these entire records. A complete document provides an infallible strong backup.

Rightsholder's significance. The researcher, as a rightsholder, connects to governing actors in PAs concept of governance. The Province of Misamis Occidental PAs is Mount Malindang and Baliangao Protected Landscape and

Seascape (BPLS). Jimenez is one of the lowlands of Mount Malindang, just like Baliangao. However, BPLS and Mount Malindang are governed by the government, not private. Since governance options include private governance, the researcher, as a private individual, rightsholder in this type, also has legal rights concerning land, water, and natural resources.

As a rightsholder, the documents that the conservation site holds for its water portion has a document-proof from the Jimenez Municipality's Assessors Office in its historical record since 1914 for the seasonal wetland of century-old in this case. Though it is a personal document of the researcher, the changes in square meters that the site is recorded from 1914 speak on the changing seasonal wetland that reflects on the survey conducted and noted through the years. It remained to be consistent in recent years' tax declaration documents.

As a local actor in conservation activity on the local level, the goal of ANR on a few threatened tree species can account for the broad range that sides the legal rights in land, water, and natural resources. In this case, the conservation site is an intact natural habitat of a century-old conservation measure, a private (individual) rightsholder. This conservation activity adheres to Aichi Biodiversity Target 11 of the CBD Strategic Plan 2011-2020 in a broader landscape context (Borrini-Feyerabend et al., 2013). The ownership and legal rights of using this SHM in *in-situ* conservation are secured and a transfer certificate of title is a security document in land ownership. Having a land title is a legal ownership matter where private individuals can still effectively adhere to conservation legalities and compliance requirements (Jadina et al., 2016; Ng, Payne, and Oram, 2021).

Stakeholders' significance. The advocacy, as validated by the primary stakeholders (MENRO and MPDC) and a secondary stakeholder (public elementary school principal) that engaged them on small-size conservation advocacy were potential for an environmental buffer. It also paved the way for the legal right to use conservation advocacy. As a rightsholder, it was able to elevate a conservation communication of awareness that the MENRO could arrange with CENRO Oroquieta for possible ocular inspection with his statement, *"I visited Ma'am Gema of DENR-CENRO yesterday. I requested her to arrange for an ocular inspection. This arrangement would mean that the CENRO team would validate the place as a stakeholder of your conservation advocacy"*. The extent to the conservation communication on individual private governance that *XenConservation* was able to stir stakeholders and protect at the same time the threatened tree species this far is bringing to the surface a focus on freshwater mangrove tree's worth. At some point, it can bring OECMs subtle particularities worth knowing of its vulnerabilities that conservation activities could well improve its status. As the MENRO was informed, the ripple effect opened information regarding the freshwater mangrove tree to CENRO Oroquieta, BPLS, and PENRO Misamis Occidental. Jimenez

MENRO coordinated the conservation communication drive in the individual private governance of SHM. It was able to deliver and connect to inform authorities of the SHM intricacies in OECMs and how online sources can bring on the possibility of providing confirmatory information and drive to protect extinct species now unknowingly revived. Private individual governance accounted that the regulation of hobbyists is a valuable conservation communication in local governance for SHM connected to

OECMs. This compliance step complies with Joint DENR-DA-PCSD Administrative Order No. 01 May 18, 2004, on Joint IRR Pursuant To Republic Act No. 9147. RA 9147 is on Conservation And Protection Of Wildlife Resources And Their Habitats. Article 3, Rule 26.2 of the act is directed at a hobbyist to submit a list of threatened plants in their possession shall be sufficient. MENRO affirmed this provision in his statement, *“I appreciate your efforts of submitting to us in a letter a listing of the names of the threatened plant species that are present on the conservation site; that was an environmentally compliant letter of your conservation advocacy. I learned about freshwater mangrove trees other than the Lunai, Pahutan, Anahau, and Molave.”* It is about compliance with laws as a hobbyist or a private individual local conservation advocate that can help fuel any timely conservation effort for the conservation goal of improving the status of threatened tree species and ancillary peatland (peatland-chimera logic) sustainability that the government prioritizes in its department’s administrative order.

The conservation communication that the private sector can reasonably contribute to is an auto-default of knowledge in the information drive of the government. This case matters that any private individual in conservation advocacy can contribute to improved data or an improved protected species status. The private sector can boost current undertakings to track species count compliance as a hobbyist stand. Information drive of disclosure of information from hobbyists would contribute to an efficient tracking of species for this noble purpose.

Though in a small way, it can still be contributory to efficient data management. It can be a breakthrough in cases where extinct species are concerned and private sector collaboration can assist in recovering those

species that could have been lost. A meso-conservation site can be helpful as a contributor to the increase of the count of individuals of *in-situ* conservation of threatened tree species. Yet, it would not discount any *ex-situ* conservation within the *in-situ* conservation of a conservation site.

However, there is a need for a knowledgeable hobbyist regarding compliance in reporting to the local environmental and natural resources office to achieve practical and available updated information. In the case of the freshwater mangrove tree in *XenConservation*, Energy Development Corporation (EDC) Binhi Staff CSR Forester Roniño Gibe [a reply in an email confirmed by their taxonomist] was able to identify the tree last June 23, 2020. This situation says private conservation advocates can significantly help the government achieve its conservation goals. The private sector research works can save threatened tree species, rediscover other threatened tree species, and discover peatland. An empowered private conservation network could boost the needed upliftment of the conservation goals in the continuum of care in conservation communication.

There is a veritable future in conservation communication for SHM in private individual's governance as the affordances provided an authentic conservation communication connectivity and continuity. The governance of private individuals makes possible both the concept of Brown (2018) and the interview's common themes of a sustainable continuum of care. It was constitutive of care that the SHM in OECMs could sustain the continuity of the study from the online sources that it inspired from the basics that stakeholders or rightsholders could translate to conservation actions.

Further, the interviews of the stakeholders from the Municipality of Jimenez confirmed *XenConservation's* tacit practice with its intangible and

tangible documents. The local governance as private individual conservation efforts depicted a meso-conservation site of a geographical space significance in a continuum of care. The continuous action of care was consistently attuned.

XenConservation's Facebook Page posts confirmed the construct validity and reliability of evidence. Interview statements were coherent to the online sources, making them logical. It speaks of the unifying truths shown in the BPLS data online and the ocular visit statement of Jimenez MENRO. *XenConservation*, in its external validity, encompassed the more significant situation of the implicit information context of explanation specifics of Jimenez (Maxwell, 1992 as cited in Hayashi, Abib, and Hoppen, 2019).

The geographical location of *XenConservation* makes the distinction. It is 2.3 kilometers from the coastal zone and 600 meters from the municipal hall in a PA's lowland within a few meters from the central business district, making the distinction. *XenConservation* has a Bakauan-Gubat or freshwater mangrove tree, listed as Number 961 of the Philippines' threatened plant species commonly found in upland or coastal areas, mostly peat soil. It discovered freshwater mangrove trees and peatland for its conservation communication in individual private governance of care in SHM scope. It is a Jimenez specifics of this tree species concerning ancillary conservation communication.

The tree data from 1999 to 2017 of the Bakauan-Gubat showed that Bakauan-Gubat could still be found in Luzon and Visayas. It can still be seen in a coastal area in Mindanao. Sarmiento (2018) noted *Carallia brachiata* or freshwater mangrove tree in Hinatuan Island, Tagana-an, Surigao del Norte. The study site is recorded as part of the coastal mangroves in the area. It is 24 km East of Surigao City, accessible by boat from the municipality proper.

Interestingly, *XenConservation's* potential in its highly accessible
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location for Bakauan-Gubat or freshwater mangrove tree and conservation attraction as an extension of the heritage tourism of Jimenez. It could be an added attraction concerning eco-tourism and accessibility features if prioritized. The normal minor variation in a topographical location as individual private governance on an ANR contributed to documenting proof and support towards a continuum of conservation care. It provided awareness of the diverse topography of lowland mangroves near a seasonal wetland of *in-situ* conservation of mangroves. The coastal habitat of freshwater mangrove trees in lowlands extends to a seasonal wetland that the conservation site was able to bring on the message for conservation communication.

The study provided considerable attention to OECMs, especially on SHM on ancillary management and ancillary care to achieve conservation goals. Conservation communication works as a subset of environmental communication, but it discovered and brought forth private governance collaboration empowerment in a workable conservation network. It also highlighted *in-situ* conservation goals that possible *ex-situ* conservation efforts could work well in the care continuum from this viewpoint.

Conservation Communication in Local Governance

Ancillary Care is bidirectional to Diversified and Convergence Care. The result recorded the entirety of the interview. It classified the raw data to an initial coding of three categorical care statements representing the entirety of the response as ancillary care in its spectrum. As an educational stakeholder, Diversity Care was a first-hand information migration from the DepEd microsite, and as a MENRO stakeholder, it was informative to the local environment division. Furthermore, Ancillary Care was responded to by the education and the MPDC stakeholders. The former noted less

traveling expenses for conservation awareness practice, and the latter connected the conservation site to the municipality's vision of preserving ecological balance. Finally, Convergent Care united the three (3) stakeholders of *XenConservation* as stakeholders in environmental education join on habitat conservation for a safe and healthy environment in preserving the endemic flora and fauna in the locality, a new frontier in conservation activities.

Ancillary care. There are two opposite directions of the degree of care in an optimum utilization for conservation communication. Either way, the governance quality extends the same level of care on either side, though in differing directions that could contribute to conservation communication. It does not make the other side less of the other side. Both are important as they are, and they could work altogether. They can stand on their own, and both are distinct. Convergent care is a whole as well as diversified care.

The role of convergent care applies to a distinct action requiring its care, and its distinction is applied to diversified care. It is a matter of appropriateness of the conservation communication needs unique in a situation. However, all these centers in ancillary care from which the direction moves sideways for convergent and diversified care. It can also be the unity or fusion of both convergent and diversified care, ancillary care.

These categories, irrespective of directions and fusion, correlate with the governance and management in OECMs. The gradation is on the suitability of the geographical space of the conservation site. This gradation category inspires the continuum of care, yet in the same level of intensity, differing in a direction that works sideways, or fusion of both care for the conservation communication in local governance.

Ancillary care can level up from a threatened species hobbyist of an

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in-situ conservation nature to international membership in the prestigious Botanic Gardens Conservation International (BGCI). It is a voluntary international membership that validates the authenticity of conservation practice, and the membership is renewable annually in the case of *XenConservation*.

Diversified care. Two highlighted points lead to diversified care: ancillary care and convergent care. However, the ancillary and convergent care also leads to another degree of care, a duality role. It relates to the diversified care [lowland wetland] in freshwater mangrove trees, a plant bioindicator from the statement of Gonara. It is rare to find freshwater mangrove trees in lowland plains, and it is a significant find considering its habitat as a threatened species.

Diversified care in this research connects to *XenConservation's* century-old seasonal wetland in a peatland, a natural flood control system that can provide risk preventive, long-term sustainability, a potential action that addresses the challenge in OECMs management from diverse actors (Maxwell et al., 2020). This distinction of care within the OECMs worked from the unrecognized SHM on ANR or *in-situ* conservation. Nature speaks of the diverse care needed for conservation communication in local governance. The trajectory as an act of care level up is ordinance crafting possibility from MENRO statement.

Both MPDCO and MENRO mentioned eco-tourism-oriented care. Both divisions have a common thought of a bright future for this unique find within their field of practice, so they are better positioned to speak a realistic future for the conservation communication in local governance this conservation advocacy holds.

The interview revealed a possible ordinance for future conservation site protection, locally. This movement needs a conservation advocate or a representative who will act as an informant to the local committee chair for the environment to uncover previously unknown data. With complete information backed up by research, support for claims can easily be tracked and avoid incorrect information. In this manner, an open-minded chairperson supporting research and environmental advocates can promote timely changes responsive to international conventions or agreements implemented locally.

The municipal's zoning ordinance could greatly influence a higher approval rating that specific conservation sites could be recognized, especially when the zoning set-up is inclined and dedicated to preserving heritage sites or century-old finds. Harmony is needed so that zoning and conservation would not resist each other but instead support each other, leading to the pronouncement of eco-tourism. In addition, walkability is a plus factor for accessibility in eco-tourism. A dedicated municipal planning and development coordinating body and a municipal environment and natural resource team's integrity are in a two-face coin instrumental for the practical and realistic response to local conservation advocacies. Their unity in conservation vision can significantly promote conservation activities for the present and the future. The MPDC complements MENRO, and their harmonious relationship was manifested when both mentioned the possible future eco-tourism potential of *XenConservation*.

Convergent care. The Philippine National Leaf, Anahau, was used in this study to represent the convergent care for itself as a threatened species. It also accounts for the Pahutan, a threatened species listed on the Philippine Red List and IUCN Red List, and the former is a Philippine Red List only.

The validation-cum-visit from the Community Environment and Natural Resources Office (CENRO) Oroquieta significantly contributed to the soonest conservation support (XenConservation, 2021). An ocular visit to the conservation site can encourage the community within the area that the local government fully supports any recent discoveries, especially those involved with vulnerabilities. The presence of a CENRO Conservation Staff that validates a conservation site's high biodiversity potential is another visibility influence. It supports conservation advocacy as coordinated with a MENRO in the hierarchy of technical assistance sought. It confirms the once implicit information regarding the census status of Bakauan-Gubat extinct in 2017 and *XenConservation's* Bakauan-Gubat now counted as part of the CENRO's tree registry.

The education sector as a stakeholder completed it as an educative arm. With a crafted local ordinance, teachers and learners could embrace the benefits and importance of conservation sites as that of local legal endorsement. Information can be disseminated early on and will be a conservation educative awakening. *XenConservation* delivered the transformative and constructive view as the convergence was noticeable despite the disparity of its unique biodiversity geographically. It clears the road towards pursuing the bidirectional process that the case study was able to clarify regarding a sub-case of minority features (Sy Diop and Liu, 2020).

Conservation Communication in Private OECM's Small Habitat Matrix

The ancillary conservation management that connects SHM in OECMs was validated in the statement of Jimenez Municipal Planning and Development Coordinator Baldomero. *"One of the visions of the municipality is to promote*

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environment and natural resources that by maintaining its legacy and tradition to harmoniously blend the century-old and urban development by keeping in place protected habitats and preservation of ecological balance. So, your program may connect the vision of the municipality. With that being in a distant, in the urban area, it is still part of the program we want to promote ecotourism in our municipality. No issue with that. Technically, we have to promote safe and healthy environment so with the preservation of the flora and fauna in our locality. We are very much thankful for your endeavor to help. It will harmoniously blend with our locality having a tree planted by our national hero, Rizal within your barangay. Until now, it is still part of the heritage of our locality so there is no issue with that." The statement connects to Comprehensive Land Use and Planning (CLUP) regarding environmental buffer or conservation area with buffer in the OECMs' scope.

His view on *XenConservation* in OECMs is within the ancillary conservation effort of private governance. Yet, it did sense that the conservation effort's conservation communication does not aim to establish the site as LCA. *XenConservation* is low-ranking private conservation advocacy regarding geographical space in square meters. It is 2,880 square meters in its area as a conservation site, yet a relevant conservation effort where its potential value could not be slipped off for consideration by conservation advocates. Its potential lies in the continuum of converging care and diversified care that it could sustain as an ANR as it confines *in-situ* conservation, not discounting *ex-situ* coconut trees.

As a conservation advocate, one (1) coconut tree of around eight (8) years thrived on the site from the *ex-situ* coconut trees when it existed in 2002. As ancillary conservation management, the plant bioindicator of the site also contributed to supporting the diversified care for wetland - peatland habitat. It is for the natural habitat

of the ancillary care as represented by the *in-situ* conservation done in the freshwater mangrove tree. The ripple effect on the implementation of DAO 2017-11 made possible the sustainability of the freshwater mangrove tree species in the conservation site.

Donald et al. (2019) noted that more than 20% of OECMs studied are managed by local communities and Indigenous Groups, and 58% of KBAs in the Philippines have an OECM. It is acknowledged that there could be OECMs in the identified KBAs. Since Jimenez is one of the lowlands in Mount Malindang Natural Park, *XenConservation* in its novel freshwater mangrove tree – the Bakauan-gubat among the other threatened species in DAO 2017-11 is potential for OECMs in private governance or other private landowners or entities category. The map noted the defined boundaries of Mount Malindang Natural Park as PA, and Donald et al. (2019) indicated on Key Biodiversity Areas in the Philippines that 58% have OECM. The fact suggests highly significant potential for *XenConservation* in an SHM connectivity to OECMs as a conservation communication in a private landowner's category.

It is notwithstanding the online materials from SEARCA in 1999 and Updated BPLS 2017 on the Protected Planet website. These two sources had accounted for its presence and when it was extinct. In 1999 it was last seen, and in 2017, it faded. The challenging status marked Bakauan-Gubat's recency in published and unpublished materials. *XenConservation's* geographical space and collection of threatened plant species are pretty few, yet of endemic or Philippine Native plant species on the site. Topography played a pivotal role in seasonal wetland and peatland that the habitat was able to convey for diversified care. The conservation value and the economic value that the site is on a tacit conservation communication. The diversified care in practice proved the rediscovery of Bakauan-Gubat is a private conservation effort.

The site is an agricultural-residential area, a residential house is not present in its Tax Declaration document. The prevailing agricultural are the coconut trees,

which have been there before the ANR or *in-situ* conservation in 2002. It underscores the fact that there is one threatened species categorized as globally threatened (IUCN) and No. 448 of DAO 2017-11, the *Mangifera altissima* Blanco or Pahutan is found in the conservation site (Mendoza, Lagbas, and Buot, 2016). It could be a conservation objective aside from a threatened species No. 961 of DAO 2017-11 of Bakauan-Gubat in the conservation site, which was last seen in 1999 in Baliangao. The criteria could be between Critical Habitat and Local (Terrestrial) Conservation Area (LCA) as individual private governance.

XenConservation is registered in the DTI business name in October 2020. It is not in mind to be recognized as a local conservation area (LCA), yet humbly as for validation on Bakauan-Gubat as not extinct in the lowlands of Mount Malindang as a KBA, which was last seen in 1999. From 2002 to 2019, it was an unnamed conservation site with an ANR; however, the maintenance of the trees was sustained as unidentified conservation advocacy. In June 2020, the tree was identified as Bakauan-Gubat by the CSR and taxonomist from EDC's – Binhi. The Bakauan-Gubat can be classified as a secondary forest garden criteria in an ANR or *in-situ* conservation in a conservation effort's SHM (Lasco, Visco, and Pulhin, 2001). In November 2020, it finally progressed as a full-blown local conservation site that advanced as a registered Institutional Member of the Botanic Gardens Conservation International (BGCI).

The effective management measure was from a CENRO Conservation Officer that visited the site as requested in this instance. It is with a legal basis as an *in-situ* conservation hobbyist in Joint DENR-DA-PCSD Administrative Order No. 01 in 2004, Article 3, Rule 26.2, and private individual as management body (Maglana and Martinez, 2018; p. 31). It was SHM on OECMs outside a PA that extends to the lowland in PAs, referring to Mount Malindang in the Misamis Occidental Province. Mount

Malindang Natural Park is KBA 118, one of the Key Biodiversity Areas (KBAs) in the Philippines (Conservation International – Philippines for Critical Ecosystems Partnership Fund, 2007). The map showed that KBA 118 is a PA with defined boundaries in a CEPF and Biodiversity Corridor and Relief. The 1999 status of Bakauan-Gubat's existence in Baliangao was an online source from SEARCA published in 2004 (Amoroso et al., 2004). Though Baliangao had it recorded more than two decades ago, it was no longer in the area, as confirmed by the 2017 Updated BPLS data. As Bakauan-Gubat was last seen in 1999, it has been more than a two-decade challenge for the lowlands that the tracking could be found. Yet, in a private landowner conservation site in another municipality in Jimenez of the same province, the rediscovery of these few trees left with local communities started getting involved.

On point is the inclusion of lowlands that one of the lowlands studied evolved as lowlands to a PA in its current status, the BPLS. The SEARCA study noted the lowlands of Mount Malindang, yet Jimenez Municipality was not one of the municipalities included in the study. One of the core municipalities on the SEARCA's study, Baliangao, was one of the municipalities focused on the SEARCA's study that leveled up to a Protected Landscape and Seascape.

XenConservation, then as SHM for OECM, is highly significant in its potential as a private landowner or private governance category for its few threatened species in ANR or *in-situ* conservation in a seasonal wetland with peatland bioindicators on the site. The pH of *XenConservation's* peat is 5.66 to 5.70, which is within the pH of most peats from 2 to 6 (XenConservation Jimenez Misamis Occidental, 2021; Jauhiainen et al., 2005, as cited in Susilawati et al., 2016). Forest soil pH is from more than 3 and 6 below, in which the site's soil pH is within a range that validates an Old World Forest (Brady and Weil, 1996, as cited in O'Neill, Amacher, and Perry, 2005, p. 27).

The ancillary conservation care that Bakauan-Gubat or freshwater mangrove

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tree was able to strengthen the conservation efforts. Its topographical location from Jimenez's coastal zone, 2.3 kilometers from the coastal mangroves, makes it significant. In this note, the potential for discoveries of SHM in the lowlands of Mount Malindang would *XenConservation* be of inspiration for the province and probably to other provinces of the region.

Conservation Communication in Continuum of Care

The Ancillary care moves as it extends both ways. It signifies an extension of care implicit in the conservation site's location. In Figure 8, spatial as SHM in a meso level binds the temporal continuum scale in a criterion-i preference rich biodiversity case of *XenConservation*, the emergence of a resilient normal minority.

The single case comported an external validity for SHM between a PA in the Mount Malindang KBA and BPLS. It was strengthened by the ocular visit of CENRO Conservation and Development Staff Forester Uba negotiated by the MENRO. It secures a stochastic accuracy holding futures in normal minority care practice in conservation communication. The high biodiversity of *in-situ* conservation is evidenced by other vulnerable tree species like Anahau, Lunai, Pahutan, and Molave. The normal minority includes ancillary wetland conservation efforts for century-old seasonal wetland and peatland in diversified care.

Ancillary care is a continuum of care and an extension of care, and it presents a dimension. The illustration expands our knowledge of the affordances of care function, thus, the continuum of care. What could not be panned out was the continuum of care stemmed from the realization that ANR could bring possibilities that extinct species could finally regenerate and be conserved in SHM privately. Here is a problem with unidentified species, which are possible and promising candidates that extinct species or new species could work towards recovering the extinct species

or contributing to increasing numbers of recovered endangered species. And that explained the expansion – *made sense: more unidentified species; one gets chances for promising and rewarding discoveries.*

Figure 8. Conservation Communication in Continuum of Care



Conservation Communication in Local Conservation Site Care

XenConservation, a private conservation effort, protects what little is left, ensuring the conservation of the trees close to the coastal mangroves zone of Jimenez, 2.3 kilometers to the site. It is beyond the PA-defined boundaries and Biodiversity Corridor. The conservation site is not a conservation activity towards establishing private governance OECMs. Instead, it is on scientific research on a local conservation site as a hobbyist that the Bakauan-Gubat can be validated as a threatened species.

Conservation communication of what has been done. XenConservation

started last 2020, yet the ANR or *in-situ* conservation for the threatened species, the Philippine Red List in DAO 2017-11 (Umali, Malabrigo and Replan, 2018), was conservation advocacy since 2002. Conservation needs long-term sustainability. There could never be a pursued conservation site statement revelation or public information signage on the site without having it started with a long-term commitment in mind, though not as public as envisioned.

Only recently, the site was given a name by the author. It was named *XenConservation* for the landowner was also given a chance to study in a public university in the Philippines that advocates its students as *Iskolar ng Bayan*. That orientation event's message was a challenge for students by the DComm Orientation Speaker in 2016. The thought of giving back to the country to search for something lost and be given back to the Philippines as a nation or something that could contribute, albeit noteworthy in the short term.

The conservation communication is lowly for it is not in hectares; it is just past a quarter of a hectare with only five (5) threatened tree species individualities on preserving a century-old inland seasonal wetland in a peatland. The only important aspect was it was able to revive the importance of Bakauan-Gubat as a mangrove in a peatland and of an International Union for Conservation of Nature (IUCN) Red List Vulnerable in Category – the Pahutan.

Conservation communication leading to conservation actions.

Conservation advocacy also can move small-time hobbyists toward environmental communication support as an Institutional Member of Botanic Gardens Conservation International means to support the more extensive conservation campaign internationally. Though lowly, it can still help the more significant cause in conservation efforts *in-situ* or *ex-situ* conservation as a

member.

It still anchors on BMB Memorandum Circular No. 2017-03, Section 3, Number 3 on agro-biodiversity in an inland wetland. It is a tacit conservation practice in small areas while maintaining an international conservation platform, and multi-stakeholder participation is upheld.

Power orientation was on a normative minority that justifies the conservation communication of private individuals in its governance for those in ANR or *in-situ* conservation hobbyists not in bioprospecting yet still on scientific research (RA 9147 IRR). The researcher could have done the gratuitous permit before the start of the project. However, since the scientific research was from an ANR or *in-situ* conservation hobbyist, it was voluntary informing authorities that made possible the conservation communication an exception that fully substantiates the hobbyist without gratuitous permit legitimate. It is transformative as it is change-oriented and collaborative towards an empowered marginal minority. It is changing the lives of minority ANR or *in-situ* conservation hobbyists for a secondary forest garden category of conservation communication care.

XenConservation is rooted in private governance endeavored identification of an unknowingly extinct mangrove species in the Province of Misamis Occidental, found in other areas in Mindanao. As noted in the study, the few intact stands of freshwater mangrove trees are found in Jimenez, Misamis Occidental. The most effective and efficient way of affording preservation, protection, and sustainable affordance of care is an explicit inclusion as a private conservation site of *in-situ* nature. It is done because substantial contiguous habitat patches existed or had been protected for the location has other nearby lots with freshwater mangrove trees.

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Though freshwater mangrove trees exist near a coastal area in Hinatuan Island in Tagana-an, Surigao Del Norte (Sarmiento, 2018), the distance from the Jimenez coastal area with mangroves in Purok 1, Butuay is 2.3 kilometers from *XenConservation* is still significant. The case in the private governance mode as its accountability is on 'private advocacy' spells it differently. The situation seems to have been more critical as a new position of forest mangrove within walkability location has been documented.

From the *XenConservation* Facebook page reference to a June 16, 2021 post on BPLS from the Protected Planet website, an authoritative source of data from governments and stakeholders on both PAs and the recent OECMs, it revealed that one of the attributes in its Management Plan as the "View Management Plan" is clicked, it showed that the two documents: the 2017 data on BPLS Updated Management Plan on GMP Baliangao Protected Landscape and Seascape in PDF type was created and modified on December 16, 2020, and the Baliangao GMPS Narrative2012-R10PDF type was created and modified on October 29, 2020. This information also revealed that both PDF-type documents were a file owned by Morshid Dimaporo of personal.mdimaporo@gmail.com. The contributors were Ryan Cuanan of ryan.cuanan@bmb.gov.ph and BMB Bmb of bmb@bmb.gov.ph. Furthermore, the only source was Protected Areas and OECMs of the Philippines Updated: 2021 Biodiversity Management Bureau, Department of Environment and Natural Resources.

These files hold a communication that cites the online source of the present status of the Baliangao's mangroves, further establishing that what has existed in 1999 is non-existent in 2021 about Bakauan-Gubat or Freshwater Mangrove Trees. The 1999 status of the freshwater mangrove trees' existence

in Baliangao was an online source from SEARCA published in 2004 (Amoroso et al., 2004).

The receptiveness that Jimenez MENRO was, as his statement did, refers to and validates *XenConservation's* efforts as private governance towards the remaining forest mangrove trees from the referred online sources. Yet the author would require certification from the Provincial Environment and Natural Resources Officer (PENRO) regarding how the province's freshwater mangrove trees' status would be for a more comprehensive coverage tracking. The limitation of this study is from the MENRO's information in Jimenez only, and it made no mention that there are still other forest mangroves trees reported in Jimenez alone. He appreciated and emphasized the significance of forest mangrove trees in the lines, *"Had it not for you, the identification of this tree species would not come up as existing in our locality. It will remain to be regarded as otherwise, a miscellaneous tree for lumber cutters and the community."* This implicit knowledge validated the conservation communication that *XenConservation* could communicate and educate on an unfamiliar tree, one of the threatened species in DAO No. 2017-11.

However, the verification status of the remaining Bakauan-Gubat species in the Province of Misamis Occidental (as PA Superintendent Alson Potutan of BPLS is concerned) remains true to the online source reflected in the recent data of the Protected Planet website, an authoritative source of data from governments and stakeholders on PAs and OECMs. It is anchored from the BPLS (Provincial Environment and Natural Resources Office under PENRO Officer Rey S. Fernandez and CENR Oroquieta Officer Samer C. Ambola). The status of Forest Mangrove Trees of the Province of Misamis Occidental would be a discovery as revealed in the statement of MENRO *"Yet, we need to have*

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this inspected adequately with the CENRO team for proper endorsements. Perhaps this could be something to look forward to for conservation and strengthen its value. I visited Ma'am Gema of DENR-CENRO yesterday. I requested her to arrange for an ocular inspection. This arrangement would mean that the CENRO team would validate the place as a stakeholder of your conservation advocacy."

It is validated that the BPLS data holds updated information online and with the MENRO's statement in his coordinating works with CENRO. Yet, it needs DENR-CENRO Oroquieta for the line of additional information that the conservation communication is up to a close of a CENRO Oroquieta data. The status of the freshwater mangrove trees as the conservation site's distinctive feature is a promising one. The Misamis Occidental PENRO is composed of DENR-CENRO Oroquieta and DENR-CENRO Ozamiz. Since PENRO acts as a consolidator of the two centers, it is implicit that the CENRO Oroquieta is directly concerned with finalizing the conservation advocacy validation. It is also implied that BPLS is part of CENRO Oroquieta.

Yet, online data and official data were also implicit in recent changes. Furthermore, this situation is closed to working out that the Jimenez data on freshwater mangrove trees revealed that for Jimenez. The *XenConservation's* freshwater mangrove trees remained the only reported freshwater mangrove tree species; its public and private data source were confined to Jimenez only. Then the conservation communication achieved the purpose it conveyed – local governance as a private individual provided the needed information on [revived or discovered] tree species count.

Implicitly, the online source cited on the Protected Planet website is the recent information regarding forest mangrove trees in BPLS. It also
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disclosed its sources as PAs and OECMs of the "Philippines Updated: 2021 Biodiversity Management Bureau. Department of Environment and Natural Resources." Inventory of mangroves from the data disclosed in the Updated BPLS is implicit of a five-year status. The 2017 data holds still the recent data in 2021 as the census of existing mangrove trees is re-inventoried every five years, as this data had suggested.

The conservation communication that this project dealt with reflected both the available information of SEARCA and Protected Planet website documents are accessible online. The records are sourced in regional partnership - SEARCA with the government from the Biodiversity Management Bureau (BMB) of DENR, so the confidence of verifiability is highly significant to its authenticity. *XenConservation's* geographical location and the threatened tree species in an ANR were instrumental in documenting freshwater mangrove trees within walkability (CLUP-minded) and 2.3 kilometers from a coastal mangrove. It added information on freshwater mangrove trees' presence in the lowland ecosystem of Mount Malindang, which is of private governance in SHM connected to OECMs. It is an addition to SEARCA's 1999 research and Updated BPLS Management Plan from BMB's 2021 research outputs.

Conservation communication on what will be done. A new horizon sets in as a local conservation site and an Institutional member of an international conservation organization. In *XenConservation*, it is from BGCI of the United Kingdom. However, the Local Conservation Area of BMB Memorandum Circular No. 2017-03 noted managing integrated protected area system (NIPAS) and OECMs on Special Ecosystems for inland wetlands in agro-biodiversity. *XenConservation's* Bakauan-Gubat, usually in uplands or coastal zones, 2,880 square meters in an ANR or *in-situ* conservation, takes the shape

of a conservation communication for a secondary forest garden in a seasonal inland wetland - peatland. Data from this dissertation project can contribute to it. The data can be a stopgap on this matter. It can illustrate how it worked as SHM.

The Local Conservation Area (LCA) goes through different phases to be recognized under the umbrella of OECMs (Maglana and Martinez, 2018). Noteworthy for *XenConservation* as a local conservation site was scheduled for an ocular visit from CENRO Oroquieta. Yet, last August 24, 2021, a CENRO Forester of Conservation Division did a site assessment as an inland wetland habitat and validated the threatened species – the Bakauan-Gubat trees (XenConservation Jimenez Misamis Occidental, 2021).

Local conservation sites are low-level that have something to do with attending and complying with the most fundamental conservation communication that could get a definite nod from authorities for the conservation efforts to be heard, listened to, and appreciated. It also goes a conservation efforts' care from a hobbyist that attempts to apply the environmental compliance conservation-compliant ways to pursue an ANR or *in-situ* conservation of traditional knowledge and tacit conservation action withheld through years, now in the surface. Low-level conservation communication acknowledges start-up conservation efforts, including membership in international conservation organizations. Yet, the conservation site is not fully developed; those concrete boundaries that could protect endangered plant species are not yet done; instead, it is indigenous material that is not durable. This vision involves a perimeter concrete fence in the conservation site for the endangered plants' protection for a high level of conservation communication.

Conservation communication is about a continuum of care in a

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gradation spectrum of a low level to high-level conservation communication in accomplished conservation efforts. It is a binary - lowly to highly advanced level, in an opposing pole marking the conservation effort sense of commitment. It does not regard conservation effort bias; instead, it envisions a more developed conservation effort. The commitment's responsiveness is long-term yet accommodates continuity and a more significant cause.

Seeing nature as an important place to protect. It is the binary in a tangible to intangible proof in conservation communication in accomplished conservation efforts. These are physical means to protect and sustain conservation like perimeter fences and intangible means to support the more significant conservation efforts like membership in legitimate conservation advocacy groups that seal the commitment to sustainability. Tangible proofs in a document could be traced in the land history in a lot's Tax Declaration instrument. Law compliant with private individuals' responsibility in the conservation requirements would strengthen stakeholders' communication, allowing collaboration for the continuity of relevant natural restoration efforts.

A subset of environmental communication. Its most straightforward and on-point conservation communication that it aimed to accomplish is the conservation site in its rich habitat spearheading the evolving form of conservation communication. It is where context is precious. It communicates to authorities only for validation and information regarding rediscovering last seen species now found statements as a subset to environmental communication. It is part of the more extensive environmental communication that hopes to protect KBAs, the PAs that also acknowledged OECMs. The focus is as it communicates to authorities; it also did a lowly conservation communication content of the enough and available resources of a small-time

conservation advocate with less financial resources. It is conservation communication of local governance from the less in life. Yet, it is holding the spirit of the best possible approach to handle the remaining threatened tree species, which could save them from extinction. *XenConservation* evoked an image of how far a lowly with a less financial resource conservation advocate can go. Within ANR or *in-situ* conservation, it is to inform environmental authorities on research-based sources proving the last seen status of a supposedly extinct tree species.

The conservation advocacy developed a community of practice through the Facebook page *XenConservation* - <https://web.facebook.com/xen.con.10>, which started to be active in public on March 13, 2021. The page was able to show that Bakauan-Gubat was last seen in Baliangao through SEARCA in 1999, and the BPLS 2017 implicitly confirmed that *XenConservation* was able to provide the conservation communication of *in-situ* conservation in ancillary conservation management for Bakauan-Gubat since 2002. It is implicit information regarding the status of existence of Bakauan-Gubat that it is recently available information from the online resource published materials. Trees are re-censused every five (5) years or when a strong typhoon causes essential damage. Immediate assessment and evaluation will be conducted on trees that have been damaged, fallen, or died (Castillo et al., 2018; p. 17). The status fact was not seen in the 2017 census of the BPLS Updated Report; the re-census would be this year 2021; if 2016 was the census date. If 2017 is the census date, then 2022 would be the re-census. The information implied recency in the status of Bakauan-Gubat that it no longer exists in Baliangao. However, *XenConservation's* ANR or *in-situ* conservation since 2002, which is unaccounted for, has resurfaced. Mount Malindang's lowland still holds some

Bakauan-Gubat trees and is not in extinction, which is the conservation communication on point. Baliangao's Bakauan-Gubat is near a river (Amoroso et al., 2004); unlike in *XenConservation*, it is near a seasonal inland wetland. Yet, the estimated elevation above sea level for Barangay Landing is 26.3 meters while Barangay Nacional is 24.5 meters (PhilAtlas, 2021). The similarity is it is not in a coastal area. In a sense, both are in the lowlands of a protected area, a secondary forest.

Wibeck and Linnèr (2021) on comprehensive sense-making analysis illustrated its importance culturally. The focus of sense-making on geographical location is central to the sustainability of the Theories of Pro-Environmental Behavior (Corral-Verdugo, Aguilar-Luzón, and Bernardo, 2019). From the stakeholders' interviews in the local context of a local conservation site experience, the consideration of the strand of a situated ANR hobbyist qualitatively enhanced the recency of the stakeholders' interviews and document review. It dealt with implicit information observed on the tree survey rectified by Castillo et al. (2018) but could be invalidated.

A clarified external validity on implicit information was validated by stakeholders' interviews and the ocular visit of the CENRO Oroquieta for Conservation, Forester Uba (XenConservation Jimenez Misamis Occidental, 2021) for the tacit information in mapping relevant social arenas. The CENRO Certification of the five (5) Bakauan-Gubat trees in *XenConservation* was implicit information of Jimenez as the only holder of the remaining Bakauan-Gubat with this study alongside a PA, the Mount Malindang, in connection to the data fact of Barangay Landing in Baliangao in 1999 and extinct in 2017 published references available online. It is tacit information of effective *in-situ* conservation of biodiversity of a threatened plant species not situated in a

coastal area nor an upland area yet outside of a PA, in the lowland of a PA (XenConservation Jimenez Misamis Occidental, 2021). Further, the Laboratory Test Report from the Regional Soils Laboratory of 5.66 to 5.70 soil pH is another implicit information that a peatland in preliminary assessment is discovered in Jimenez, Misamis Occidental. It is first in the province and the first in Region X – Northern Mindanao (DENR-Biodiversity Management Bureau, 2021) but not yet a suspected or confirmed peatland area status.

Chapter VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The study through the case *on XenConservation* strengthened conservation communication in a local conservation site of seasonal wetland since 1914. It is in a continuum of convergent care from ancillary care as an ancillary wetland (midpoint of upland and coastal in a once central business district) to diversified care as a new pathway in areas of lowland freshwater mangrove habitat. Conservation communication in local governance in OECMs as SHM constitutive care on freshwater mangrove inland seasonal wetland habitat in floodplains, helps provide a novel consideration. Ng, Payne, and Oram (2021) on SHM provided connectedness in the geographical space that *XenConservation* was proactive towards OECMs governance management in ancillary care of conservation communication. The research has shown that freshwater mangrove trees, a Philippine Red List, not an IUCN Red List, near coastal mangrove trees in a 2.3 km distance on *in-situ* conservation still exist. It is untapped and unrecognized, contributing to conservation communication in local governance for ancillary wetlands (seasonal wetland and peatland) in its continuum of care.

The focus of the review of related literature is that OECMs' graphic presentation on nodes inspired the infographic figure to reflect the common theme of governance and conservation communication and the persistent and visible affordances (Farella et al., 2021). It provided continuity of context from the review on OECMs, governance, and conservation communication which transits into the continuum of care as ancillary-convergent-diversified care with the interviews in a linear-analytic structure. Volunteer collected data as a rightsholder could be powerful cheap data that could strengthen management practice (Geldmann et al., 2021). Plant

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bioindicator and ecological topography could convey the conservation communication in local governance as it answers the challenge in OECMs management for its diverse actor (Maxwell et al., 2020).

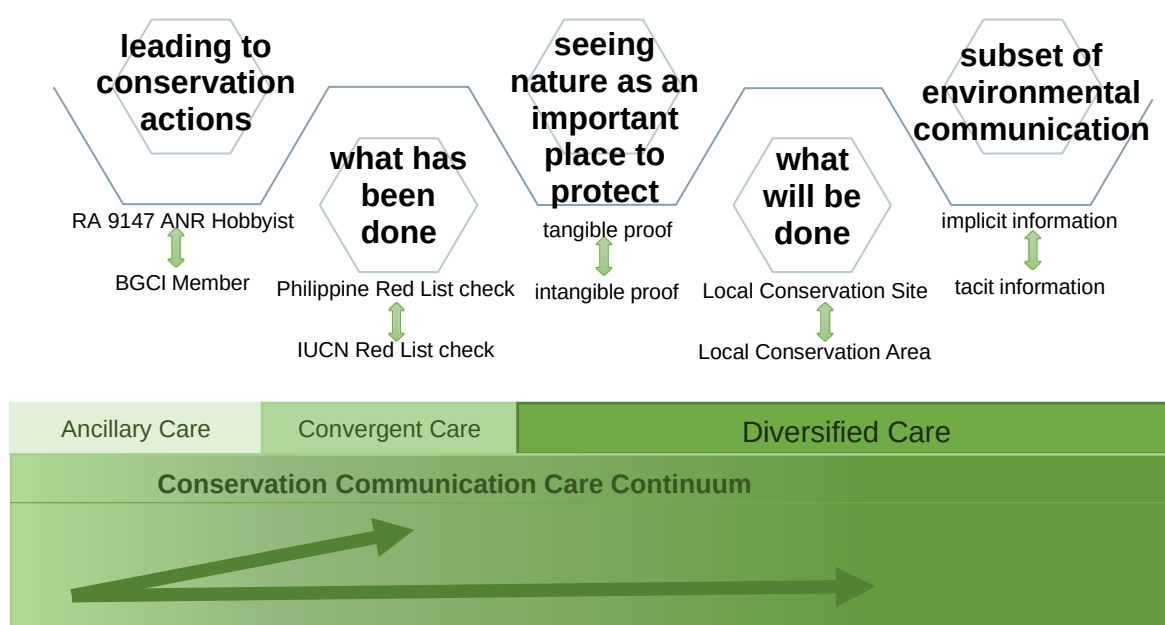
The persistence and visibility affordances as a special connection to governance diversity and vitality in private governance could significantly change information towards sustainability goals. As implicit information blossomed into tacit information keyed in for off-the-record confirmation practices for conservation protection, it positively affected the implicit information on the label as an extinction code to a critically endangered species. This outcome benefits conservation advocates as private shareholders and the government in its conservation goals. The implicit and tacit information care is essential for conservation communication in local governance in the constitutive of care that allows sustainability as it redefines the movement of information. Local conservation sites have a unique role in effective *in-situ* conservation or developing communication toward an educational pursuit.

As an offshoot of environmental communication, conservation communication in local governance works in an empowered evolving care practice within a spectrum of convergent to ancillary to diversified approaches. It is a collaboration of an integrative practice of PAs and OECMs. Proactive orientation-friendly transcends against a reactive risk reduction approach resulting in a struggling situation. This anticipatory approach to reducing the risk of decline in conservation could weave a substantial increase. The credit is on bidirectional moves from ancillary care, a positive outlook on both sides, preserving the evolving handiwork of nature's artistry in a continuum of care for conservation advocates. Figure 9 put together how it builds inside

out in binary polarity gradations for an authentic conservation communication that responds to the challenge of protecting and promoting awareness of threatened species worth keeping.

There could be more from less as the case testing proved an upliftment of conservation status of threatened species and the peatland, implicitly and tacitly. SHM in OECMs - outside PAs with effective *in-situ* conservation as a conservation goal and normative minority conservation accommodation in conservation communication significantly contributed to a promising direction towards the revival of extinct species. A PA's lowlands could offer conservation sustainability in a conservation communication in local governance of *in-situ* conservation or ANR. It is for the threatened plant species conservation from local conservation sites on a private type of governance, an ANR hobbyist member of Botanic Gardens Conservation International (BGCI) to a local conservation area of memorandum of agreement with local government possibility.

**Figure 9. Conservation Communication Concepts as
Conservation Communication in *XenConservation***

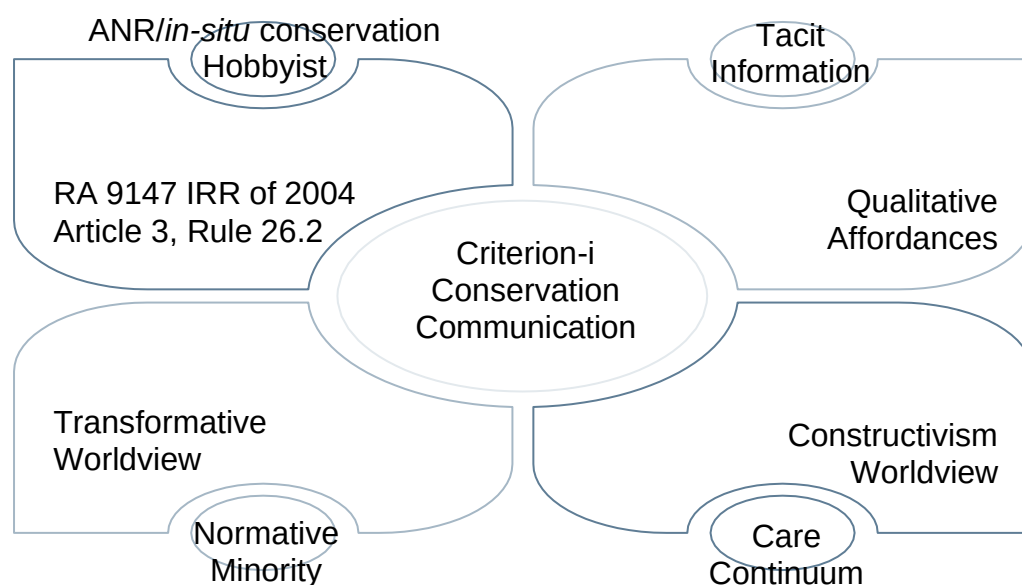


Conclusions

XenConservation's inspired concepts from Brown (2018) on conservation communication bridged the SHM hobbyist in *in-situ* conservation for threatened plant species on Philippine Red List OECMs outside PAs. The tacit voluntary private practice affordances of a titled lot and transformative normal minority topographical lowland freshwater mangroves not in upland or coastal in small habitat matrix in an ancillary peatland positioned. Refinement in a constructivism worldview of a convergent-ancillary-diversified continuum of care completed the list (Naugle, 2002 and Peterson and Liu, 2008 as cited in Jansen, van der Stoep and Jochemsen, 2017; Grover, 2015).

The ancillary view of conservation communication reflects the SHM in OECMs ancillary conservation management. It was a Criterion-i purposeful sampling feature, which concluded in explanations as theorizing for conservation communication in SHM care continuum affordances of persistence and visibility - a Criterion-i conservation communication in Figure 10.

Figure 10. Theorizing Conservation Communication's Ancillary View



There could be more from less. The case proved an upliftment of

the conservation status of threatened species. OECMs as outside PAs with effective *in-situ* conservation in a hobbyist status as a conservation goal significantly contributed to a promising direction towards the revival of extinct species.

Peatland in lowland as a remnant of ancient forest on a transformative view in a normative minority is quality care. The normative minority conservation goals in line with conservation communication from private type governance maneuver a bidirectional move in a continuum of care for conservation advocates. It is reflective of a constructivist worldview.

The persistence and visibility affordances as a special connection to governance diversity and vitality in private governance significantly changed the information towards conservation communication. As implicit information blossomed into tacit information keyed in for off-the-record confirmation practices for conservation protection, it positively impacted the implicit information on the extinction to a level of a critically endangered species. The implicit and tacit information care is essential for conservation communication in local governance in SHM constitutive of care in OECMs.

Local conservation sites have a unique role in effective *in-situ* conservation. Conservation communication as the exploratory purpose collaborative effort with stakeholders played an informer and connector's role in the discovery of peatland and recoverable extinct threatened tree species. It remains the enduring feature that *XenConservation* makes a revelatory case that is highly significant for an opportunity in peatland exploration. It is theory generating on criterion-i as a pre-determined rich case selected in conservation communication with ancillary features.

Recommendations

XenConservation spanned a conservation communication on freshwater mangrove trees in SHM ANR or *in-situ* conservation. The study was grounded in the curiosity of an unknown tree in the locality of Jimenez until Forester Roniño Gibe of EDC identified it as *Carallia brachiata*. Further, in Proclamation No. 2152, DENR declared all mangrove areas subject to private rights as mangrove swamp forest reserves since 1981. This geographical location would ensure a transformation of an updated data bank that caters to lowland freshwater mangroves. It is also an opportunity to contribute to the Philippine Peatlands Map to be the 25th peatland area for the DENR-Biodiversity Management Bureau may consider it as Suspected or Confirmed as the Regional Soil Laboratory Report is concerned upon further assessment. Presently, a request for further assessment as peatland for the site has been made with CENRO, the LGU, and DENR-ERDB. This conservation communication is on the governance of care for unrecognized mangrove habitats on an inland seasonal wetland.

Data from research on implicit and tacit information could be promising for validation - towards a piece of explicit information or published information. As implicit information could affect census data or survey data count, this would inspire a more expansive survey count of threatened mangroves for lowlands in a PA or municipal reserves. In the same way, implicit and tacit information could be keyed in as basic information towards a piece of developing data on finding the lost or claiming what once was lost. It speaks for an information premise in asserting claims of conservation recoveries crucial for conservation sustainability. This mapping could ensure an improved lowland distribution of Bakauan-gubat data in the province for existing trees' Philippine Red List data bank.

A campaign towards voluntary conservation for private rightsholders is practicable considering there are lands on tax declaration and could not be awarded a transfer certificate of title for it is in the mother title yet. Some areas are in the middlemost part requiring road right of way for others to pass, and the adjacent landholders are reluctant to provide a road right of way; conservation would be the best gift to nature. This opportunity opens an act of care campaign rather than leaving the area unattended and to oblivion. It would seek to find the strength of utilizing this for nature's oasis. For this purpose, the natural corridor belt attends to the specificity value that SHM could contribute to its valuable grain of sustainable development (Tang, Gao, and Wu, 2020).

The local governance level will fill the gap for research and natural discoveries from which national priority lists could empower communities and individuals in limited or small areas. It points to governance in coordinating activities of a conservation effort and the local government unit (LGU) that appreciation of the natural habitat could be a regular and novel contribution. Private governance care to a diverse mangrove location can provide a new dimension of care for the forest reserve. Ancillary management for OECM linked to the ancillary wetland and peatland conservation communication in local governance could be an explorable conservation communication. It strengthens in its descriptive continuum, from care to defining specificity. This endeavor will provide insight into a subset of environmental communication for a small habitat that is not on the top priority conservation list.

Research could explore the impact and significance of implicit and tacit information in conservation communication in dealing with a normative minority, for example, the impact of implicit information care rather than tacit information care in conservation. This focus would need to address the potential standard of care afforded

in a responsible relationship connected to the effective use of information that accords the best possible protection to conservation advocates and the government. The affordances mark the quality of care in bidirectional moves leading to conservation actions in a more refined way. It is educational as a conservation communication in private type governance as a governance diversity, control of safety is concerned.

With this impetus, everyone who has reach and access may start up conservation, thus allowing multiple level sustainability approaches towards the continuum of care in conservation communication in local governance, leading to increased conservation sites in the 21st century. The realistic and practical path in conservation communication is finding overlap or beyond boundaries, acceptability, and the ability to replicate authenticity closely links small matrices to synergies. With the conservation communication in the local governance of care continuum, threatened species are key to better discoveries. It acts as a bridge to discover environmental buffers in small habitats. Through communicating with local stakeholders, it would be an emerging possibility of unrecognized areas, not that known and not on the top priority conservation, yet conservation fit for a greater chance in immediacy response.

REFERENCES

- Alburo, Hemres M. (2017). Distribution and Abundance of Philippine Tube-Nosed
Alburo, Hemres M. (2017). Distribution and Abundance of Philippine Tube-
Nosed Fruit Bat (*Nyctimene rabori* Heaney & Peterson) in Cebu, Philippines.
Journal of Society & Technology, Vol 7, No. 1, pp. 19-29.
- Alves-Pinto, Helena, Geldmann, Jonas, Harry, Maioli, Veronica, Balmford,
Andrew, Latawiec, Agnieszka Ewa, Crouzeilles, Renato, and Strassburg,
Bernardo. (2021). Opportunities and challenges of other effective area-
based conservation measures (OECMs) for biodiversity conservation.
Perspectives in Ecology and Conservation, Vol 168, pp. 1-6.
- Amoroso, Victor B., Roxas, Alita T., Lariosa, Emmanuel A., Estoista, Rosa Villa B.,
Canencia, Oliva P., Mero, Danilo C., Arreza, George R., Bornales, Romeo Jr.
G., and Cambel, Teresita L. (2004). Participatory Rural Appraisal in the
Lowland Ecosystem of Mt. Malindang, Misamis Occidental, Philippines.
Biodiversity Research Programme for Development in Mindanao: Focus on
Mt. Malindang and Environs. SEAMEO SEARCA, pp. 127.
- Baldomero, J. B. (2021, June 14). Personal Communication [Personal Interview].
- Beefink, Frederik and van der Meijs, Nick P. (1996). *Combining Subgraph
Isomorphism and Hashing Techniques for Efficient Bipolar Layout-to-Circuit
Extraction* (Technical Report ET-CAS 96.09).
cas.et.tudelft.nl/space/publications/1996/beefink_etcas9609_96.pdf.
- Bennett, Nathan James, Roth, Robin, Klain, Sarah C., Chan, Kai Ming Adam,
Christie, Patrick, Clark, Douglas, Cullman, Georgina, Curran, Deborah,
Conservation Communication and Local Governance of *XenConservation*:
A Peatland in Jimenez, Misamis Occidental, Philippines ... 117

Durbin, Trevor J., Epstein, Graham, Greenberg, Alison, Nelson, Michael Paul, Sandlos, John, Stedman, Richard C., Teel, Tara, Thomas, Rebecca E.W., Verissimo, Diogo, Wyborn, Carina. (2017). Conservation social science: Understanding and integrating human dimensions to improve conservation. *Biological Conservation*. Elsevier, Vol 205, pp. 93-108.

Biodiversity Management Bureau. (2017). Adoption of the BMB Functional and Organizational Structure on Technical Concerns (BMB Memorandum Circular No. 2017-03).

Borrini-Feyerabend, Grazia, Dudley, Nigel, Jaeger, Tilman, Lassen, Barbara, Broome, Neema Pathak, Phillips, Adrian and Sandwith, Trevor. (2013). Governance of Protected Areas: From understanding to action. Best Practice Protected Area Guidelines Series No. 20. Switzerland: International Union for Conservation of Nature and Natural Resources.

Borrini-Feyerabend, Grazia and Hill, Rosemary. (2015). 'Governance for the conservation of nature,' in G. L. Worboys, M. Lockwood, A. Kothari, S. Feary and I. Pulsford (eds) *Protected Area Governance and Management*, Canberra: ANU Press.

Brown, Allison Elizabeth. (2018). Conservation Communication and Photography: Conversations with Marine Conservation Photographers. Published MA Thesis. University of Washington.

CANARI. (2012). Communicating for Conservation: A communication toolkit for Caribbean civil society organisations working in biodiversity conservation. Laventille: Caribbean Natural Resources Institute.

Castillo, Luis Santiago, Ayram, Camilo Andrés Correa, Matallana Tobón, Clara L., Corzo, Germán, Areiza, Alexandra, González-M, Roy, Serrano, Felipe, Briceño, Luis Chalán, Puertas, Felipe Sánchez, More, Alexander, Franco, Oscar, Bloomfield, Henry, Orrury, Victoria Lina Aguilera, Canedo, Catalina Rivadeneira, Morón-Zambrano, Vilisa, Yerena, Edgard, Papadakis, Juan, Cárdenas, Juan José, Golden Kroner, Rachel E., & Godínez-Gómez, Oscar. (2020). Connectivity of Protected Areas: Effect of Human Pressure and Subnational Contributions in the Ecoregions of Tropical Andean Countries. *Land*, Vol 9, pp. 1-19.

Castillo, Manuel L., Castillo, Leilani A, Canceran, Myranel S, Gonzalvo, Karla JaneP., Barua, Leonardo D., Alegre, Aldin C., Barredo-Parducho, Valeriana O., Gestiada, Emer C., Breva, Rolly V., and Bantayan, Nathaniel C. (2018). Distribution, Diversity and Spatial Analysis of Tree Species in a Long-Term Ecological Research Plot in Molawin-Dampalit Watershed, Mount Makiling Forest Reserve. *Asian Journal of Biodiversity*, Vol 9, pp. 12-36.

Cho, Ji Young and Lee, Eun-Hee. (2014). Reducing Confusion about Grounded Theory and Qualitative Content Analysis: Similarities and Differences. *The Qualitative Report*, Vol 19, Article 32, pp. 1-20.

Church, Sarah & Lu, Junyu & Ranjan, Pranay & Reimer, Adam & Prokopy, Linda. (2020). The role of systems thinking in cover crop adoption: Implications for conservation communication. *Land Use Policy*, Vol 94.

CIFOR. (2017). Why peatlands matter. Indonesia: Center for International Forestry Research.

Conservations International – Philippines for Critical Ecosystems Partnership Fund.

(2007). Key Biodiversity Areas and CEPF Investments in the Philippines Map.

https://www.cepf.net/sites/default/files/philippines_map.pdf.

Convention on Wetlands. (2021). Global Wetland Outlook: Special Edition 2021.

Gland, Switzerland: Secretariat of the Convention on Wetlands.

Corral-Verdugo, Victor, Aguilar-Luzón, María del Carmen, Hernández, Bernardo.

(2019). Theoretical Bases Guiding Conservation Psychology. *Psychologist Papers*, Vol 40, N° 3, pp. 174-181.

Cortés-Capano, Gonzalo, Toivonen, Tuuli, Soutullo, Alvaro, Fernández, Andrés.,

Dimitriadis, Caterina, Garibotto-Carton, Gustavo, & Minin, Enrico Di. (2020).

Exploring landowners' perceptions, motivations and needs for voluntary conservation in a cultural landscape. *People and Nature*, Vol 2, pp. 840-855.

Creswell, John W. (2007). *Qualitative Inquiry and Research Design Choosing*

Among Five Approaches. Second Edition. California: Sage Publications, Inc.

de la Espriella, Ricardo, Gómez Restrepo Carlos. (2020). Teoría fundamentada.

Rev Colomb Psiquiatr, Vol 49, Issue 2, pp. 126-132.

DENR-Biodiversity Management Bureau. (2021, June 2). *PHILIPPINE Peatlands*

[Status update]. Facebook.

https://web.facebook.com/story.php?story_fbid=2946937878966597&id=1900712493589146.

Department of Environment and Natural Resources. (2004). Proposed Ligawasan

Marsh Protected Area Management Plan Volume I Description, Evaluation and

Prescription.

<https://faspselib.denr.gov.ph/node/1219>.

Department of Environment and Natural Resources. (2017). Updated National List of Threatened Philippine Plants and Their Categories (DENR Administrative Order No. 2017-11).

<https://www.philippineplants.org/dao-2017-11.pdf>.

Donald, Paul F., Buchanan, Graeme M., Balmford, Andrew, Bingham, Heather, Couturier, Andrew R., Rosa, Gregorio E. de la, Jr., Gacheru, Paul, Herzog, Sebastian K., Jathar, Girish, Kingston, Naomi, Marnewick, Daniel, Maurer, Golo, Reaney, Leeann., Shmygaleva, Tatyana, Sklyarenko, Sergey, Stevens, Candice M.D., & Butchart, Stuart H.M. (2019). The prevalence, characteristics and effectiveness of Aichi Target 11's "other effective area-based conservation measures" (OECMs) in Key Biodiversity Areas. *Conservation Letters*, Vol 12, Issue 5, pp. 1-8.

Evans, Sandra K., Pearce, Katy E., Vitak, Jessica, Treem, Jeffrey W. (2017). Explicating Affordances: A Conceptual Framework for Understanding Affordances in Communication Research. *Journal of Computer-Mediated Communication*, Vol 22, Issue 1, pp 35–52.

Fajardo, Paola, Beauchesne, David, Carbajal-López, Alberto, Daigle, Rémi, Fierro-Arcos, L. Denisse, Goldsmit, Jesica, Zajderman, Sabine, Valdez-Hernández, Juan I., Maigua, María Yolanda Terán, & Christofolletti, Ronaldo A. (2021). Aichi Target 18 beyond 2020: mainstreaming Traditional Biodiversity Knowledge in the conservation and sustainable use of marine and coastal ecosystems. *PeerJ*, pp. 1-44.

Farella, Giulio, Tasseti, Anna Nora, Menegon, Stefano, Bocci, Martina, Ferrá, Carmen, Grati, Fabio, Fadini, Amedeo, Giovanardi, Otello, Fabi, Gianna, Raicevich, Sasa, and Barbanti, Andrea. (2021). Ecosystem-Based MSP for Enhanced Fisheries Sustainability: An Example from the Northern Adriatic (Chioggia— Venice and Rovigo, Italy). *Sustainability*, Vol 13, No. 3, pp. 1-28.

Fleming, Tova. (2019). Addressing divergent audiences in conservation communication: an examination of land trust websites in Northern California. Published MA Thesis. Humboldt State University.

Geary, Ben, Bermingham, Nora, Chapman, Henry, Charman, Dan, Fletcher, William, Fyfe, Ralph, Quartermaine, Jamie., Van de Noort, Robert. (2010, December). Peatlands and the Historic Environment. Scientific Review.
<https://www.iucn-uk-peatlandprogramme.org/sites/www.iucn-uk-peatlandprogramme.org/files/Review%20Peatland%20Historic%20Environment,%20June%202011%20Final.pdf>.

Geldmann, Jonas, Deguignet, Marine, Balmford, Andrew, Burgess, Neil D., Dudley, Nigel, Hockings, Marc, Kingston, Naomi, Klimmek, Helen, Lewis, Alanah Hayley, Rahbek, Carsten, Stolton, Sue, Vincent, Claire, Wells, Sue, Woodley, Stephen, and Watson, James E. M. (2021). Essential indicators for measuring site-based conservation effectiveness in the post-2020 global biodiversity framework. *Conservation Letters*, pp. 1-9.

Gonara, Ramgima. (2021, May 31). Personal Communication [Personal Interview].

Gooden, Jennifer and 't Sas-Rolfes, Michael. (2020). A review of critical perspectives on private land conservation in academic literature. *Ambio*, Vol49, Number 5,

pp. 1019-1034.

Google. (2022). [XenConservation's Satellite Location Map].

Grelock-Yusem, Susan Michelle. (2019). Wolf Lost & Found: Reframing Human-Wildlife Coexistence with the Arts. Published PhD dissertation. Pacifica Graduate Institute.

Grover, Vijay. (2015). Research Approach: An Overview. Golden Research Thoughts. Vol. 4, Issue 8, pp. 1-12.

Hesselink, Frits, Goldstein, Wendy, van Kempen, Peter Paul, Garnett, Tommy and Dela, Jinie. (2007). Communication, Education and Public Awareness, a toolkit for the Convention on Biological Convention, Montreal.

Housing and Land Use Regulatory Board. (2017). National Urban Development and Housing Framework 2017-2022. pp. 1-182.
<https://hlurb.gov.ph/wp-content/uploads/services/lgu/clup-guidebook/NUDHF%20Full%20Version%20-%20FINAL.pdf>.

IUCN-WCPA Task Force on OECMs. (2019). Recognising and Reporting Other Effective Area-based Conservation Measures. Switzerland: IUCN.

Jadina, Maribeth & Flor, Benjamina Paula & Jamias, Serlie & Querijero, Nelson. (2016). Theorizing Land Ownership in Land Titling. Silliman Journal, Vol 57, pp. 71-84.

Jansen, Peter, van der Stoep, Jan, and Jochemsen, Henk. (2017). Theorizing Government Communication with Regard to the Dutch Nature Policy.

Empedocles: European Journal for the Philosophy of Communication, Vol 8,
Conservation Communication and Local Governance of *XenConservation*:
A Peatland in Jimenez, Misamis Occidental, Philippines ... 123

No. 1, pp. 95-113.

Johansson, Rolf. (2007). On Case Methodology. Open House International, Vol 32, No. 3, pp. 48-54.

Joint DENR-DA-PCSD. (2004). Joint Implementing Rules and Regulations Pursuant to Republic Act No. 9147: "An Act Providing For The Conservation and Protection Of Wildlife Resources And Their Habitats, Appropriating Funds Therefore and For Other Purposes."
extwprlegs1.fao.org/docs/pdf/phi157501.pdf.

Kabir, Syed Muhammad Sajjad. (2016). *Basic Guidelines for Research: An Introductory Approach for All Disciplines*. Bangladesh: Book Zone Publication.

Kumar, A. Muthu, Pandey, Ashish, Mishra, Gayatri, and Rao, Srinivasa. (2015). A report on occurrence of *Neofusicoccum* sp. in *Carallia brachiata* (Lour.) Merr. Trees from Karnataka, India. International Letters of Natural Sciences, Vol 31, pp. 22-26.

Ladle, Richard J., Correia, Ricardo A., Do, Yuno, Joo, Gea-Jae, Malhado, Ana CM, Proulx, Raphael, Roberge, Jean-Michel & Jepson, Paul. (2016). Conservation culturomics. Frontiers in Ecology and the Environment, Vol 14, Issue 5, pp. 269-275.

Lasco, Rodel D., Visco, Roberto, and Pulhin, Juan M. (2001). Secondary Forests in the Philippines: Formation and Transformation in the 20th Century. Journal of Tropical Forest Science, Vol 13, No. 4, pp.652-670.

Lock, Irina, Wonneberger, Anke, Verhoeven, Piet, and Hellsten, Iina. (2020). Back to

the Roots? The Applications of Communication Science Theories in Strategic Communication Research. *International Journal of Strategic Communication*, Vol 14, Issue 1, pp. 1-24.

MacKinnon, Kathy, Smith, Risa, Dudley, Nigel, Figgis, Penelope, Hockings, Marc, Keenleyside, Karen, Laffoley, Dan, Locke, Harvey, Sandwith, Trevor, Woodley, Stephen, & Wong, Mike. (2020). Strengthening the global system of protected areas post-2020: A perspective from the IUCN World Commission on Protected Areas. *Parks Stewardship Forum*, Vol 36, pp. 281-296.

Maglana, Ma. Victoria Z. and Martinez, Ruth. (2018). Contributions to Guidelines and Policies for the Decentralised Establishment of Conservation Areas in the Philippines Other Effective Conservation Measures and Aichi Target 11. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. https://faspselib.denr.gov.ph/sites/default/files//Publication%20Files/2018-08-10_OECM%20WS%20report_final.pdf.

Maini, Bani. (2021). Advancing Marine Conservation through Other Effective area-based Conservation Measures (OECMs): Expert Perspectives from a Delphi Study. Published MA Thesis. Brock University.

Maxwell, Sean L., Cazalis, Victor, Dudley, Nigel, Hoffmann, Michael Hoffmann, Rodrigues, Ana S. L., Stolton, Sue, Visconti, Piero, Woodley, Stephen, Kingston, Naomi, Lewis, Edward, Maron, Martine, Strassburg, Bernardo B. N., Wenger, Amelia, Jonas, Harry D., Venter, Oscar, & Watson, James E. M. (2020). Area-based conservation in the twenty-first century. *Nature*, Vol 586, pp. 217–227.

Medecilo, Maria Melanie P. and Lagat, Myra N. (2017). Floristic Composition of The Remaining Forests in Upland Cavite, Luzon Island, Philippines. Philippine Journal of Systematic Biology. Vol 11, Issue 1, pp. 74 – 94.

Mendoza, Liezl A., Lagbas, Arthur J., and Buot, Inocencio Jr. E. (2016). Conservation Status of the Plant Species in Selected Areas with Frequent Human Activities in Roosevelt Protected Landscape, Bataan, Luzon Island, Philippines. The Thailand Natural History Museum Journal. Vol 10, No. 2, pp. 79-115.

Miller, Thaddeus. R., Minter, Ben A., & Malan, Leon C. (2011). The new conservation debate: the view from practical ethics. Biological Conservation, Vol 144, Issue 3, pp. 948-957.

Mroczkowska, Agnieszka, Kittel, Piotr, Marcisz, Katarzyna, Dolbunova, Ekaterina, Gauthier, Emilie, Lamentowicz, Mariusz, Mazurkevich, Andrey, Obremaska, Milena, Plociennik, Mateusz, Kramkowski, Mateusz, Lucow, Dominika, Kublitskiy, Yuriy, and Slowinski, Michal. (2021). Small peatland with a big story 600-year paleoecological and historical data from a kettle-hole peatland in Western Russia. The Holocene, Vol 31, No. 11-12, pp. 1761-1776.

Mukul, Sharif A., Herbohn, John and Firn, Jennifer. (2016). Tropical secondary forests regenerating after shifting cultivation in the Philippines uplands are important carbon sinks. Scientific Reports, pp. 1-12.

National List of Threatened Flora. (No Date). <https://bmb.gov.ph/index.php/facts-and-figures-wild/national-list-of-threatened-flora>.

Ng, Casey Keat-Chuan, Payne, John, & Oram, Felicity. (2021). Small habitat matrix: Conservation Communication and Local Governance of *XenConservation*: A Peatland in Jimenez, Misamis Occidental, Philippines ... 126

How does it work? *Ambio*, Vol 50, pp. 601-614.

O'Neill, Katherine P., Amacher, Michael C., and Perry, Charles H. (2005). *Soils as an Indicator of Forest Health: A Guide to the Collection, Analysis, and Interpretation of Soil Indicator Data in the Forest Inventory and Analysis Program* (Forest Service North Central Research Station General Technical Report NC-258). United States Department of Agriculture.
https://www.nrs.fs.fed.us/pubs/gtr/gtr_nc258.pdf.

Palinkas, Lawrence A., Horwitz, Sarah M., Green, Carla A., Wisdom, Jennifer P., Duan, Naihua, and Hoagwood, Kimberly. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, Vol 42, No. 5, pp. 533-544.

PhilAtlas. (2021). Landing Municipality of Balingao Province of Misamis Occidental.
<https://www.philatlas.com/mindanao/r10/misamis-occidental/balingao/landing.html>.

PhilAtlas. (2021). Nacional Municipality of Jimenez Province of Misamis Occidental.
<https://www.philatlas.com/mindanao/r10/misamis-occidental/jimenez/nacional.html>.

Pinchot, Gifford. (2018). *The Fight for Conservation* (1910). Project Gutenberg.

Popov, Evgenii Aleksandrovich, Kolesnivoka, Olga N. and Zamjatina, O N. (2021). Environment as a Socio-cultural Phenomenon. *IOP Conference Series: Earth and Environmental Science* 670, pp. 1-8.

Proclamation Number 2152. (1981). Declaring the Entire Province of Palawan and Certain Parcels of the Public Domain and/or Parts of the Country as Mangrove Swamp Forest Reserves. The Official Gazette.

<https://www.officialgazette.gov.ph/1981/12/29/proclamation-no-2152-s-1981/>.

Proclamation Number 228. (2002). Declaring Mt. Malindang National Park Situated in the Province of Misamis Occidental as a Protected Area and its Peripheral Areas as Buffer Zone Pursuant to Republic Act 7586 (NIPAS Act of 1992) and shall be Known as Mt. Malindang Natural Park. The Official Gazette.

<https://www.officialgazette.gov.ph/2002/08/02/proclamation-no-228-s-2002/>.

Protected Areas and Wildlife Bureau-Department of Environment and Natural Resources. (2013). The National Wetlands Action Plan for the Philippines 2011-2016. pp.1-86.

Qiang, Yinmeng, Xie, Hongxian, Qiao, Sitan, Yuan, Yang, Liu, Ying, Shi, Xianggang, Shu, Mi, Jin, Jinhua, Shi, Suhua, Tan, Fengxiao, & Huang, Yelin. (2015). Development of microsatellite markers for *Carallia brachiata* (Rhizophoraceae). Applications in Plant Sciences, Vol 3, pp. 1-3.

Rahajoe, Joenie S., Alhamd, Laode, Atikah, Tika D., Pratama, Bayu Arief, Shiodera, Satomi, and Kohyama, Takashi. (2016). Floristic Diversity in the Peatland Ecosystems of Central Kalimantan. In M. Osaki and N. Tsuji (eds), Tropical Peatland Ecosystems, Springer, Tokyo, Chapter 11, pp. 167-196.

Republic Act Number 7586. (1992). An Act Providing for the Establishment and Management of National Integrated Protected Areas System, Defining its Scope and Coverage, and for Other Purposes. The Official Gazette.

<https://www.officialgazette.gov.ph/1992/06/01/republic-act-no-7586/>.

Roth, Robin J. and Dressler, Wolfram. (2012). Market-oriented conservation governance: the particularities of place. *Geoforum*, Vol 43, Issue 3, pp. 363-366.

Rueda, Girlie H. (2021). Community Knowledge and Awareness on the Ecological Services of Peatland in Victoria, Oriental Mindoro, Philippines. *Journal of Nature Studies*, Vol 20, No. 1, pp. 1-15.

Sarmiento, Roger T. (2018). Vegetation of the Ultramafic Soils of Hinatuan Island, Tagana-An, Surigao Del Norte: an Assessment as Basis for Ecological Restoration. *Ambient Science*. Vol 5, No. 2, pp. 44-50.

S.H.A. (2021, June 10). Personal Communication [Personal Interview].

Songcuan, Al, Baloloy, Alvin, Blanco, Ariel and David, Laura T. (2015, October). *Mangrove Forest Extent Mapping in Siargao Island, Surigao del Norte, Philippines Using Support Vector Machine (SVM) Classification* [Paper presentation]. 36th Asian Conference on Remote Sensing, Manila Philippines.

Sundari, S., Ibo, L.K., Rahajoe, J.S., Alhamb, L., Gunawan, H., and Priyono, N.C. (2020). Biodiversity study of several peatland types in Papua. *IOP Conference Series: Earth and Environmental Science*; pp. 1-15.

Supsup, Christian E., Puna, Nevong M., Asis, Augusto A., Redoblado, Bernardo R., Panaguinit, Maria Fatima G., Guinto, Faith M., Rico, Edmund B., Diesmos Arvin C., Brown, Rafe M., and Mallari, Neil Aldrin D. (2016). Amphibians and Reptiles of Cebu, Philippines: The Poorly Understood Herpetofauna of an

Island with Very Little Remaining Natural Habitat. Asian Herpetological Research 2016, Vol 7, pp. 151-179.

Susilawati, Helena Lina, Setyanto, Prihasto, Ariani, Miranti, Hervani, Anggri and Inubushi, Kazuyuki. (2016). Influence of water depth and soil amelioration on greenhouse gas emissions from peat soil columns. Soil Science and Plant Nutrition, Vol 62, No. 1, pp. 57- 68.

Swedberg, Richard. (2018). On the Uses of Exploratory Research and Exploratory Studies in Social Sciences. In John Gerring, Colin Elman, and Jim Mahoney (eds.), Producing Knowledge.

Swindles, Graeme T., Jones, Andrew, and Rushworth, Garry. (2016). The phenomenon of urban peat formation. The Naturalist, Vol 141. pp. 121-127.

Sy Diop, Khalifa A. and Liu, Ersi. (2020). Categorization of Case in Case Study Research Method: New Approach. Knowledge and Performance Management, Vol 4, pp. 1-14.

Talty, McKinley J., Lacroix, Kelly Mott, Aplet, Gregory H., & Travis Belote, R. (2020). Conservation value of national forest roadless areas. Conservation Science and Practice, Vol 2, Issue 11, pp. 1-14.

Tang, Yuhan, Gao, Chi, and Wu, Xuefei. (2020). Urban Ecological Corridor Network Construction: An Integration of the Least Cost Path Model and the InVEST Model. International Journal of Geo-Information, Vol 9, No. 33, p. 1-16.

Umali, Arthur Glenn A., Malabrigo, Pastor Jr. L., and Replan, Enrico L. (2018). Floral Diversity and Habitat Assessment at Mt. Malarayat Brgy. Malitlit, Lipa

City, Batangas. *Ecosystems and Development Journal*, Vol 8, No. 1, pp. 3-14.

UNEP-WCMC. (2021). Protected Area Profile for Philippines from the World

Database of Protected Areas. Available at: www.protectedplanet.net.

UNEP-WCMC and IUCN. (2021). Protected Planet: The World Database on Other

Effective Area-based Conservation Measures (WD-OECM) [Online], March

2021, Cambridge, UK: UNEP-WCMC and IUCN. Available at:

www.protectedplanet.net.

Varble, Sarah, Secchi, Silvia & Druschke, Caroline Gottschalk. (2016). An

Examination of Growing Trends in Land Tenure and Conservation Practice

Adoption: Results from a Farmer Survey in Iowa. *Environmental Management*.

Vol 57, pp. 318–330.

Wibeck, Victoria and Linnèr, Björn-Ola. (2021). Sense-making Analysis: A

Framework for Multi-Strategy and Cross-Country Research. *International*

Journal of Qualitative Methods, Vol 20, pp. 1-12.

XenConservation Jimenez Misamis Occidental. (2021, May 7). *Peat's pH*. [Status

update]. Facebook.

https://web.facebook.com/story.php?story_fbid=130284242482315&id=1000

65022183910.

XenConservation Jimenez Misamis Occidental. (2021, August 23). *Bakauan- Gubat*

Validation [Status update]. Facebook.

<https://web.facebook.com/photo?fbid=203627915147947&set=a.1011579653>

94943.

XenConservation Jimenez Misamis Occidental. (2021, September 20). *CENRO Oroquieta Certification of Bakauan-Gubat* [Status update]. Facebook.
<https://web.facebook.com/photo/?fbid=221259340051471&set=a.101157965394943>.

Yin, Robert K. (2003). *Case Study Research Design and Methods*. Third Edition. Thousand Oaks, California: Sage Publications.

Appendices

APPENDIX A

Informed Consent I

 **UP OPEN UNIVERSITY**
PARTICIPANT'S INFORMED CONSENT FORM Appendix B

Research/Project Title: CONSERVATION COMMUNICATION

Faculty of Studies/Office: FACULTY OF INFORMATION AND COMMUNICATION STUDIES

Researcher/Proponent: XENIAH CARYL C. DAVID

To the participant: Kindly encircle the applicable scale:
1 - Researcher gave information
2 - Researcher did not give information
NA - Not applicable

A. INFORMATION PROVIDED

Purpose and conduct of study:	1	2	NA
1. Why is the study being done?	(1)	2	NA
2. What has been done previously?	(1)	2	NA
3. How will the present study be conducted?	(1)	2	NA
4. What is the nature and extent of involvement of research participants?	(1)	2	NA
Risks and Inconveniences			
1. Will there be discomforts? Are these described clearly?	(1)	2	NA
2. Will there be risks? Are these explained fully?	(1)	2	NA
3. Are there other effects the participants need to know in order to make a decision?	(1)	2	NA
Possible benefits for the participants			
What benefits can the participants expect?	(1)	2	NA
Compensation			
1. Will there be reimbursement of travel expenses?	1	2	(NA)
2. Will there be compensation for loss of income? Meal expenses?	1	2	(NA)
3. Will there be compensation for loss of income? Meal expenses?	1	2	(NA)
4. Are there other financial considerations?	1	2	(NA)
Provision for injury or related illness			
Will the participant be given free treatment in case of injury or illness incurred as a result of participating in the study?	1	2	(NA)
Contact person			
1. Who is the person knowledgeable about the research and rights of the participant?	(1)	2	NA
2. How can he/she be contacted?	(1)	2	NA

*Adapted from Philippine National Health Research System. (2006). National Ethical Guidelines for Health Research. Accessed: <http://www.pchsr.dost.gov.ph/index.php/downloads/publications/ethics-guidelines> (7/14/2011).

1

 **UP OPEN UNIVERSITY**
PARTICIPANT'S INFORMED CONSENT FORM Appendix B

Voluntariness of participation

1	2	NA	
1. Is the participant free of any coercion in participating?	(1)	2	(NA)
2. Is there assurance that the participant can withdraw anytime without affecting the remuneration due to him/her?	1	2	(NA)
3. Is there provision for obtaining the informed consent from the legal representative in case of minors, the mentally handicapped or the incapacitated?	1	2	(NA)
Confidentiality			
4. There is a statement that describes the measures that will be taken to keep and ensure the confidentiality of the participant's records?	(1)	2	NA

B. CONSENT FORM

I have read and understood the above information and had been given the opportunity to consider and ask questions on the information regarding my involvement in this study. I have signed directly to the research proponent who has answered to my satisfaction all my questions. I have received a copy of this Participant's Informed Consent Form. I voluntarily agree to participate.

Participant's Signature:

Xeniah Caryl C. David Xeniah Caryl C. David May 17, 2011
Name of Participant Signature of Participant Date

Witness or Legal Guardian's Signature:
(Only when participant cannot read or sign this Informed Consent)

_____ _____ _____
Name of Witness/Legal Guardian Signature of Witness/Legal Guardian Date

Researcher's Signature:

I, the undersigned, certify that to the best of my knowledge, the participant signing this consent form has read the above information about fully, that this has been carefully explained to him/her, and that he/she clearly understands the nature, risks, and benefits of his/her participation in this study.

Xeniah Caryl C. David Xeniah Caryl C. David May 17, 2011
Name of Researcher Signature of Researcher Date

2

Participant Information

Name of Participant JAIME E. ANTONIO

Check one: ☒ Use my full name in the research document
☐ Use only my initials in the research document
☐ Use a pseudonym in the research document

Home address: _____
Phone number: _____
Email address: _____

Publishing research material:

Check one: ☒ Information about my participation can be used in future publications. Use my full name.
☐ Information about my participation can be used in future publications. Use my initials.
☐ Information about my participation can be used in future publications. Use a pseudonym.
☐ Please do not share information about my participation in any future publications.

Comments: _____

APPENDIX B

Informed Consent II

UP OPEN UNIVERSITY
PARTICIPANT'S INFORMED CONSENT FORM¹ Appendix B

Research/Project Title: CONSERVATION COMMUNICATION
Faculty of Studies/Office: FACULTY OF INFORMATION AND COMMUNICATION STUDIES
Researcher/Proponent: MERVIN ORTEL C. DANIDO

To the participant: Kindly encircle the applicable scale:
1 - Researcher gave information
2 - Researcher did not give information
NA - Not applicable

A. INFORMATION PROVIDED

Purpose and conduct of study:	1	2	NA
1. Why is the study being done?	(1)	2	NA
2. What has been done previously?	(1)	2	NA
3. How will the present study be conducted?	(1)	2	NA
4. What is the nature and extent of involvement of research participants?	(1)	2	NA
Risks and inconveniences			
1. Will there be discomforts? Are these described clearly?	(1)	2	NA
2. Will there be risks? Are these explained fully?	(1)	2	NA
3. Are there other effects the participants need to know in order to make a decision?	(1)	2	NA
Possible benefits for the participants			
1. What benefits can the participants expect?	(1)	2	NA
Compensation			
1. Will there be reimbursement of travel expenses?	1	2	NA
2. Will there be compensation for loss of income? Meal expenses?	1	2	NA
3. Will there be compensation for loss of income? Meal expenses?	1	2	NA
4. Are there other financial considerations?	1	2	NA
Provision for injury or related illness			
1. Will the participant be given free treatment in case of injury or illness incurred as a result of participating in the study?	1	2	NA
Contact person			
1. Who is the person knowledgeable about the research and rights of the participant?	(1)	2	NA
2. How can he/she be contacted?	(1)	2	NA

¹Adapted from Philippine National Health Research System. (2006). National Ethical Guidelines for Health Research. Accessed: <http://www.pcfrd.doh.gov.ph/index.php/downloads/publications/ethics-guidelines> (7/14/2011).

UP OPEN UNIVERSITY
PARTICIPANT'S INFORMED CONSENT FORM¹ Appendix B

Voluntariness of participation

	1	2	NA
1. Is the participant free of any coercion in participating?	1	2	NA
2. Is there assurance that the participant can withdraw anytime without affecting treatment due to him/her?	1	2	NA
3. Is there provision for obtaining the informed consent from the legal representative in case of minors, the mentally handicapped or the incapacitated?	1	2	NA

Confidentiality

	1	2	NA
Is there a statement that describes the measures that will be taken to keep and ensure the confidentiality of the participant's records?	(1)	2	NA

B. CONSENT FORM

I have read and understood the above information and had been given the opportunity to consider and ask questions on the information regarding my involvement in this study. I have spoken directly to the research proponent who has answered to my satisfaction all my questions. I have received a copy of this Participant's Informed Consent Form. I voluntarily agree to participate.

Participant's Signature:

Name of Participant: _____ Signature of Participant: _____ Date: MAY 17 2021

Witness or Legal Guardian's Signature:
(Only when participant cannot read or sign this Informed Consent)

Name of Witness/Legal Guardian: _____ Signature of Witness/Legal Guardian: _____ Date: _____

Researcher's Signature:

I, the undersigned, certify that to the best of my knowledge, the participant signing this consent form has read the above information sheet fully, that this has been carefully explained to him/her, and that he/she clearly understands the nature, risks, and benefits of his/her participation in this study.

Name of Researcher: _____ Signature of Researcher: _____ Date: MAY 17 2021

Participant Information

Name of Participant: _____

Check one: ☐ Use my full name in the research document
☐ Use only my initials in the research document
☒ Use a pseudonym in the research document

Home address (optional): _____
Phone number: _____
Email address: _____

Publishing research material:

Check one: ☐ Information about my participation can be used in future publications. Use my full name.
☐ Information about my participation can be used in future publications. Use my initials.
☒ Information about my participation can be used in future publications. Use a pseudonym.
☐ Please do not share information about my participation in any future publications.

Comments: Ranglima Bonara

APPENDIX C

Informed Consent III

 **UP OPEN UNIVERSITY**
PARTICIPANT'S INFORMED CONSENT FORM¹ Appendix B

Research/Project Title: CONSERVATION COMMUNICATION
Faculty of Studies/Office: FACULTY OF INFORMATION AND COMMUNICATIONS
Researcher/Proponent: XENIAH GAYL C. DANDU

To the participant: Kindly encircle the applicable scale:
1 - Researcher gave information
2 - Researcher did not give information
NA - Not applicable

A. INFORMATION PROVIDED

Purpose and conduct of study:	1	2	NA
1. Why is the study being done?	(1)	2	NA
2. What has been done previously?	(1)	2	NA
3. How will the present study be conducted?	(1)	2	NA
4. What is the nature and extent of involvement of research participants?	(1)	2	NA
Risks and inconveniences			
1. Will there be discomforts? Are these described clearly?	(3)	2	NA
2. Will there be risks? Are these explained fully?	(1)	2	NA
3. Are there other effects the participants need to know in order to make a decision?	(3)	2	NA
Possible benefits for the participants			
What benefits can the participants expect?	(1)	2	NA
Compensation			
1. Will there be reimbursement of travel expenses? Compensation for loss of income? Meal expenses?	1	2	NA
2. Will there be compensation for loss of income? Meal expenses?	1	2	NA
3. Will there be compensation for loss of income? Meal expenses?	1	2	NA
4. Are there other financial considerations?	1	2	NA
Provision for injury or related illness			
Will the participant be given free treatment in case of injury or illness incurred as a result of participating in the study?	1	2	NA
Contact person			
1. Who is the person knowledgeable about the research and rights of the participant?	(1)	2	NA
2. How can he/she be contacted?	(1)	2	NA

¹Adapted from Philippine National Health Research System. (2006). *National Ethical Guidelines for Health Research*. Accessed: <http://www.pchrd.doh.gov.ph/downloads/publications/ethics-guidelines> (7/14/2011).

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PARTICIPANT'S INFORMED CONSENT FORM¹ Appendix B

Voluntariness of participation

	1	2	NA
1. Is the participant free of any coercion in participating?	1	2	NA
2. Is there assurance that the participant can withdraw anytime without affecting treatment/care due him/her?	1	2	NA
3. Is there provision for obtaining the informed consent from the legal representative in case of minors, the mentally handicapped or the incapacitated?	1	2	NA

Confidentiality

	1	2	NA
Is there a statement that describes the measures that will be taken to keep and ensure the confidentiality of the participant's records?	(1)	2	NA

B. CONSENT FORM

I have read and understood the above information and had been given the opportunity to consider and ask questions on the information regarding my involvement in this study. I have spoken directly to the research proponent who has answered to my satisfaction all my questions. I have received a copy of this Participant's Informed Consent Form. I voluntarily agree to participate.

Participant's Signature:

Name of Participant

Signature of Participant

Date

Witness or Legal Guardian's Signature:
(Only when participant cannot read or sign this Informed Consent)

Name of Witness/
Legal Guardian

Signature of Witness/
Legal Guardian

Date

Researcher's Signature:

I, the undersigned, certify that to the best of my knowledge, the participant signing this consent form has read the above information sheet fully, that this has been carefully explained to him/her, and that he/she clearly understands the nature, risks, and benefits of his/her participation in this study.

Name of Researcher

Signature of Researcher

Date

Participant Information

Name of Participant _____

Check one: ☒ Use my full name in the research document
☒ Use only my initials in the research document
☐ Use a pseudonym in the research document

Home address (optional) _____

Phone number _____

Email address _____

Publishing research material:

Check one: ☐ Information about my participation can be used in future publications. Use my full name.
☒ Information about my participation can be used in future publications. Use my initials.
☐ Please do not share information about my participation in any future publications.

Comments: _____

APPENDIX D

XenConservation's Threatened Species



Anahau (861 OTS)



Molave (431 EN)



Lunai (870 OTS)



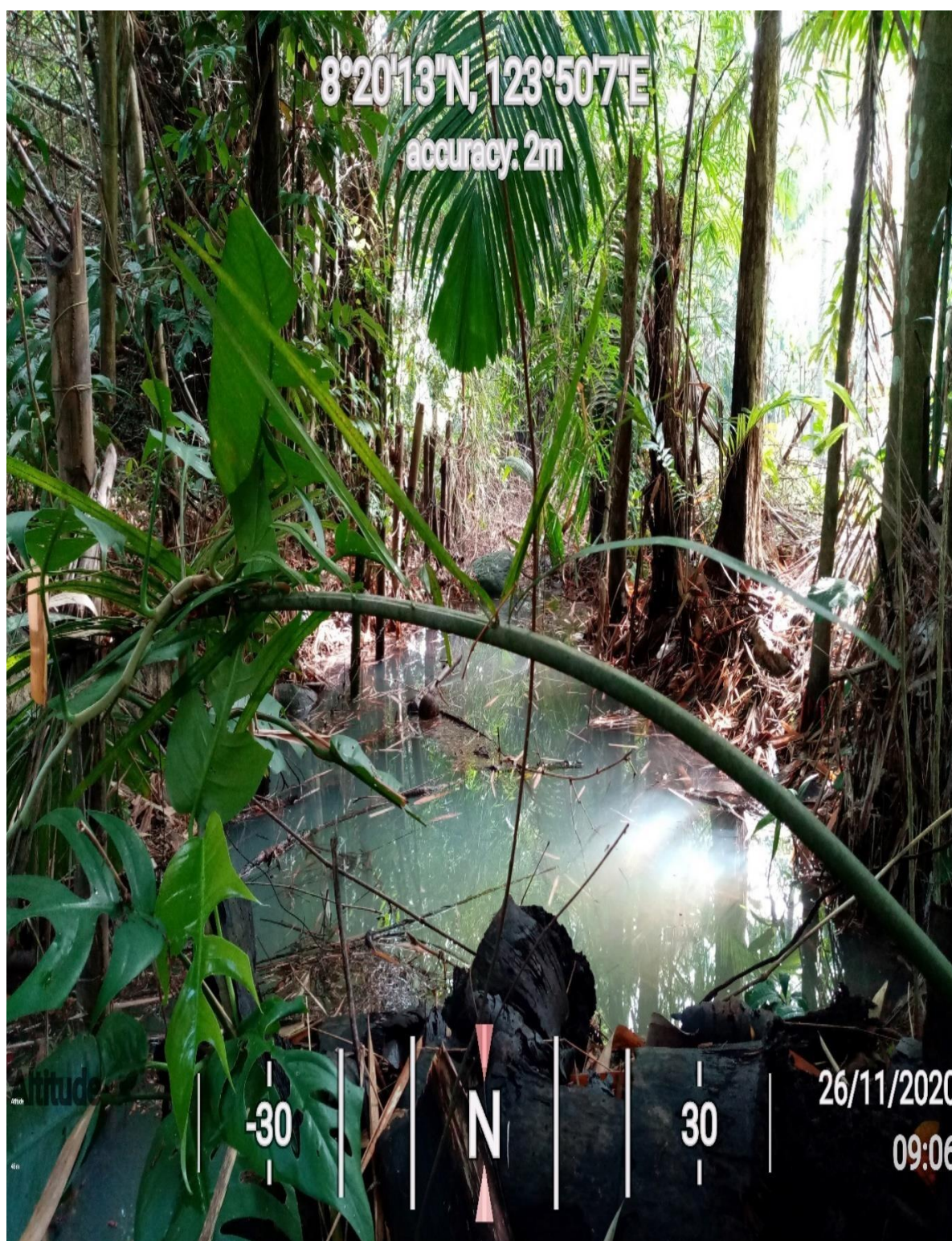
Pahatan (448 Vu)



Bakauan-gubat (961 OTS)

APPENDIX E

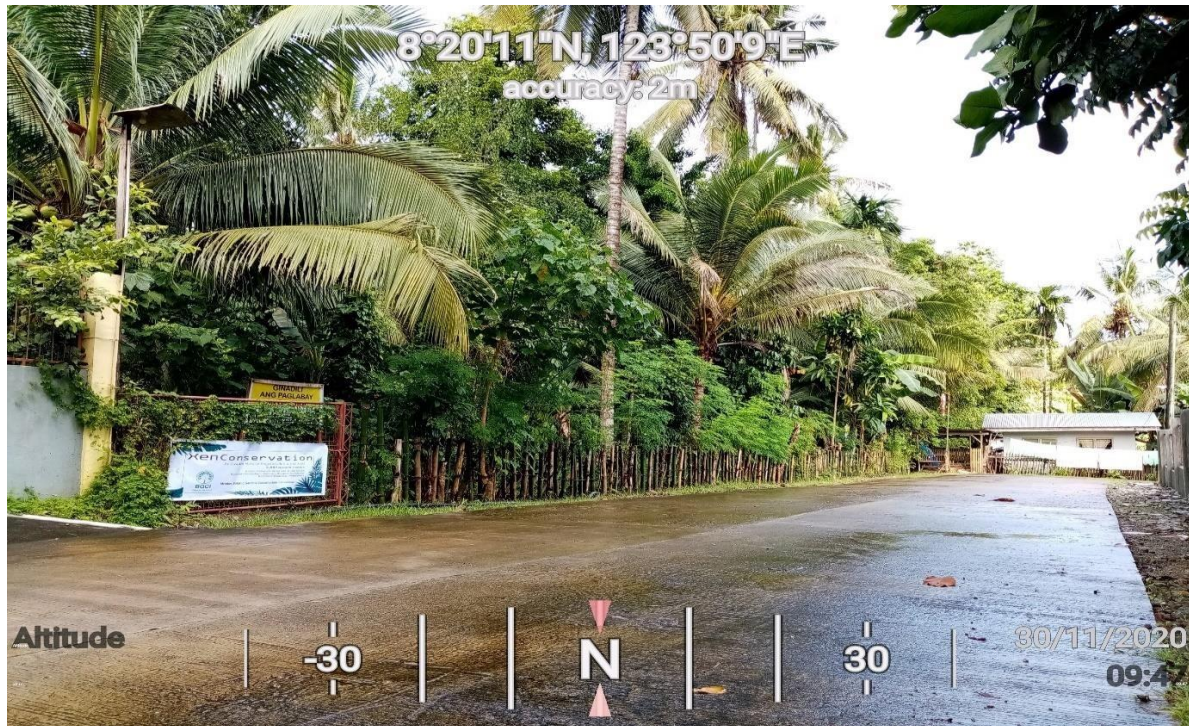
XenConservation's Seasonal Wetland



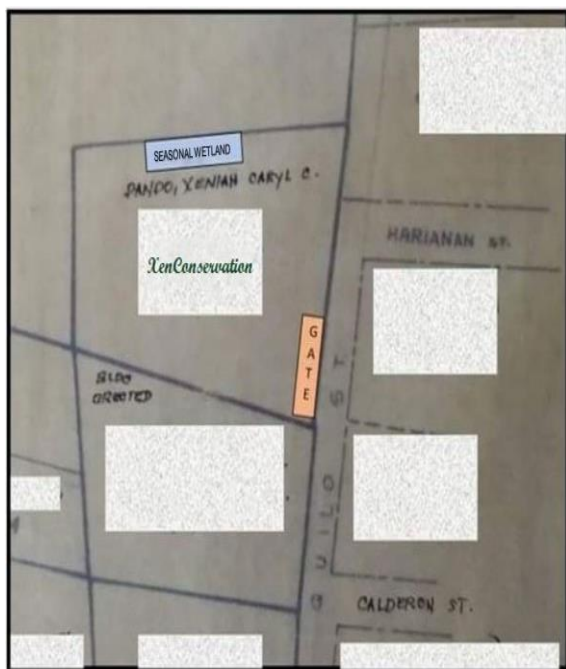
Inland seasonal wetland with boulders

APPENDIX F

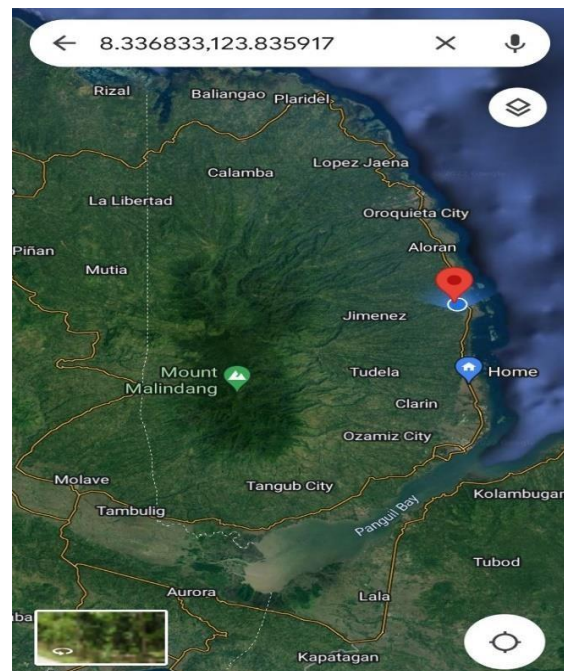
XenConservation's Geographic Location



Street view in Quilo Street



Location's Tax Map



Location's Satellite Map