Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Ma. Francisca Iñez B. Mejia
Student number	4792939

Studio		
Name / Theme	Transitional Territories / Accumulation - Clearance	
Main mentor	Diego Andres Sepulveda Carmona	Spatial Planning and Strategy – Department of Urbanism
Second mentor	Denise Piccinini	Landscape Architecture – Department of Landscape Architecture
Argumentation of choice of the studio	In the Philippine Archipelago, crisis and opportunity constantly present themselves in equal measure. With 36,000 km of coastlines, it is one of the longest in the world. How uncanny it is that there are but less than ten local coastal engineers and planners who are expertly qualified in managing these. It is an entire country riddled with riverine and coastal communities whose growth have become unprecedented and vulnerabilities more exposed in recent years, nobody knows who truly takes care of them. Who are the guardians of the Philippine ecosphere? They are the indigenous tribes who have protected and lived over mountains to seas for millennia remain yet are still shunned by the government from their own development plans and visions for the country's future. These refluent and steadfast people are the most connected with our pre-colonial history, our true roots, are those treated as outcasts and whose own ways of living should serve not as warnings yet of teachings of vulnerability and of heritage and identity, and thus pride. I have traveled much away from the city in the last decade of my life, engaging with different indigenous and local communities and having had the opportunity to involve myself in masterplan projects of coastal municipalities like Butuan City, Agusan del Norte and Atimonan, Quezon, notwithstanding also working on my mother's sinking coastal hometown of Hagonoy, Bulacan for my undergraduate thesis. These experiences have awakened in me how water must be a crucial aspect in determining the direction by which the studies and visions for such areas would be conducted and implemented in long-term plans, and yet I have observed how water is merely used as a technical risk factor instead of being seen and applied as the link to authentic development that also encompasses the social and political. I have thought to myself, "How many more municipalities and cities like these in the Philippines are more	

	impacted and need better coastal/water planning and development? Or merely understanding? Could the quality of the relationship with water of the communities living therein be proportional to their growth and quality of life?" Water, I have come to believe, is a key element if not THE key element for understanding who we are and what we may yet become. Territories that span rivers both intrigue and fascinate me. They are the in-between zones in where indigenous cultures and traditions now overlap with contemporary sensibilities, where the land cleanses itself. The social layers of colonization, political upheavals, and both eco-logical and environmental disasters teem here no matter how remote they may seem from the urban life of mega-cities many people migrate to with an-other layer embedded; that of temporality of time. With the desire to further explore this and express my tenderness for water and the island nation I come from, my primary choice is the Transitional Territories studio. And with the Accumulation-Clearance theme that the studio is beginning with this year, I feel an utter connection with accumulated pasts, cultures, and practices that define the river settlements and coastal landscapes of the country that could direct what is yet to come or what can come for us; a clarity. A different, more visionary process and approach is vital – one that would amplify the involvement of the most vulnerable sectors, enable local knowledge, and pave the way for an alternative model for water resilience to emerge. As an avid diver who once headed an organization that promoted the awareness and conservation of the marine environment, I feel deeply and have observed how water in all its forms– oceans, lakes, rivers, lagoons – and meanings are always tied to the people that live with them. A possible focus for this study would be communities in river settlements in the tropical region, which are the densest along coastal zones, and thus, are the most vulnerable as the river becomes the urban touchpoint with nature and the indigenous roots we have become so detached from. Identifying, strengthening, and protecting these areas must be placed at the forefront of development plans not only by local governments, but to be strategically mandated and implemented by the national government, *albeit with fresh eyes.* Although, more than solutions, it is the way of thinking and seeing I am more excited and interested in uncovering through my graduation project that I believe TT can offer as "It approaches the state of risk and fragility in coastal, riverine, and/or deltaic landscapes as an opportunity to move away from exist-ing paradigms and envision an urbanism of care." The inclusion of 'care' into the program is something I value and wish to extend as I seek out and be guided by new approaches and standards that could enrich my own understanding and knowledge about water and its relationship with the built

	environment by delving into alternative research by design methods. I aim to create a project that not only holds much meaning yet shall be expressed well; to create an inventory, an atlas, a new language, or whatever expression by which these multitudes and layers of my country and who I am could be unwrapped, understood, and celebrated.

Graduation project	
Title of the graduation project	**The River as Endless Territory** *Restoring the Social-Ecological Continuum in the Philippine Archipelago*
Goal	
Location:	The Philippines Main Study Sites: - Pasig-Marikina-Laguna River Basin along Sierra Madre Biodiversity Corridor, LUZON - Agusan River Basin along Eastern Mindanao Biodiversity Corridor, MINDANAO
The posed problem,	**Problem Focus:** *The River is an Endless Territory* Throughout the archipelago, the river's cycles, boundaries, and ecosystems reveal the symptoms of socio-ecological crises affecting its entirety as most human settlements rest along it, increasing the fragility and vulnerabilities of the Philippines to the more damning effects of the climate crisis. The Philippines as a megadiverse hotspot has over 421 principal rivers, encompassing biodiversity corridors which are considered not only the last frontiers of the Philippine ecosphere but also the planet's. There are three critical biodiversity hotspots determined as priority areas for conservation, protection, and sustainable management, namely 1) The Sierra Madre Biodiversity Corridor in Luzon, 2) The Palawan Corridor in Palawan, and 3) The Eastern Mindanao Corridor in Mindanao identified by the Critical Ecosystem Partnership Fund (CEPF, 2001). As potential sites connected with the river basin, these areas exhibit essential criticalities in terms of the complexities of interactions between high levels of biodiversity, the urban domains, the ancestral domains, and the riverscapes. Also spread throughout the islands, the biodiversity corridors pose as exploration areas that uplift the notion of the archipelago's multiplicities, allowing for a richer view of a country as biogeographically unique as the Philippines with which a multiplicity of identities and risks meld with. For the purpose of this exploration and study, only 2 biodiversity corridors are touched upon; namely the (1) The Sierra Madre Biodiversity Corridor (SMBC) and (2) The Eastern Mindanao Biodiversity

	Corridor (EMBC) as they meet the fast-growing cities that operationalize the riverscape belonging within ancestral domains most palpably. The convergence of these different layers reveals the need to understand their complex interactions and what is missed within the management of natural resources and development of biodiversity conservation frameworks and climate adaptation plans in what is supposed to be a continuum and not merely areas demarcated as 'protected landscapes and seascapes', 'alienable and disposable lands', and 'forest reserves' regarded as separated from one another. Fragmentation begins when there is no clear and careful understanding of the relationships existing and developed between marked territories and the people who manage them; different national agencies, local government units, and indigenous tribes, with most operating on the same values and approach of centralized governance, galvanized by economic growth in a Neo-Colonial Era. Although there are practices and policies that have been set in place that attempt to bridge ecosystem and resource management across local to regional scales in an integrative manner, many components are disrupted by external influences of systemic social-spatial injustices as well as intensified climate-related hazards that render them ineffective or not enough. Thus the river is considered the trans-bounding entity that enfold these separate and contentious domains, wherein the biophysical tensions meld with the socio-cultural, and vice versa. Interlacing them opens up understanding of how urbanization has been intentionally operationalizing the riverscapes and what are their most acute impacts, whether through the encroachment of ancestral domains by building infrastructure for industrial agriculture and the sole use of city activities, or for being part of the traditions and rituals that the indigenous tribes perform to show their reverence to the spirits of the river. A 'River Interface Unit' (RIU) emerges that positions a river system as the complex social-ecological system boundary with the three major components of Urban Domain, Ancestral Domain, and Biodiversity Corridor. As opposed to just 'ridge to reef', a transect from 'coast to coast' is considered across these components. These RIUs can be studied and diagnosed through the differentiation of 1) the interaction between climate change impacts, 2) anthropogenic stress/pressures on natural capital, and a critical assessment of 3) existing adaptive capacities between the urban, the indigenous, and biodiversity. Therein, opportunities for the mediation between the relationships between indigenous and urban tribes can be identified to create pathways towards the regeneration of lost land and biodiversity - marine or terrestrial - and where a more

	authentic strategy towards climate adaptation can be formed and catalyzed. A transitional and sustainable development regime that respects and integrates indigenous and local knowledge systems (what remains of them) throughout these RIUs within Philippine river basins and in the process, enhancing adaptive capacities for negotiated and evolutionary resilience is possible. **Problem Statement:** **We Find the Struggle in the River** Humans co-exist with nature and must live with each other, yet if the forces determining this co-existence are grounded on dysfunctional dichotomies maintained by entrenched colonial values in power and institutions as exemplified by the rabid development aggression perpetrated in the Philippines, the fragmentation of vital megadiverse natural and socio-cultural landscapes shall continue, leading to a hyper-vulnerable state of an already scattered territory weak in both spirit and body. With the interplay of its endemic risk to intensifying, unpredictable climate and natural hazards and the priority placed on centralized development and economic growth, the multiplicities that exist in the Philippine Archipelago stand weak in the face of climate change as the growing population of urban tribes are continually disconnected and desensitized from the natural environment, of which indigenous tribes are deeply connected with through their ancestral worldviews. Such disconnect between human and nature amongst majority of the Filipino population is complicit to the colossal degradation of the megadiversity of the Philippines' social-ecological ecosystems from terrestrial to marine biocultural areas just in the last century. Accordingly, the violence against and deliberate exclusion of indigenous communities in the co-management and decision-making over the territories they consider their life and know so well are eroding ties to ancestral traditions and knowledge systems that could in turn enhance and protect the national ecosphere from further disasters, from further loss of life. These interacting elements pose the multiple complexities within multiple complexities of the whole archipelagic system that must be understood and assessed for adaptive capacities and dynamics to be enhanced; for the preservation of critical biodiversity, empowerment of indigenous knowledge and cultures, and an effective and transformative climate adaptation for all. Upon unraveling the accumulated realities that patronize the Philippines as *Exotic, Exhausted*, and *Helpless*, it is evident that the health and well-being of its ecosystem services and the humans who depend on these are at the center, to which

	the riverscapes are witness to. We find the most struggle along the rivers, whose boundaries that fragment it carry the different life forms and forms of life in constant exchange of values, expectations, and lifestyles from the urban to the indigenous. Thus, to see the riverscape as an endless territory wherein the natural hydrological cycle and a robust socio-spatial landscape that facilitates this must be restored or maintained is the aim of this project. Engaging with the riverscape to unfold its system functionalities amidst biophysical stresses and the many meanings to the many identities who manage and make use of its resources and who are exposed to its many risks can hold the key to the path towards a clearance state, a restoration of the social-ecological continuum present in the practices and cosmology of the Filipino indigenous tribes is vital and can aid in a renewed paradigm of sustainable development, hanging in the balance of socio-spatial justice, decolonization, and the recognition of pluriversality.
research questions and	**Main Research Question** As an archipelagic territory composed of multiplicities — identities, resources, and risks — pressured by a homogenizing and centralized development paradigm, how can the Philippines prevail from the effects of the climate crisis through a transitional and renewed co-management regime of the river, restoring the spiritual continuum between human and nature? **Sub-Questions** *Critique Questions (Assessment)* CR1: What are the identities, resources, and risks present in the River Interface Units? How do these multiplicities interact as systems; what are the effects of climate change vs. development aggression over these? What are their limits? CR2: How does development aggression manifest itself in the socio-spatial landscapes of the Philippines? What are their impacts on the river basin ecosystems? CR3: What are the main drivers of development aggression and what are the policies in place that define its limits? CR4: What are the socio-cultural values, expectations, and lifestyles based on land use and practices that surround the River Interface Units? What are the biophysical forces present in and affecting River Interface Units and how do they interact with these socio-cultural values, expectations, and lifestyles?

	CR5: Who are the indigenous groups in the River Interface Units? What roles do they perform within the land management or spatial development frameworks that affect their ancestral domains? *Action Questions (Design and Planning Approach)* AR1: What are existing spatial development, land management, and climate change adaptation frameworks in place; nationally, regionally, and locally? What is the decision-making process, and who creates them? How are they implemented and facilitated throughout the islands? AR2: How do the differing worldviews in the archipelago influence the response to disasters and climate change effects? What are the different adaptive capacities found in urban domains vs. the indigenous domains? AR3: What are existing co-management frameworks already allowing for indigenous participation within the country? Are there opportunities to synchronize these or must they be altered? AR4: Where are there areas where co-management can be most urgently applied? What dynamics are there and how can they be formulated and integrated as adaptation pathways? AR5: How can the riverscape reconstruct or mediate belief/socio-cultural structures? *Form Questions (Vision)* FR1: What design approach is most appropriate for dealing with multiplicities of values and beings? If there is none, how can the design process be transformed? FR2: How can engaging with the riverscape in more delicate ways be achieved? FR3: How can multi-diverse imagined futures be formed into pathways for design interventions? FR4: How can we turn 'archipelagic vulnerability' to 'archipelagic opportunity'? FR5: How is forcing a singular identity over a place with so much plurality and megadiversity another form of colonization?
design assignment in which these result.	**The Proposition** *A Renewed and Transitional Planning Model*

	Biophysical and socio-cultural tensions must be determined and understood more carefully as multiplicities co-exist in the biogeographically diverse Philippine archipelago to form a more solid critique of the existing land management regime that is homogenizing and allowing the shameless encroachment on ancestral domains and thus disrupting ecosystems and debilitating the services they offer. Thus by exposing the effects of the violence of development aggression over peoples and lands within biodiversity corridors along operationalized riverscapes considered as 'Critical Zones', a refoundation of values can be unearthed in where mediation between urban and indigenous ways of living co-exist in symbiosis for a salubrious adaptation to the ecological crisis at hand alongside the unabated risks they entail. As risks are determined by how vulnerabilities and exposures are combined against a system's adaptive capacities, The River Interface Unit (RIU) is considered as the initial scale of intervention in where the elements that interact within the interface shall be assessed through a values-based risk and adaptive capacity assessment framework with the focus on intentions and practices that either enable or hinder growth of the relationship with nature. From there, opportunities in where the growing inevitable risks encountered by the Philippines can be found and more harmoniously acted upon. Integration of these dynamics can be conducted in collaboration with local actors and communities to form adaptive pathways towards the renewal and synchronization of values for the regeneration of lost land and biodiversity that have contributed to degraded ecosystem services, while also strengthening adaptation capacities for climate change. Renewed values can be translated through a transitional design approach and planning model in the way the riverscape is treated and managed, respectively. Such is vital to be discovered – those that would amplify the involvement of multi-diverse stakeholders especially from the most vulnerable sectors, enable indigenous and local knowledge in the co-creation of both futures and sustainable spatial development, and ultimately, to restore the spiritual continuum between human-nature unearthing a more rooted identity into a liberated future for the Philippines. From a Neo-Colonial state to a freed state. What if we live in an archipelagic future where indigenous and local knowledge systems and "ways of living" are uplifted and lead? Where we as urban tribes once again retrain our senses and imbibe from them the value of strength in vulnerability, in taking only what is truly needed, and to live by the temporal dynamics of nature as resilience. Diverse ways of life in co-habitation, back in true harmony; the indigenous and urban tribes of the Philippines, coming together, hanging on the

	balance of the river as the site of the cycling constants; birth, struggle, death, and love.

Design Outcomes

[1] **A Critical Review and Analysis** of governance structures over the River Basin, local land management policies, climate adaptation plans and frameworks, and national, regional, and local development plans to formalize;

[2] **Visualization of Clearance Pathways and Resilience Imaginaries** towards a transitional co-management regime within River Interface Units (RIUs) as the first step to design a;

[3] **Bespoke Risk and Adaptation Capacity Assessment Framework** founded on values-based risk and adaptive capacity and their interactions analysis (Climate Change Impacts, Anthropogenic Stress, Ecosystem Services, and the Hydrological Cycle) in where opportunities can be identified for collaborative development of multiscale strategic pathways that can lead to the creation of;

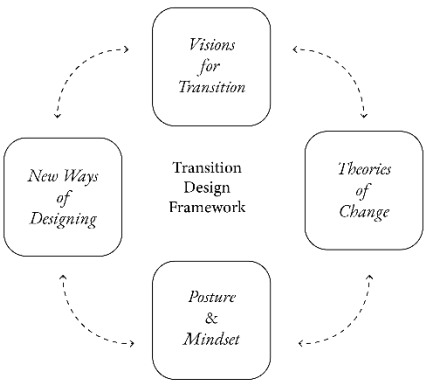
[4] **A Renewed Model or Method for Integrative Regional Planning** (inclusive decision-making, circular governance, indigenous and local design, and collective land management) over the Philippine riverscapes that assesses, evaluates, and harmonizes multi-diverse dynamic systemic relationships for an evolutionary form of climate adaptation in where total indigenous rights and knowledge recognition, biodiversity conservation and regeneration, and sustainable land use development are substantially valued, treated, and integrated.

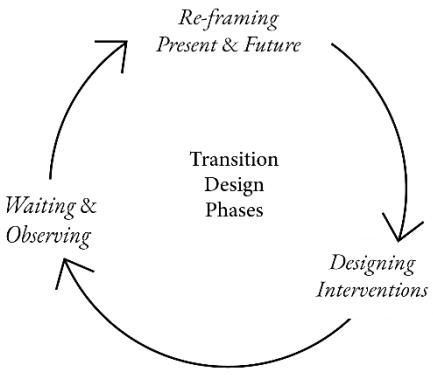
All these potentially arriving at a heightened awareness of the social-ecological continuum over the river, that as it spreads regionally, a robust and unique archipelagic identity on the planetary scale might be revealed as the ultimate revelation of clearance; freedom.

Process

Method description

Transitional Design Methodological Framework



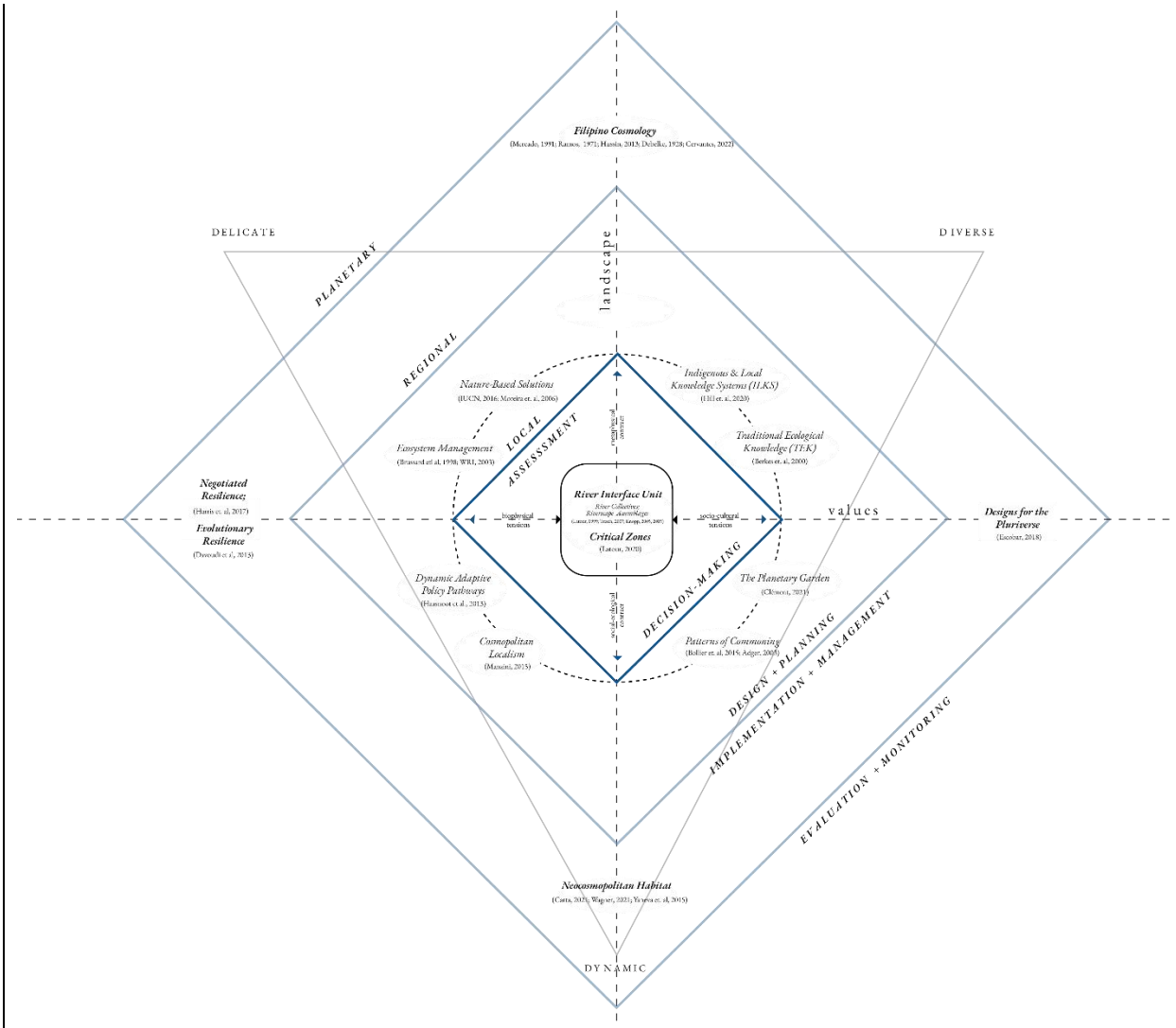


A Transition Design framework guides the research by design methodology. New knowledge, action, and self-reflection are key components of a transition design thinking method by which the adoption of diverse frames of reference and values is the initial step. The entire approach is hinged on being a simultaneous learning and challenging process as this entails the designer's need "to acknowledge the hypocrisy that comes from being a change agent toward a new system from within the old system" (Tonkinwise, 2019). Moving beyond Design for Service and Social Innovation, Transition Design is founded on the crucial shift towards more longer-term visions and the requirement of a new set of "more sustainable socioeconomic and political paradigms" by which design interventions shall be hinged upon (Irwin, 2015).

Four main areas serve as to guides to this framework. Visions for Transition, Theories of Change, Posture & Mindset, and New Ways of Designing. The co-evolution and interaction of these areas form a 'palette' from which "situation-appropriate interventions may be designed." The 'transition design framework' which follows an emerging three-phased approach for "addressing wicked problems and catalyzing systems-level change... prescribes a logic for coalescing different practices (knowledge and skillsets outside the design disciplines), situated within mutually-influencing co-evolving areas that are relevant to seeding and catalyzing relational changes." The entire research framework follows these phases with each step falling under: 1) Re-framing Present & Future, 2) Designing Interventions, and 3) Waiting & Observing (Tonkinwise, 2019; Irwin, 2015).

The method itself allows for an open-ended outcome considering the deep uncertainties, complexities, and multifarious ways that the research may encounter by virtue of dealing with the megadiverse Philippine context, yet emphasizes the 'emergent' quality that challenges dominant existing paradigms in design that always presupposes concreteness, predictability, and profitability. Moreover, the use of this methodology invites diversity and dynamism into the design process from which a new way of designing can also emerge in itself.

Conceptual Framework and Theoretical Underpinnings



Recognizing the imperative for the transition from the Neo-Colonial realities that pervade in the archipelago of multiplicities that has been driving development aggression heavily implies the need for ontological reconsiderations as the "substantial challenge to the onto-epistemic formation embedded in the current dominant form of capitalist modernity (Escobar, 2018)." Thus, operating on this opens up the discourse and research towards cosmologies and the many worlds that exist in the megadiverse Philippine context. Indigenous tribes in the Philippines have always considered their land their life, and with this belief comes an entire worldview in where values, lifestyles, and expectations from the world are constituted differently. Filipino Cosmology as a whole is embedded as one of the main pillars of the theoretical foundations that lead the project, alongside Pluriversality (Designs for the Pluriverse), Negotiated and Evolutionary Resilience, and The Neocosmopolitan Habitat.

The conceptual framework is organized and designed in such a way that the River Interface Units (RIU) are considered as Critical Zones (Latour, 2020), placed at the center as the fundamental sites of study in where it is pressured by biophysical and socio-cultural forces in the environment causing tensions, driven by climate change and a homogenizing and centralized development paradigm manifested through anthropogenic stressors and their dynamics with with the former two. Tension is used as these forces are straining (pushing and pulling) the zones leading to eventual limits. A breakout from this tensive and pressured state is envisioned in where theories of change involve directions towards new values and landscapes as the axes, with design and planning theories of change that respond to the tensions more

concretely, tying these together to form a whole social-ecological system now poised in a delicate, diverse, and dynamic continuum as systems-level change occurs over multiple scales - from local to planetary.

It would be appropriate to note that most theories that build up the framework are formulated from the Western rationalist paradigm, recognition and awareness throughout the project and going deeper into learning about more local perspectives can also allow the designer to cross-check and see how certain aspects of some theories are put into practice in less publicized ways by the local communities and indigenous tribes. Aside from the theoretical underpinnings listed and defined here as *Theories of Change*, *Terminologies of Change* are also highlighted that are used throughout this research to signify emerging perspectives or esoteric ideas that beg for more attention and consideration, and even further insight that can be unraveled as the study continues.

Conceptual Design Approach Framework:

The Path to Clearance for Transformative Climate Adaptation: Critical Risk and Adaptive Capacity Assessments over the River Interface Unit (RIU)

The transitional path to clearance begins with the focus on critical areas for conservation and protection that provide the most eco-system services and biodiversity needed for ecosystem health and human well-being in the country. The 3 Critical Biodiversity Hotspots encompass major river basins (RB) from which the River Interface Units as 'Critical Zones' arise. Overlapping with these Hotspots are three different spatial compositions, each with a certain boundary, set of main inhabitants, and observable socio-spatial, biophysical, and political spaces in where they all interact with the riverscape:

The Ancestral Domain (AD)
Demarcated and Legally Identified Indigenous Territories awarded with a Certified Ancestral Domain Title (CADT). The CADT is used here for data purposes as this allows for a more accurate geographical basis of the project, although it must be noted that there are more CADTs being awarded as the project is ongoing, and that indigenous territories are contested to be much larger than those legally recognized.

The Urban Domain (UD)
Any human settlement that is not ascribed as indigenous territory. In the Philippines, there are 3 main types of cities: 1) Highly Urbanized City (HUC) 2) Independent Component Cities (ICC), and 3) Component Cities (CC). An HUC is categorized accordingly due to their population of more than 200,000 people. There are 148 cities of the Philippines of which majority are located in Coastal and Riverine Areas including the capital, Metro Manila and all identified HUCs, namely: Butuan City, Davao City, Iloilo City, Malolos City, Cagayan De Oro City, Cebu City, Bacolod City, General Santos City, Baguio City, Mandaue City, Tacloban City, Lucena City, Iligan City, Lapu-Lapu City, and Angeles City.

The Biodiversity Corridor (BC)
Ecological zones containing Key Biodiversity Areas (KBA) - terrestrial, marine, and wetland - and large tracts of old-growth forests, wetlands, and other megadiverse landscapes that are declared part of the National Integrated Protected Areas System (NIPAS) Act of 1992 marked as: Strict Nature Reserves, Natural Parks, Natural Monuments, Wildlife Sanctuary, Protected Landscapes and Seascapes, Resource Reserves, and National Biotic Areas.

RIVER INTERFACE UNITS

There are several RIUs that may be selected for this study, yet for the limitations and scope of this study, two RIUSs each taken from different Critical Biodiversity Hotspots are determined to have a richer understanding of the multiplicities throughout the scattered island regions and the different identities, resources, and risks that are present therein, notwithstanding the different dynamics between the biophysical space, socio-cultural, and political spaces within each domain to be observed at the interfaces.

Proposed RIUs as case studies of the project are the following:

01 RIVER INTERACE UNIT:

RB: Pasig-Laguna-Marikina River Basin
UD: Metro Manila
AD: Negrito Community Ancestral Domains
BC: Sierra Madre Biodiversity Corridor

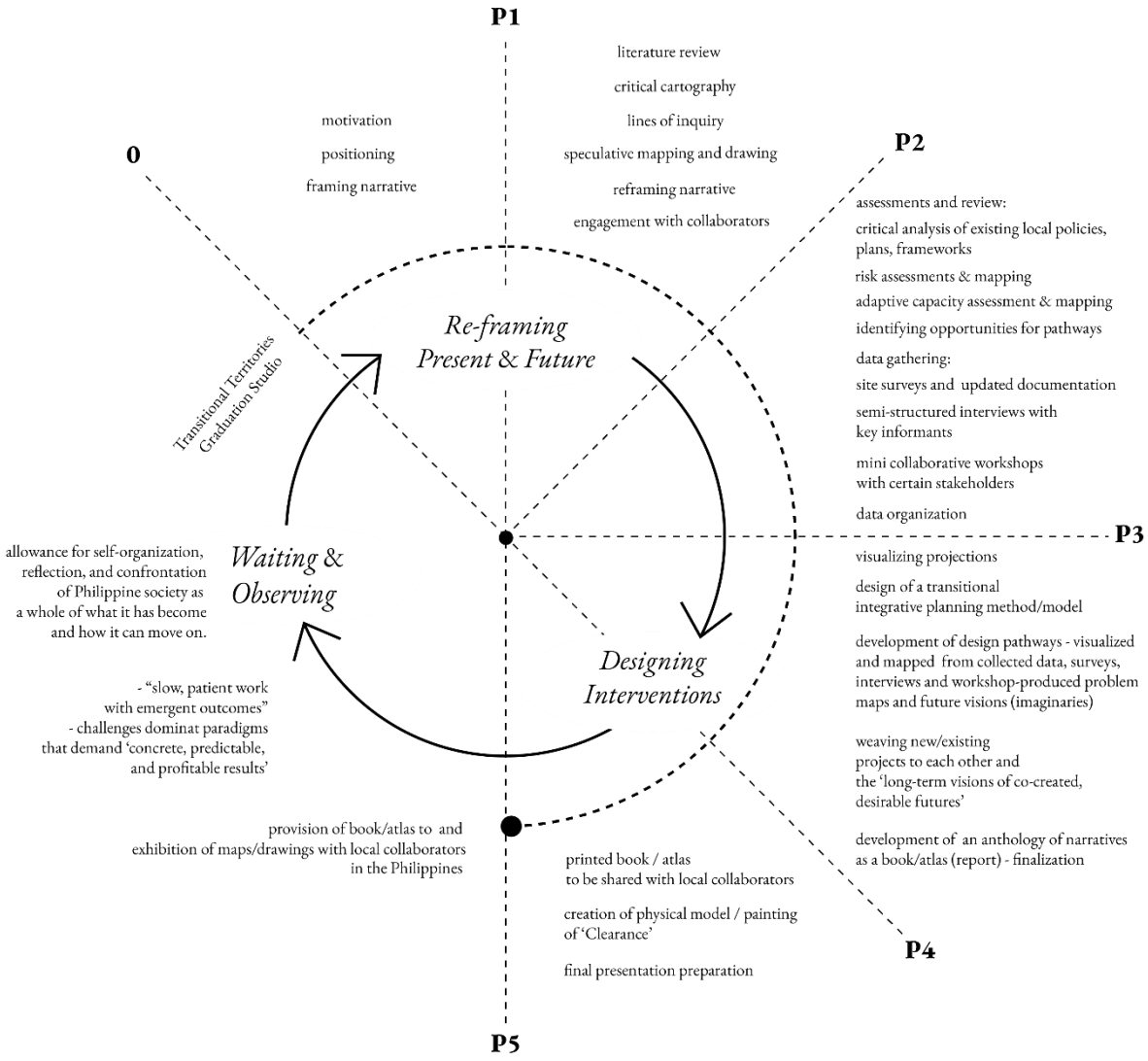
02 RIVER INTERFACE UNIT:

RB: Agusan River Basin
UD: Butuan City
AD: Lumad Community Ancestral Domains
BC: Eastern Mindanao Biodiversity Corridor

Critical Risk and Adaptive Capacity Assessments for Climate Change within RIUs follow the aspects established for Building Adaptive Capacity to Climate Change in Tropical Coastal Communities (Cinner et. al., 2018) in where a broader and more delicate understanding of adaptive capacity approaches its enhancement across five aspects: Assets, Flexibility, Social Organization, Learning, and Agency. Through the identification as well as leveraging of these aspects with one another, dynamics between them shall be laid out to see formed opportunities on how they can be harmonized for a more productive change in the capacities involved.

Multi-scale interactions between planned and autonomous adaptive action to multiple stressors have certain dynamics that must be carefully weighed to form a desired effect, especially in building adaptive capacities. With such aim, the RIU is considered a complex social-ecological system that responds to multiple stressors with 2 layers; climate change effects and anthropogenic stresses which affects the Urban Domain, Ancestral Domain, Biodiversity Corridor, and the River Basin with dynamics visible on three main areas of the Biophysical Space, the Socio-Cultural Space, and the Political Space.

Project Timeline:



Re-framing present and future entails the awareness and recognition of the need for a decolonization process in designing and moving forward with more reflexivity while in the act of conceptualizing and how literature is reviewed. Although many theories have already been formed in recent years about the need for novel perspectives to push forward the field of urbanism and all disciplines in general, it is crucial to declare that these 'new' perspectives being sought after have always been there, just ignored or discriminated against by the Western rationalist point of view, like those that weave the spiritual with the material present within many local and indigenous cosmologies. In the case of exploring this project within the Philippines, this transitional process begins with the designer's own perspective and experiences as a Filipina Architect having been educated within an American system of education with English as a second native language who is very much part of the urban tribe. As an architect, the author was trained within the paradigm of globalization and a Western outlook albeit efforts of the educational institution to emphasize and integrate vernacular, local, and tropical architecture in the program, majority of what was taught of history, theories, and approaches in the design discipline remain to be streamed from the Global North.

The homogenizing and centralized development paradigm in the Philippines follows a globalized and neo-colonial phenomenon that influences the design and planning and in turn the very management of land and natural resources in the country. To untangle this complex web of multiplicities - identities, resources, and risks - that is the Philippines, opportunities for transitional pathways to emerge are sought after that better and more meaningfully serve the populations that co-exist therein with the overarching goals of;

1) biodiversity preservation and regeneration for sustainability of ecosystem services (a new sensing of living with nature; better relationship)
2) empowerment and inclusion of Indigenous Peoples and recognition of their knowledge and worldviews in the co-production of spatial development and co-management of natural capital (socio-spatial justice)
3) integrated and salubrious climate adaptation strategies for a thriving future 'for all' (a rendefined sustainable development and resilience imaginary regime)

From the individual designer as the main agent in design projects, the research and design process will be transformed into one that truly listens and invites diverse literature, voices, and perspectives from different people and communities possible within the thesis project timeframe. Local researchers, historians, artists, scientists, indigenous groups and their chosen representatives shall be consulted and engaged. In so doing, dialogues and discussions can precipitate as well as the reframing of the problem or the methodology, moreover, of problems, solutions, and if not the latter, pathways to solutions. *We must imagine the future together.*

A mixed-method approach to this assessment of Risks and Adaptive Capacity within the RIU scale is to be undertaken and enriched by participatory data-gathering on site and and semi-structured interviews. Some small collaborative workshops with local actors such as those listed below with which the author have already contacted for the purpose of data-gathering and to also be able to share the project with more Filipinos who may find clearance through the success of this thesis.

Research Methods (Applied Within Research by Transitional Design)

Beginning with the thesis positioning and narrative framing development within the Transitional Territories Graduation Studio the methods that shall be incorporated in the conduction of the research are the following:

[1] Assessments and Reviews:

- Critical Analysis of Existing Local Policies, Laws regarding Indigenous Representation, Governance as well as Risk-Reduction, Climate Adaptation Plans, and other relevant Spatial Development Frameworks

- Critical Risk Assessment and Mapping

- Critical Adaptive Capacity Assessment and Mapping

- Further Literature Review of Theories of Change

[2] Data Gathering:

- Site Surveys
- Digital Documentation; Photography, Audio-Visual

- Mini-Collaborative Workshops with Collaborators
- Semi-Structured Interviews with Collaborators/Key Informants

- Engagement with Collaborators:

  - Local Environmental Planning Professionals
  - Design Professors/Researchers from the University of the Philippines
  - Non-Government Organizations for Biodiversity Conservation and Environmental Awareness
  - Local Collectives of Artists Engaging in Climate/Social Justice
  - Planning and Development Consultants
  - Community Development Organizations;
  - Indigenous Groups/Representatives:

    1) Negrito Communities along Kaliwa Forest Reserve (through their chosen representatives)
    2) Manobo Community along Agusan Marsh (through their chosen representatives)
    3) Kalipunan ng Katutubong Mamamayan ng Pilipinas (National Federation of Indigenous Peoples" Organizations in the Philippines - KATRIBU)
    4) Koalisyon ng Katutubong Mamamayan ng Pilipinas (National Coalition of Indigenous Organizations in the Philippines - KASAPI)
    5) BAI National Network of Indigenous Women in the Philippines Inter-peoples Exchange (IPex)
    6) EED Philippine Partners Task Force for Indigenous Peoples Rights (EED-TFIP)
    7) Indigenous Peoples" Rights Monitor (IPRM)
    8) Anthropology Watch (Anthrowatch)
    9) Philippines Association for Intercultural Development Inc. (PAFID)
    10) Tanggapang Panligal ng Katutubong Pilipino (Legal Assistance Center for Indigenous Filipinos - PANLIPI)
    11) Legal Rights and Natural Resources Center-Kasama sa Kalikasan/ Friends of the Earth Philippines (LRC-KSK/FOE Phils.)
    12) Cordillera Peoples Alliance for the Defense of the Ancestral Domain and for Self-Determination (CPA)

  - Government Agencies:
    1) National Commission on Indigenous Peoples (NCIP)
    2) Local Government Units (LGUs) within case study sites
    3) Department of Environmental National Resources (DENR)
    4) Philippine Climate Change Commission (PCCC)
    5) River Basin Management Office (RBMO)
    6) National Development Company (NDC)
    7) National Water Resources Board (NWRB)
    8) Pasig River Rehabilitation Commission (PRRC)
    9) Department of Social Welfare and Development (DSWD)

[3] Complex Data Visualization and Projections:

- Further Development of Lines of Inquiry
- Critical Cartography
- Speculative Mapping and Drawing

- Visualizing Projections
- Design of a Transitional Integrative Regional Planning Model
- Development of Design Pathways (Clearance Pathways)
- Weaving New and Existing Projects and Frameworks with the "Resilience Imaginaries – Long-Term Visions of Co-Created, Desirable Futures"
- Development of an Anthology of Narratives as a Book/Atlas (Final Report)

Research Aim

The creation and proposal of a renewed and transitional model for integrative planning with the River Interface Unit (RIU) as the fundamental scale of inquiry that can allow a new form of evolutionary resilience to emerge as negotiated in a participatory and collaborative process that would reveal Clearance Pathways towards a decolonized and collective future for the Philippine Archipelago that could potentially restore the social-ecological continuum between human-nature and with it the values of socio-spatial justice and the engaged recognition of pluriversality.

Sub-Goals

To understand and develop how multiplicities manifest in space and how such premise can be used within a design and planning approach for transformative climate adaptation of Critical Zones in the Philippines.

To make explicit the interrelationships and dynamics in the composition and ecology of the river basins as territories of a multiplicities of beings through risk and adaptive capacity assessment starting with RIUs.

To uncover the dialectics between modernity and indigeneity in their values, expectations, and lifestyles as projected in the construction of space in the Philippine Archipelago through the assessment review of disjointed institutional frameworks and conflicts within governance policies over land management, climate adaptation, and indigenous rights.

To develop a critical values-based based assessment of risk and adaptive capacities for multiplicities in the Philippines that challenges the current spatial development framework paradigm.

To engage with local and indigenous communities to develop a robust way of integrating their knowledge systems and worldviews into the revision of the neocolonial policies and systems of governance in the Philippines.

To visualize the formulated adaptation pathways and collective futures gathered from engagements with local communities and develop Clearance Pathways and Resilience Imaginaries for a transformative climate adaptation framework.

Literature and general practical preference

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General Geospatial/Quantitative Data Sources:

[1] Geoportal Philippines (Main Philippine Geospatial Data and Mapping Service)
[2] Philippine Statistics Authority (PSA)
[3] Nationwide Operational Assessment of Hazards (NOAH)
[4] World Wildlife Foundation (WWF)
[5] Critical Ecosystem Partnership Fund (CEPF)
[6] United Nations Development Program (UNDP)
[7] Asia Indigenous Peoples Pact (AIPP)
[8] ICCA Consortium - Territories of Life
[9] Internal Displacement Monitoring Center (IDMC)
[10] Climate Central
[11] National Oceanic and Atmospheric Administration (NOAA)
[12] International Best Track Archive for Climate Stewardship (IBTracs)
[13] Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
[14] Climate Portal by World Bank Group / ADB
[15] International Union for Conservation of Biodiverity (IUCN)

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (Urbanism), and your master programme (MSc AUBS)?

The beauty and privilege of being able to work on this Urbanism master thesis in TU Delft as an international student as well as pursuing this within the Transitional Territories research

studio confirmed for me this intuition that everything that has made me and is making me who I am as both a 'global citizen' and designer always comes from somewhere, a longer and bolder history, and because of systems. **Life happens** is the core of my profound interest in Urbanism to keep it short. As I have written in my motivation in the beginning of this graduation year, *"I have seen and grew up with the dysfunctional dichotomies of urban life right before my eyes; slum settlements beside gated subdivisions with lavish mansions, drug wars with holy preachers supporting them, the top academic and research institutions being distrusted by the government and vice versa, the most hardworking people with the lowest wages, a self-proclaimed agricultural nation that still imports rice, wealthy city people moving to remote islands capitalizing on tourism and lower standards of living, the strong sense of community yet also of diasporas, and so much more… and through all this, life still abounds and unfolds. What Baldwin describes as birth, struggle, death, and love, I've come to learn is the city, is in the life of people with nature. Nature is still beautiful as it changes, whatever is still left for us to both make purpose of and delight in. As these constants of change are further understood and elaborated, I too shall be changed with it, as one does with every project if one puts enough heart into it. And this is where both the Philippines' and my own renewal lie – not on the surface, but in the depths; to be truly free."* And to uncover why and how these happen and reveal the way I see this seemingly chaotic universe through the problems of colonization, identity, and accumulated realities is but one way of how urbanization has been affecting not only myself, but so many others who may not know our very complex stories that could potentially galvanize others towards concrete action for true socio-spatial justice, in fact, climate justice, and that, ultimately, there is always hope with design.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

SOCIAL

This project stems from the deep-set tenderness and love I have for the country I was born in - where my family and closest friends reside and fortunately are still able to choose to. These forces that are mentioned in this study have shaped me and millions of other Filipinos and by extension those they also affect in the world. Contributions of Filipinos are just as profound in the global community today, and this unraveling and critical assessment of the nation's vulnerabilities, capabilities, and its global appropriation can somehow provide clarity as to what has made us who we are and what more can be possible within the archipelagic territory so filled with beauty that would be a tragedy to lose. Identity is a vital component in being resilient and coping with threats that are many in this world, as both individual and community. If this research brings even a single Filipino closer to that understanding of a clearer self that can lead to a form of action, then I will have succeeded.

PROFESSIONAL / ETHICAL

In this respect, I must be cautious of how I apply my skills and knowledge as this designer in my aims of this study to bring out indigenous knowledge and practices into the realm of 'mainstream practice'. In the act of decolonizing, there is always the question of who is decolonizing and how. The transitional design and research approach is one way of exploration I would like to divulge in and uncover its potentials for shifting the Western paradigms we as colonized peoples have been operating with that can also inform the very process of design universally itself. Ethical considerations here touch on the decolonization process of the act of designing by the author herself. Reflecting on the very situation as an urbanite, raised within a global household that patronized western culture, I am fortunate to have been able to unravel this part of who I am and see for myself the many islands of the country that make us truly

beautiful and how beauty and its manifestations in space, its production, is made by a deluge of confluences. As I explained the project to a foreign friend he responded about how what has been happening to the Philippines is some form of cruelty. "Cruel because the systems have been denying a lot of other people to see and love the country the way you do."

SCIENTIFIC

Many strategies for climate adaptation and data gathering therein for design research have been developed from Western ontological perspectives; it is time to make explicit and highlight perspectives and ideas from the Global South by people from the Global South whose very identities and freedoms are linked to this dominant paradigm left us with by historical colonization. The colonization process is not done by 'independence days' as seen here in the Philippine perspective, and that its effects are still acute and now more than ever with the Climate Crisis laying this all bare. This is but one way of presenting and understanding the multiplicities of the Philippines and the identities, resources, and risks that animate one another therein.

If the global scientific community indeed aims to progress, it must innovate from a standpoint of acknowledging and respecting diversity and the richness of many worlds yet to be discovered if only one truly listens, observes, and recognizes the systems that define them and their disciplines. I salute Bruno Latour, as a white male scientist for being one such researcher who recognized errors in his earlier views and was dynamic in presenting his newer perspectives, always aware that his understanding of the world can be changed at any moment and invites those who have the same privilege to do the same and provide where credit is due. As cultural anthropologist Wade Davis wrote, "The world in which you were born is just one model of reality. Other cultures are not failed attempts at being you: they are unique manifestations of the human spirit." More than a critique of the dominant paradigms in research and development, the project's significance lies in its potential for uncovering alternative ways of reframing the problems we have as a country, what makes our vulnerabilities the way they are and how nothing is impossible if we work together drawn from values that we all believe in. From here adaptive capacity assessments can be expanded to a more values-based position that does not only spring from the material, but also spiritual implications that is very much inseparable with the ways of life of the indigenous.