

NEW FUTURES FELLOWSHIP PROJECT

RESPONSIBILITY AND RESOURCES FOR CLIMATE JUSTICE

TOWARD A GLOBAL FRAMEWORK FOR PUBLIC COASTAL ACCESS

Contributors: Kira Clingen, Rai Saad Khan, Keoni Rodriguez

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Project Overview:

This report examines how various countries, across the world, derive coastal access rights, how coastal access policy manifests on the ground, and how countries can sustain best practices to preserve the public right of coastal access.

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Contact Information:

Planet Reimagined

team@planetreimagined.com

www.planetreimagined.com



I. Introduction

Across the globe, one in three people live within 100 kilometers of the oceanic coastline. One in ten people live in an area that is less than 10 meters above mean sea level.¹ The way that these 2.4 billion people access the coast to support their livelihoods and recreation will be fundamentally reshaped by the effects of anthropogenic climate change over the next century. Disasters, as a result of extreme weather, such as hurricanes, typhoons and floods will continue to dramatically reshape vulnerable coastlines in mere hours. Sea level rise and saltwater intrusion will remake the topography of coasts over decades. All of these coastal hazards, both slow and fast moving, will impact the livelihoods and lifestyles of populations who live near the coast, including their access to the coastline. The fate of public coastal access is an urgent and pressing issue, which has been overlooked for decades despite the global collective action against climate change. Coastal access must be addressed to ensure a pathway for sustainable development.

Coastal population density is typically higher than inland areas, and urban areas in low elevation coastal zones (LECZ) - defined as contiguous land along the coast below 10 meter elevations - are expanding faster than any other areas.²³ In these areas, coastal access is often discussed in terms of recreation, health, or coastal properties. Yet, coastal access is also critical to the livelihoods of millions of coastal dwellers.

The world ocean is our largest global commons, providing habitat, livelihoods and recreation for billions of beings, including humans. This global commons is governed by a patchwork of inconsistent and largely uncoordinated agencies and regulations.⁴ Nations maintain their own set of laws and policies that govern the coastlines within the boundaries of their territory, whether administered at a national or local level. These laws define public and private ownership of coastal lands.

However, while the United Nations Convention on the Law Of the Seas (UNCLOS) seeks to create an overarching structure for countries engaging with the ocean and, by extension attempts to address the right (or lack thereof) of coastal access, there is no cohesive framework for enforcing, assessing, or maintaining coastal access to the general public. This is despite public coastal access playing an integral role in multiple Sustainable Development Goals, most notably, for Goal 14 (Life Below Water), Goal 11 (Sustainability Cities and Communities), and Goal 13 (Climate Action).

¹ United Nations. Factsheet: People and Oceans. New York: United Nations Ocean Conference, 2017.

² Small, C. and RJ Nichols. "A Global Analysis of Human Settlement in Coastal Zones." *Journal of Coastal Research* 19 (2003): 584-599.

³ Seto, K.C., M. Fragkias, B. Güneralp, M.K. Reilly. "A Meta-Analysis of Global Urban Land Expansion." *PLoS ONE* 6 (2011): e237777.

⁴ Kubiak, Lauren. "Protecting our global ocean commons." IUCN Crossroads. August 7, 2020. www.iucn.org/crossroads-blog/202008/protecting-our-global-ocean-commons

This report summarises how various countries, across the world, derive coastal access rights, how coastal access policy manifests on the ground, and how countries can sustain best practices to preserve the public right of coastal access. Without broad frameworks for addressing coastal access, governments are ill-equipped to meet the unique and unprecedented challenges of climate change and the rampant inequities that accompany it. Taking into account the structural marginalisation of certain groups and communities from accessing rights and services, coupled with their disproportionate exposure to climate impacts - there is a need for an environmental justice approach to ensure that those peoples can access and benefit from their rights to coastal access .

This report proceeds in the following sections:

1. First, it outlines differing notions of public access to coastlines, suggests an overarching definition for public coastal access;
2. It provides an overview of discussions over differing frameworks for protecting public coastal access, including rights-based approaches, indigenous approaches, the public trust doctrine, and more.
3. Next, it discusses the current scope of threats to coastal access, and the challenges in studying this area.
4. Finally, it demonstrates policies regarding public coastal access through a collection of case studies, which illustrate the differing challenges and best practices across the world.

II. Understanding Public Coastal Access

There is currently no globally agreed definition for Public Coastal Access, nor for what the concept or right may entail. In its most basic form, the concept may entail “people’s physical ability to view, reach, or move along the shoreline of both the mainland and nearby islands”⁵. A more nuanced, and deeper perspective argues it must also cater for the different uses, values, or roles that the coastline plays for groups and communities in proximity to the coastlines. For various fishing or sea-faring communities, coastal access includes the right to a livelihood from the sea. For various indigenous communities, coastal access includes preserving the cultural value and practices that are embedded along the coastline. For many environmentalists, coastal access may entail maintaining ecological integrity. In this way, it is important to recognize the different values associated with the coast, including aesthetic, scientific, moralistic, utilitarian, and to recognize public coastal access as inherently multi-dimensional, and as a negotiation between multiple stakeholders.

Historically, coastal access and management was largely a local consideration.⁶ Coastal access around the world was public, and shared by competing interests for recreation, sailing, fishing, shellfishing, fowling, trading and shipbuilding. Early examples of a systemic change from local to national and public ownership trace back to English common law, dating back to the medieval period, where coastal lands, subject to tidal changes, or “navigable waters,” were owned by the sovereign King. This was as these coastal lands were seen as incapable of cultivation or private occupation, and the natural uses of coastal lands - navigation, commerce and fishing - were public activities. Therefore, the title to all submerged and coastal lands were vested in the Sovereign as trustee for the benefit of the nation, in what has become known as the public trust doctrine⁷. This doctrine not only provided that these lands, water, and living resources were held in trust for the public, but also established the right for the public to fully enjoy these lands. The public trust doctrine has persisted to the modern day in common law jurisdictions around the world, and has been developed by the courts to provide a crucial check and limitation on states in their duties and responsibilities when managing these coastal land assets. Indeed, this has included strong judicial provisions in certain jurisdictions which prohibit the state from disposing of the public’s interest in tidelands, or other requirements on the state to consider the public’s interest when making decisions that affect coastal areas in the public trust.

However, this dynamic of public-ownership became intertwined with colonial notions of resource extraction and ownership, which were imposed around the globe during the colonial

⁵ CBCL Limited. (2009a). The 2009 State of Nova Scotia’s Coast Technical Report: Chapter 6 Public Coastal Access. Report prepared for Nova Scotia Department of Fisheries and Aquaculture, Halifax, Nova Scotia.

⁶ Christie, Donna R. and Anastasia Telesetsky. *Ocean and coastal management law in a nutshell*. St. Paul, MN: West Academic Publishing, 2019.

⁷ Christie, Donna R. and Anastasia Telesetsky. *Ocean and coastal management law in a nutshell*. St. Paul, MN: West Academic Publishing, 2019.

era, without consideration of, nor input from the indigenous communities and users of land around the coast and inland. Towards the modern era, governments have increasingly started to turn over public coastal land to private ownership, limiting public coastal access; this has only been exacerbated as a result of population growth and land development pressures on coastal areas. Since World War II, authors argue that there has been a rapid privatization⁸ of the coastline, transforming a formerly, predominantly, public space into residential, commercial, and industrial developments, such as water treatment facilities, urban ports, power plants, petro-chemical processing facilities, or residential estates. This ‘coastal squeeze’ has resulted in a general reduction of public coastal access and a decrease in the quality of the sites which have persisted. Furthermore, it threatens to damage or destroy coastlines and the cultural, socio-economic, or ecological benefits and services they provide.

This private ownership approach neglects Indigenous rights, which are under increasing threat, globally, from various sources over the past half century. There is an urgent need for the protection of these rights, through a comprehensive rights-based approach.

Different conceptual frameworks to address coastal public access emerged after the advent of British common law.

An interest in blue space planning, or planning for public space cropped up in the 1980s. Blue public space represents aquatic environments as public spaces, comparable to parks, plazas and other land-based open spaces.⁹ However, this framework routinely privileges health over livelihoods, and represents a model that is applicable to post-industrial wealthy nations with developed public infrastructure and governmental agencies regulating coastal access and management. In contrast, many if not most coastal dwellers interact with the ocean in subsistence oriented patterns, requiring a different conceptualization that goes beyond recreation.

Ownership-based models, which rely on the demarcation of public and private space, break down due to the dynamic nature of the coastline. America’s coastline was deemed its most valuable resource in the 1970s, but it is unequally distributed between communities and users. Additionally, in cases where ownership is geared towards privatisation for commercial reasons, owners are not incentivized to prioritize long-term sustainability, especially when that conflicts with short-term profit. A rights-based framework that shifts away from the issues of boundary demarcation and prioritization of profit, would provide more equitable and just access to our

⁸ Pogue, P. and Lee, V. (1998). Effectiveness of State Coastal Management Programs in Providing Public Access to the Shore: A National Overview. Coastal Resources Center /Rhode Island Sea Grant. University of Rhode Island, Narragansett, RI.

⁹ Wessels, A.T. “The ultimate team sport: urban waterways and youth rowing in Seattle.” in S. and P. Kemp (Eds) . The paradox of urban space, inequality and transformation in marginalized communities. New York: Palgrave Macmillan, 2011.

shared global commons.¹⁰ A framework such as that would necessitate an arduous, democratic process for its formulation, but the potential for its success is promising.

Inherently linked to a rights-based approach are the myriad frameworks that constitute Indigenous epistemologies of land. In a broad sense, these frameworks are underpinned by a sense of reciprocal kinship relationality to the land, which manifest in certain rights-based approaches, most notably the United Nations Declaration on the Rights of Indigenous People.¹¹ UNDRIP seeks to maintain these epistemologies through the vehicle of a rights-based approach, which has the potential to be reinforced on a global scale in regards to coastal access, a significant site for cultural revitalization for Indigenous communities worldwide. A global framework for coastal access will need to take into account the framework of Indigenous rights to include all stakeholders and do no harm.

Challenges in studying Coastal Access

A central issue around coastal access revolves around ownership and scale. A framework for coastal access requires a careful consideration of scale, from the local to the global, because the direct negotiation between all individuals on the coastline, all 2.4 billion people, is impossible. Issues of coastal access and usage at the scale of a small port or estuary with several hundred stakeholders are not the same as the issues facing larger regions with hundreds of thousands of people and sewage outflows. These issues change again at a global scale with issues surrounding anthropogenic climate change that will affect all people, though at differing levels of impact and severity.

The physical geography of the coastline makes it challenging to standardize our knowledge and understanding of the coast. Indeed, assessing the boundaries between coastal lands and uplands has always been a contentious issue. The cartographic tools that we use to control and standardize information of terrestrial areas, including land use mapping and topographic surveys, are erroneous when applied to charting the ocean. In addition, any framework for coastal access will need to be able to account for tides, even as their amplitudes change rapidly due to climate change.

The challenges of mapping coastlines also include significant differences in the resolution and completeness of data available to governments. Western cartographic methods are tied to the development of private land ownership, and privilege the countries that these tools were developed in. Poorer and marginalized countries may have limited access to high resolution satellite data and light detection and ranging (LIDAR) technology to establish baseline coastal maps to observe changing conditions in coastal development and the shifting coast. Resource

¹⁰ Christie, Donna R. and Anastasia Telesetsky. *Ocean and coastal management law in a nutshell*. St. Paul, MN: West Academic Publishing, 2019.

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satellites including Landsat 2, owned and operated by the US Department of the Interior and National Aeronautics and Space Administration (NASA), have allowed nations under surveillance to purchase Landsat imagery from the United States. The Landsat program also allows companies to purchase images, pitting the use of imagery for environmental planning against privatization and commercial development interests.^{12 13}

Additionally, the coastline shifts temporally. Over the course of a single day, the length of the coastline, and therefore potential access, shifts between high and low tides. Seasonally, storm surges and major weather events like hurricanes and typhoons reshape parts of the coast. On a longer timescale, erosion and sea level rise change the boundary between land and ocean. The coastline is a variable, dynamic place.

Similarly, coastline risks are dynamic, and increased by changes in coastal infrastructure, community livelihoods, agricultural and habitation. As projected by the Intergovernmental Panel on Climate Change (IPCC), global mean sea level rise (GMSL) will rise between 0.43 meters and 0.84 meters by 2100 due to melting glaciers and ice sheets and changes in groundwater storage. Sea level rise will not be uniform globally. It will vary regionally, and is directly tied to anthropogenic land use, including groundwater extraction causing subsidence. Sea level rise is accompanied by additional risks, including erosion, flooding and salinization in all low-lying coastal areas.¹⁴

¹² Black, Megan. "Prospecting the World: Landsat and the Search for Minerals in Space Age Globalization." *The Journal of American History* 106, no. 1 (2019): 97-120.

¹³ Bryan, J., & Wood, D. (2015). *Weaponizing maps: Indigenous peoples and counterinsurgency in the Americas*.

¹⁴ IPCC. Summary for Policymakers. In *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*, eds. H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegria, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer. 2019.

III. Models of Public Coastal Access from Around the World

The following six country case studies illustrate a critical issue or perspective around coastal access. In the United Kingdom, we see how policy has evolved to privilege recreational coastal access use through a comprehensive mapping program. In Mauritius, we examine how colonial legislation is inherited and passed down without input from present day citizens. The Hawai'i case demonstrates how Indigenous rights frameworks intersect with modern-day imperialism. In Egypt, we study how 'global' coastal policies must be localized and contextualized. Australia's example shows how private property rights can come into deep conflict with both public access and Indigenous rights. Similarly, the Pakistani case demonstrates how private developers and interests work to limit coastal access, especially in the context of state co-option.

1. *The Case of the United Kingdom*

- Creates a scalar framework for recreational coastal access from national to local policy and implementation.
- Establishes a technical mapping program that provides a global model to map land use and coastal access.
- Builds upon hundreds of years of legislation to establish coastal access.

This is well illustrated by the example of a coastal walking path, such as the Coast Path in the United Kingdom, a 4,300 kilometer path along the English coast that is scheduled to open in 2021. The path is managed by Natural England, a non-departmental public body sponsored within the United Kingdom's Department for Environment, Food and Rural Affairs.¹⁵ The path provides public access to the coastal margin, or the area between the sea and the pathway, and is accessible for day recreation seekers or dedicated thru-hikers. The path expands on existing coastal pathways, and was made possible by several separate pieces of legislation.

The National Parks and Access to the Countryside Act 1949 established the National Parks Commission, which was later reorganized and renamed Natural England in 2006. The Act also created and maintained public rights of way into the countryside.¹⁶

The Countryside and Rights of Act 2000 (CRoW Act) implemented the "right to roam" on upland and uncultivated areas of England and Wales, giving public right of access to land mapped as open country on registered common land, or "open access land." These CRoW and

¹⁵ Natural England. "Natural England." <https://www.gov.uk/government/organisations/natural-england>. Accessed August 3, 2021.

¹⁶ UK Parliament. National Parks and Access to the Countryside Act 1949. 1949 CHAPTER 97 12 13 and 14 Geo 6. <https://www.legislation.gov.uk/ukpga/Geo6/12-13-14/97>

Coastal Access regional scale maps were produced over several years.¹⁷ The maps identified ecologically sensitive public areas, including salt marshes and mudflats, safety hazards including steep topography, and private areas including buildings, gardens and agricultural land.

The Marine and Coastal Access Act 2009 established an exclusive economic zone (EEZ) around the United Kingdom, and also established the Coast Path as “a route for the whole of the English coast which... passes over land which is accessible to the public.” In addition, the Act created a coastal margin “accessible to the public for the purposes of its enjoyment by them in conjunction with that route or otherwise.” Critically, the act defined “the English coast” to include coastline adjacent to the sea.¹⁸

While additional legislation helped to shape a pathway to laying the physical route of the Coast Trail, these three acts are keystones to establishing coastal access, and underlie the complex web of governmental agencies, public advocacy and law over 75 years. While the legislative framework for the Coast Path was laid between 1949 and 2021, the physical shape of the coastline changed significantly. The 1953 North Sea flood, 1968 Hurricane, Gale of January 1976, 1978 North Sea storm surge, Great Storm of 1987, 1990 Burns’ Day Storm, 2013 East Coast Tidal Surge and 2017 Hurricane Ophelia, among hundreds of others, all reshaped the coastal margin, impacting the future course of the Coast Path. The frequency, rather than the intricacies, of these events, are important, because they elucidate the challenges in creating updated, consistent baseline maps that accurately represent coastal conditions and inform public coastal access.

While the Coast Path is exclusively within British sovereign territory and does not cross international boundaries, the trail will be affected by anthropogenic climate change at a global scale. Global carbon emissions that drive sea level rise and erratic weather events are experienced locally on shorelines hit by hurricanes with increased strength and landmasses that erode more quickly. At a national scale, the definition of “the English coast” relies on a stable sea level to define what is accessible land, especially in relation to islands and other unique coastal features. The Act defines islands as accessible if they are walkable, even those that are accessible only during certain times or tidal conditions. Sea level rise and erosion will redefine these areas in the near future, threatening the mission of the Coast Path to connect the nation’s coastline. Locally, the path will be moved, and public access will likely be restricted during and in the aftermath of extreme weather events.

To preserve the Coast Path in the United Kingdom requires coordinated decision-making, from global efforts to mitigate climate change and prevent increasing sea level rise, to national affordances for alternative routes to keep the coast connected, and local implementation and

¹⁷ Natural England. CRow and Coastal Access Maps.” *Natural England*.
<http://www.openaccess.naturalengland.org.uk/wps/portal/oasys/maps/MapSearch/>

¹⁸ UK Parliament. Part 9: Coastal Access in Marine and Coastal Access Act 2009.

maintenance of the trail. This national landscape is connected through time and space to a rich history of coastal access legislation, yet the trail is specifically for recreational users, and the legal framework that establishes coastal access does not include protections for communities who rely on the ocean to support their livelihoods. This form of coastal access framework was exported to various nations that the United Kingdom and other imperialist countries colonized during the eighteenth and nineteenth centuries, including the now independent island nation of Mauritius.

2. *The Case of the Republic of Mauritius*

- Showcases how colonial-era legislation has been transposed onto contemporary nation-states.
- Highlights the need for meaningful consultation with local residents to form coastal access policy.
- Introduces new ideas for environmental and climate change mitigation and management.

The Republic of Mauritius is an independent island nation located in the Indian Ocean, off the southeast coast of the African continent. The island was originally uninhabited, and colonized by several western European imperial powers, including the Netherlands, which seized control of the island in 1598, France, which colonized the island in 1715, and Great Britain, which invaded in 1810. The nation gained independence in 1968, and has been self-governing for the past half century. The country is one of a group of small island developing states (SIDS) that share similar challenges with sustainable development, including their susceptibility to natural disasters and fragile environments.¹⁹

When Mauritius was decolonized in 1968, the nation adopted a Westminster parliamentary system, modeled on the British system of governance, as well as significant legal frameworks from the countries that colonized the island. The case of Mauritius shows how frameworks for legal access were exported from western European imperialist nations with temperate climates and industrialized economies, and continue to shape public coastal access in the tropical island nation today.

The 1895 Pas Geometriques Act, or “not geometric” Act in English, was some of the first environmental legislation passed on the island, and amended in 1989. The Act is inherited from the French parliament, and makes a strip of beach, called the Pas Geometriques, or “not geometric” Act in English, from the high tide mark to the horizon around the nation publicly accessible. The Act provided the funds to survey these lands, and granted the Mauritian

¹⁹ United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Development States. “About Small Island Developing States.” *United Nations*. <https://www.un.org/ohrlls/content/about-small-island-developing-states>

government the right to lease, but not sell, the land and its annexes. Private owners, including residents and hotels, can lease the land, so long as they do not prevent public access.²⁰

This Act was expanded with the Beach Authority Act of 2002, which established the Beach Authority in Mauritius and Rodrigues, part of the territory of the Republic of Mauritius, to control and manage public beaches between the high tide and a line 100 meters into the ocean, as declared by the Housing and Lands Minister.²¹ The Act governs the 93 public beaches across the nation, though, from the Pas Geometriques Act, the entire Mauritius coastline should be publicly accessible below the high water mark, even in areas where the beach frontage is leased to private property owners.

In practice, the Pas Geometriques Act is rarely followed as intended. Tourism and development pressures along the coast have led to disputes between recreational users and hoteliers, as well as fishermen and developers, who rely on ocean access for their livelihoods.²² Leasees build impenetrable walls and block off public pathways to coastal access points to prohibit public access. Sea level rise and erosion that move the mean high water level mark inland will exacerbate these existing issues, pushing public coastal space users into private property, without a clear process to mediate these disputes.

Mauritius faces challenges unique to SIDS that are significantly different than those facing continental France in terms of geography and funding. Mauritian residents have put forth new proposals that call for development pushed back from the Pas Geometriques and the development of a resilient coastal green belt along the ring of beaches.²³ A global public coastal access framework must ensure that local voices and legislation are privileged over inherited imperial frameworks as part of the ongoing process of decolonization. While Mauritius gained independence in the twentieth century, the following case of Hawai‘i explores a colonized territory that is still under imperial control.

3. *The Case of Hawaii, USA*

- Shows the importance of preserving public access for Indigenous uses.

²⁰ Mauritius. Pas Geometriques (Amendment) Act 1989 (No. 35 of 1989). 1989.

www.fao.org/faolex/results/details/en/c/LEX-FAOC041846/

²¹ Mauritius. The Beach Authority Act of 2002 (No. 7 of 2002). 2002.

www.extwprlegs1.fao.org/docs/pdf/mat52589.pdf

²² Lily, Jason and Soufia Bham. Submission: Cultural Rights and Spaces. Port Louis, Mauritius, 2009.

²³ Jaufeerally, Karim. "Tourism Dynamics, Coastal Land Issues and the Mauritian Public, What Interactions for the Future?" Mauritius Coastal Zones Blog. August 2016.
www.mauritiuscoastalzones.blog/2018/09/20/tourism-dynamics-coastal-land-issues-and-the-mauritian-public-what-interactions-for-the-future/

- Highlights the contradictions in overlaying imperial policy over Indigenous legal frameworks.
- Demonstrates the use of customary rights to safeguard Indigenous practices.

The Hawaiian case demonstrates how states are forced to adapt to enduring apparatuses of imperialism and how Indigenous movements seek to safeguard access to the coastline. This section looks into the history of the Hawaiian Kingdom to understand the origins of public trust in Hawai'i and how subsequent legislative transformations have sought to maintain the doctrine of public trust into the future.

The State of Hawai'i is an archipelago of over 100 islands in the Northern Pacific Ocean, but the word Hawai'i generally refers to the 8 largest and inhabited islands. Hawai'i was first inhabited by Polynesian voyagers, who administered the land through the ahupua'a system, a framework of land management that divided the islands in wedge-shaped districts from highland to coast. These ahupua'a were administered by a complex hierarchy of chiefs, land managers, and commoners with a profound sense of relationality between the human actors and the natural environment.

After exposure to European contact in 1778, the Hawaiian Islands were catapulted into a series of political and social changes, including the unification of the islands under one political entity, the Hawaiian Kingdom. The privatization of land in the Hawaiian Kingdom began through the Māhele in 1848, which included legislation to assure the public trust of the archipelago's water resources, including the coastline. It is through this historical precedent that the current public trust doctrine finds its genealogy.²⁴

Hawai'i presents a unique understanding of the intersection of coastal access, coloniality and Indigenous rights due to its political status and history. An ongoing history of imperialism contributes to distinctive present realities surrounding coastal access in Hawai'i. In the 1890s, a series of political machinations led to the illegal annexation of the Hawaiian Islands to the United States, a history which has been one of the foundations for calls for the protection of Native Hawaiian civil rights. Modern-day Native Hawaiian activists have advocated for the reinforcement of public trust doctrine as a way to restore traditional usage rights that were previously upheld by the Hawaiian Kingdom.²⁵

As such, the public trust doctrine is the overarching ideological apparatus by which coastal access is administered in Hawai'i today. As a result of a push in the 1970s for Native Hawaiian

²⁴ R. Hōkūlei Lindsey, "Native Hawaiians and the Ceded Lands Trust: Applying Self-Determination as An Alternative to the Equal Protection Analysis," *American Indian Law Review* Vol. 34, No. 2 (2009-2010):223-257.

²⁵ Hawai'i's Thousand Friends. "The Public Trust Doctrine Hawai'i's Precious Water," 2004. http://www.hawaiis1000friends.org/uploads/8/9/0/4/89042106/public_trust_brochure.pdf

civil rights called the Hawaiian Renaissance, the current Hawai‘i State Constitution was written, enshrining Indigenous rights into the primary legal apparatus of Hawai‘i.²⁶ Prior to that, there were ongoing debates, legal cases, and scholarly articles regarding the status of coastal access in Hawai‘i. The lingering land titles from the Hawaiian Kingdom provided a unique problem in assessing coastal property rights.

Nonetheless, customary fishing rights and gathering practices on the coast of Hawai‘i are preserved for those of Hawaiian descent, provided the shoreline lies on undeveloped property.²⁷ The only exceptions to this access are locations directly administered by the United States military. Cases such as these fall under federal law which supersedes the state, thereby overstepping Indigenous rights of Native Hawaiians. Nonetheless, a global framework that reconciles a rights-based approach that privileges Indigenous access and the ownership-based frameworks of the West can serve as a formidable transition state to fully ensuring that the public right to coastal access is maintained. Native Hawaiians today take great advantage of their fishing rights through both subsistence and commercial ventures. The next case study of Egypt shows how fishing takes center stage as a primary driver of coastal access policy.

4. *The Case of Egypt*

- Highlights the dangers of deploying ‘universal’ development policies without local input.
- Underscores the need for coordinated environmental and economic development that prioritizes existing coastal dwellers.

Egypt links northeast Africa to the Middle East, and is bounded to the north by the Mediterranean Sea, and to the east by the Red Sea. An estimated one million of Egypt’s 100 million citizens are employed in the fishing sector.²⁸ Fishing technology has been employed and improved for thousands of years along the Red Sea coast. Today, sport fishermen and commercial fishermen alike share the waters, and the fishing economy is separated into an aquaculture sector, which breeds fish including tilapia and mullets in intensive commercial farms, and the capture sector, which fishes lakes and oceans.

Historically, coastal space, including estuaries, lakes and the oceanic coastline, were publicly owned common resources. Access to this common property was privatized throughout the 1970s, based on recommendations from the United States Agency for International Development (USAID). As national environmental policy was developed, the Egyptian government, particularly the Egyptian General Authority for Fish Resources Development (GFARD) utilized

²⁶ Ibid.

²⁷ Article 12 §7 of the State Constitution (1978).

²⁸ Bush, Ray and Amal Sabri. “Mining for Fish: Privatization of the ‘Commons’ Along Egypt’s Northern Coastline. *Middle East Report* 216 (2000): 20-23.

USAID’s recommendations to focus on the economic potential and challenges posed by the coastline, including the relationship between population pressure, scarce water resources and limited cultivable land. To reduce the risk of resource shortages, the Egyptian government set out to privatize land, which was sold to commercial fish farming operations that displaced local fishermen, especially those operating a subsistence level. While GFARD imposed a series of regulations, large and powerful government interests easily flouted regulations that ensnared smaller fishing operations with confusing policies and exemptions that put boat owners, fish laborers and their families out of work.²⁹

These efforts to respond to overutilization through privatization largely failed. In 2019, Egypt’s General Authority for Fish Resources Development (GFARD) imposed a 9 month ban on commercial fishing in the Red Sea due to depletion.³⁰

National policy focused on resource scarcity failed to take into account the complex local interactions of small-scale fishermen who depend on public coastal access for their livelihoods.

5. *The Case of Australia*

- Includes a framework for Indigenous coastal access.
- Is framed around two kinds of boundaries: dynamic and static, that account for processes of erosion and deposition, but are still hotly contested by coastal users.

Much like the case of Mauritius and Hawai‘i, the coastline is held in public trust. As such, this case study will provide an additional insight into how climate change and sea level rise can cause conflict for different stakeholders where public trust doctrine meets private property rights. In addition, Australia has a prominent Indigenous rights movement that has influenced attempts to address policy around the coastline and access to it.

Historically, the coastline was categorized as Crown Land, imbuing public access to it. However, issues surrounding access to the beach have been exacerbated by changing tides and climate change. As the tide rises, the property line changes, further demonstrating deficiencies in an ownership based approach.³¹

²⁹ Bush, Ray and Amal Sabri. “Mining for Fish: Privatization of the ‘Commons’ Along Egypt’s Northern Coastline. *Middle East Report* 216 (2000): 20-23.

³⁰“MEMO Staff. Egypt Bans Fishing in Red Sea for 7 Months.” Middle East Monitor MEMO. January 21, 2019. www.middleeastmonitor.com/20190121-egypt-bans-fishing-in-red-sea-for-7-months/

³¹ Thom, Bruce. “Who owns the beach when the sea is rising?.” *The Conversation*. April 28, 2014. <https://theconversation.com/who-owns-the-beach-when-the-sea-is-rising-24767>

The primary point of contention in Australia in regards to this issue lies in the distinction between “fixed” and “ambulatory” boundaries. “Ambulatory” boundaries, which operate under ancient common law precedents, allow for property owners to claim more land on the shoreline as sand collects on the beach. Multiple cases of this occurring in Australia has led scholars and policymakers to consider ways to ensure a public right to access the shoreline, without infringing on property rights.³² As such, maintaining this ownership based approach undermines attempts to secure public rights to the beach.

Further, attempts to prevent the erosion of shoreline and the accompanying loss of property, some owners have attempted to build seawalls, which have been hotly contested. According to John Corkill, there is no legal way for owners to contend with the changing tides to maintain the size of their property. Any land claimed by rising sea levels reverts to Crown Land and is held in public trust.³³

Additionally, like Hawai‘i, notions of Indigenous rights to the coast for cultural practice color the debates around legal access to the coast. Through the Native Title Act of 1993, Aboriginal people in Australia can invoke inherited rights to land, which includes access to the sea, as confirmed by the Croker Island (Yamirr) case of 2001. Aboriginal rights to certain activities, however, can vary between the jurisdictions of Australian law. Despite recommendations made towards achieving a national framework for assessing coastal rights for Indigenous peoples, there exists no overarching approach for the country.

Those who wish to create a global framework should seek to understand the failures and successes of Australian coastal policy. In regards to addressing climate change, an ownership-based framework creates friction between owners and other citizens as high water marks change constantly. Despite that, successful attempts at maintaining coastal access for Indigenous people through inherited rights is a valuable example of marrying Western and Indigenous approaches to the coast. However, this framework is not completely fleshed out and has yet to be tested in regards to securing access for all stakeholders.³⁴

6. *The Case of Pakistan*

- Highlights the need for strong and coherent federal policy.
- Shows the potential for developers to take control of public resources without comprehensive regulation.

³² John R Corkill, “Ambulatory boundaries in New South Wales: Real lines in the sand,” *Property Law Review* 3 (2) (2013): 67-84.

³³ Indigenous Working Group Workshop, “Sea Country: An Indigenous Perspective,” (2002).

³⁴ Indigenous Working Group Workshop, “Sea Country: An Indigenous Perspective,” (2002).

The coastlines of Pakistan stretch over 990km across the arid and semi-arid climates of the Sindh and Balochistan provinces. Otherwise dotted sparsely with mangrove forests and small fishing communities, settlement along the coastline is heavily dominated in the mega-city of Karachi which lies in the deltas of the Indus, Lyari, and Malir rivers. Formerly the site of the largest arid climate mangroves in the world, Karachi has since become a sprawling urban and industrial center which typifies issues around coastal access in Pakistan. Indeed, with Pakistan lacking any unified or comprehensive framework around its coastline, the fate of its coastal access has been a highly contested and contingent process, associated closely with localized issues around urbanization and mega ‘development’ projects across the coast.

The fate of Karachi has been deeply intertwined with coastal access, from its very nature as a port city, to the beach providing one of the last multi-class, multi-ethnic public spaces in the region, or being a source of income for its fishing communities. However, the coastline has faced increasing deterioration and ecological neglect as a result of heavy pollution, untreated sewage disposal into the sea, destruction of mangroves, and a swathe of other issues. In particular, unsustainable land reclamations and constructions have posed the most significant threat to coastal access, with new high-profile residential and commercial projects, such as the DHA’s Waterfront Development Project, enclosing public beaches for private use. This issue of land reclamation and ‘ocean sprawl’³⁵ has been particularly potent across Asia, where the intersecting logics of commercialization, ‘aesthetic’ development, and lax regulations and state capacity have worked to reinforce unequal power dynamics into unequal coastal access.

While there have been notable attempts by civil society to challenge these development projects, such as the ‘*Sahil Bachao Coalition*’, these have been limited in the face of state co-option into large commercial projects. State protection of coastal access has been otherwise limited and ad-hoc, whether in the form of temporary judicial stays or irregularly enforced requirements of Environmental Impact Assessments, reflecting the overall lack of coherent policy frameworks and the lack of a clear and single responsible authority. In this way, the case of Karachi has demonstrated that in lieu of state incapacity and co-option, the strengthening of civil society is crucial to maintaining coastal access.

Indeed, this dynamic can be seen elsewhere across the Pakistani coast, particularly in the mega-development projects in Balochistan. The commercial environment created by the China-Pakistan Economic Corridor, centered around the Balochi port-city of Gwadar, has meant an environment of securitization and land acquisitions³⁶ across the coastline - preventing access for local communities, and particularly for fishermen. Altogether, there is a requirement for

³⁵ Sengupta, Dhritraj and Chen, Ruishan. ‘Gaining or Losing Ground? Tracking Asia’s Hunger for ‘New’ Coastal Land in the Era of Sea Level Rise’. *Science of The Total Environment* 732 (2020): 12-19

³⁶ Maqbool Ahmed. “The Mysterious Case of Land Acquisitions in Balochistan,” Herald, November 23, 2018, <https://herald.dawn.com/news/1398696>.

strong and simplified coastal governance, which has been currently limited by poor coordination and planning between overlapping government departments.

V. Analysis

These examples provide a working context to understand how governments with a diverse set of tasks derive their frameworks for coastal access. In summary, their coastal access policies fit into several thematic categories: public trust doctrine, Indigenous rights-based frameworks, and commercial interests.

The doctrine of public trust, while sometimes effective, can be insufficient when in conflict with other realms of ownership, a problem that will continue to be exacerbated as climate change rapidly changes the shoreline. Places with a guaranteed public access are, at times, unable to mediate between stakeholders when conflict arises in cases when private owners are perceived as infringing on public right to access.

In contrast, Indigenous rights-based frameworks are a way for stakeholders to produce frameworks to counter ownership-based approaches that have long been excluded from the mainstream. Although these approaches can be somewhat controversial, they can be examples for ways that rights are upheld and administered for marginalized peoples. These approaches that derive Native rights can be a productive way to open the door to comprehensive public rights-based access, but are not the end-all of what effective coastal access rights look like.

Lastly, coastal access policies are often inflicted by the concerns of commercial stakeholders who seek to maintain their profits through fishing activity. As not only coastlines change, but marine ecosystems as a whole change, governments will need to account heavily for commercial fishing on the coastline and otherwise while taking into account public access.

As mentioned before, the United Nations Development Goals demand a more comprehensive and far-reaching framework for coastal access. The United Nations in particular should take a particular interest in convening global stakeholders to determine a democratic process for understanding coastal access in pursuit of ensuring equitable access as the world continues to change rapidly.

VI. Conclusion

The IPCC recommends that adaptation to sea level rise focuses on a “locally appropriate combination of decision analysis, land use planning, public participation and conflict resolution approaches,” to reach the United Nations Sustainable Development Goals (SDGs).³⁷ It is also critical to think across scales to expand this thinking from areas with anticipated increases in sea level rise to areas with changing coastal access, and work across scales with local and global considerations.

It is critical to establish a rights-based framework for coastal access that can be adjusted and amended to serve coastal communities in all countries. As the effects of anthropogenic climate change and sea level rise continue to reshape coastlines around the globe, it is increasingly apparent that any approach to policy requires nested, hierarchical decision making across scales, from the local to global. A framework for coastal access must simultaneously be rigid to protect community coastal access, and flexible to adapt to changing conditions on the ground.

This global framework emerges first from collective knowledge. Satellite data collected by Landsat and other governmental satellites that survey nations without the financial or technological capabilities should be available free of charge. Frequently updated high resolution imagery should be shared, without restriction, to these nations, who should be provided ownership rights. A public, global map, similar to the CRoWs Act maps produced in the United Kingdom, must be produced across scales, detailing coastal ownership and points of access. Making information on coastal ownership laws accessible in a visual format without jargon or technical language is critical for populations around the globe.

The time horizon of legislation and bureaucratic reform rarely matches environmental timescales. Regulation that mediates between human and environmental activity privileges anthropogenic concern, without an understanding of cycles that occur over thousands of years. This global framework for public coastal access may first be tailored to the IPCC projections for climate change, in ten year increments. This will allow for an understanding of how public coastal access may change due to sea level rise, and allow for proactive measures to address the material needs of coastal access, including providing public access, rebuilding fishing piers and jetties, and protecting ports and other high value economic zones.

Oceanic coastal public access and ownership is a critical right, one that is more precarious due to global climate change. Existing public coastal access opportunities must be retained, new or increased public access opportunities should be provided, and development must not be allowed

³⁷ IPCC. Summary for Policymakers. In *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*, eds. H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegria, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer. 2019.

to interfere with public access. These issues require careful consideration and regulation at the global level, and adoption by states who can tailor these guidelines to meet local considerations that serve to maintain and increase coastal communities' dignity and autonomy.

The IPCC, UN, UNFCCC, all national leaders and other global entities must act with urgency to secure coastal public access by way of a global, rights-based framework that achieves the following:

- Raise awareness of the problem that coastal access is important for billions of people, and climate change is affecting all those coastlines, but every country manages access differently
- Call for a fair and equitable international standard to make sure the oceans are treated as a public good, with more access for the world's poorest and most vulnerable people
- Respond swiftly to the timeframe presented by climate change as it continues to alter the coastline and wellbeing of people
- Promotes collaboration across borders to produce and maintain best practices for ensuring rights are protected