



# The Dividends of Coastal Conservation in the United States

An Economic Analysis of Coastal and Ocean Parks

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By Shiva Polefka and Billy DeMaio

August 2016

Center for American Progress



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COVER: Visitors to Everglades National Park, Florida, camp on the beach at Middle Cape Sable.

# Contents

- 1 Introduction and summary**
- 4 Taxonomy of coastal protected areas**
- 8 Analytical synthesis of the economic contributions of coastal national park units**
- 15 Coastal recreation and tourism: A pillar of a sustainable Blue Economy**
- 19 Policy recommendations**
- 23 Conclusion**
- 25 Endnotes**

# Introduction and summary

In his 2015 Earth Day speech at Everglades National Park, President Barack Obama hailed America's national parks, proclaiming, "We are blessed with the most beautiful God-given landscape in the world."<sup>1</sup> He is not the only one who feels this way.

In 2015, more than 1 million people visited the Everglades National Park to enjoy its mangrove forests, sawgrass prairies, and extraordinary wildlife.<sup>2</sup> Located on the southern tip of Florida, it is just one of hundreds of coastal and marine parks, wildlife refuges, and marine sanctuaries in the United States. All of these places were designated to preserve America's publicly owned natural and cultural treasures, both along its shores and under its seas and Great Lakes. Not only do these jewels of American natural and cultural heritage hold immeasurable intrinsic value, but they also provide bountiful economic benefits to their surrounding communities and to the U.S. economy as a whole. The 1.08 million visitors to Everglades National Park in 2015 spent more than \$103 million in nearby communities, helping sustain 1,521 jobs and diversify the economies of the surrounding counties.<sup>3</sup>

Most Americans and visitors to the United States know the pull of the coast when it comes time to recharge, relax, seek peace, or play. A landmark study by the Outdoor Industry Association found that nationwide direct spending on outdoor recreation and tourism in the United States totaled \$646 billion in 2012, and coastal and Great Lakes states took in the lion's share of this spending, absorbing \$511.9 billion.<sup>4</sup> Beach and harbor towns from Maine to Michigan to Maui thrive by accommodating the commonly shared desire for recreation in unspoiled coastal lands and along the shores of clean bodies of water.

However, there have been few systematic quantifications of the economic benefits that coastal communities derive from publicly accessible, protected coastal lands. Studies often bundle the nation's public beaches, reefs, and coastal trails with the rest of America's equally important national parks or analyze them in the context of the broader outdoor recreation economy.

On the cusp of the National Park Service's, or NPS's, second century, therefore, the conservation of special coastal and marine places—and public access to them—deserves special attention. The United States' thin fringe of coastal counties is home to more than 40 percent of the population but just 22 percent of its national park units.<sup>5</sup> The National Marine Sanctuary System, the signature federal program that protects and promotes the nation's ecological treasures and cultural maritime heritage offshore, has just 15 sites under its jurisdiction; the National Park Service, meanwhile, has 59 national parks under its purview and oversees 412 units in total.<sup>6</sup> Expanding existing coastal and offshore parks—and designating more of them—represents a key opportunity in the century ahead to ensure that federal systems for protecting special places serve Americans where they live. More coastal parks would also help ensure that public conservation efforts are successfully protecting extraordinary resources across all U.S. terrestrial and maritime territory.

This report helps illuminate the opportunities for accelerating coastal and ocean conservation and the diverse and significant benefits associated with doing so. First, it describes the different types of coastal protected areas in the United States. It then presents a new analytical synthesis of visitation and corresponding economic impact data from the National Park Service; the U.S. Department of the Interior, or DOI; and the National Oceanic and Atmospheric Administration, or NOAA, to illuminate the social and economic benefits that the conservation of special coastal places provides. Finally, the report offers recommendations for policymakers to harness the economic power of coastal parks, improve and expand coastal protected areas, and ensure equitable enjoyment of these American assets for generations to come.

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## Overview of analytical synthesis

The analysis estimates how coastal and ocean parks perform in visitation and local economic impact compared with their inland counterparts by parsing the relevant data for coastal park units from that of the National Park System as a whole. The analysis reveals that despite comprising a small portion of the United States' overall system of protected places, America's coastal and ocean parks appear to punch well above their weight in visitation and economic impact per site. Specifically, coastal park units within the National Park System drive nearly 30 percent of the system's total recreational visits, its spending impacts within nearby communities,

and also its overall economic impact, despite comprising just 22 percent of the system's total number of park units. In addition, the median figures for recreational visitation, visitor spending, jobs created, and economic output for coastal parks all significantly exceed the median for noncoastal park units (see Tables 1 and 2 on page 12 for complete findings).

The results indicate that coastal and ocean parks are high-performing economic assets for the surrounding communities and states—assets that serve as infrastructure to sustain high levels of employment and economic output, whether at urban beaches or in remote wilderness. Yet coastal and ocean parks provide benefits beyond the direct economic impacts of visitor spending. These protected areas are often the most accessible outdoor recreation opportunity for the 42 percent of Americans that live in the nation's coastal counties, including its large coastal cities.<sup>7</sup> Accordingly, coastal parks play an essential role in ensuring fair and equitable fulfillment of the statutory mandates of the National Park Service and the National Marine Sanctuary System: to conserve extraordinary natural and cultural resources for the enjoyment of all Americans today and for the generations to come.<sup>8</sup>

In addition, growing evidence shows that the habitats and ecosystems protected within coastal and marine parks provide many additional valuable services to coastal economies and society as a whole, including sustaining fish and wildlife populations; protecting lives, property, and communities from the impacts of storms and floods; and sequestering carbon dioxide and water pollutants.

America's conserved coastal lands and ocean areas represent a central pillar of the recreation and tourism industries. They are essential to a sustainable Blue Economy in which prosperity and equitable economic growth are linked to the health of U.S. coastal and marine ecosystems and should therefore be celebrated and protected.

# Taxonomy of coastal protected areas

*“The [National Park S]ervice ... shall promote and regulate the use of the Federal Areas known as national parks, monuments and reservations ... [whose] purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner ... as will leave them unimpaired for the enjoyment of future generations.”*

— National Park Service Organic Act, August 25, 1916<sup>9</sup>

The United States is home to a wide array of publicly accessible protected lands and waters under a multitude of distinct local, state, and federal designations. To many of these areas’ visitors, they are all simply national parks—beautiful, interesting, and inspiring places made accessible with government-funded infrastructure that facilitates exploration and enjoyment. The formal distinctions are meaningful and worth reviewing, however, in order to parse and understand their economic impacts and to compare the policy needs and opportunities associated with each underlying program.

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## The National Park System

The U.S. National Park Service manages the largest subset of these federally protected areas, within what is known as the National Park System. As the statute quoted above indicates, the National Park Service has a dual mission: to conserve the natural and cultural resources placed under its stewardship and to manage the areas under its jurisdiction for the enjoyment of present and future generations.<sup>10</sup>

The National Park System includes the iconic national parks that most Americans are familiar with—such as Yosemite, Yellowstone, the Everglades, and Acadia—which are extraordinary natural areas established through an act of the U.S. Congress and the president’s signature.<sup>11</sup> However, the National Park System also includes 19 other types of congressionally designated protected areas with varying formal names, including historic and cultural sites such as national battlefields

and national memorials; scenic routes such as national parkways, national trails, and national riverways; national recreation areas predominantly established at artificial reservoirs; and waterways of extraordinary ecological value, known as national wild and scenic rivers.<sup>12</sup> The system also includes national monuments, which can be designated by presidential proclamation alone under the statutory authority of the Antiquities Act of 1906.<sup>13</sup> National monuments designated for the conservation of public lands and waters tend to have less restrictive regulations than congressionally established park units and often allow for the continuation of some extractive industries such as grazing, hunting, and fishing. They do, however, prevent future expansion of commercial and industrial development and, in many cases, eventually become national parks. For example, Grand Canyon, Zion, Olympic, and Acadia national parks all began as presidentially protected national monuments.<sup>14</sup> In total, the National Park System comprised 412 areas, or units, as of July 2016,<sup>15</sup> which protect 84 million acres across all 50 states, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands.<sup>16</sup>



Visitors to Acadia National Park on Maine's Mount Desert Island enjoy Sand Beach. Photo: Flickr/Paul Lurrie, U.S. Department of State (IIP)

Coastal and offshore areas have been established as units within the National Park System under several different designations, including national parks such as the Channel Islands and Glacier Bay; national recreation areas such as Golden Gate; and national monuments such as Fort Frederica and Virgin Islands Coral Reef.<sup>17</sup> Others include Port Chicago Naval Magazine National Memorial and Sagamore Hill National Historic Site, the Long Island, New York, home of President Theodore Roosevelt,<sup>18</sup> who signed the Antiquities Act into law in 1906. Special segments of marine and Great Lakes coastline also have their own category of designation within the National Park System. National lakeshores and national seashores are park units originally designed to preserve public recreational access to the coast as a congressional response to the rapid privatization and development of coastal lands in the 1960s and 1970s.<sup>19</sup> Cape Cod in Massachusetts, Cape Hatteras in North Carolina, and Sleeping Bear Dunes on Lake Michigan are prominent examples.<sup>20</sup>



Units of the National Park System are perhaps the most prominent of America's coastal parks, and comprise a large majority of federally protected coasts and ocean areas in terms of numbers. As discussed below, these sites have received the most thorough and uniform economic impact analysis; they are therefore the focus of subsequent sections of this report. Two other prominent federal programs for protecting and conserving coastal, ocean, and Great Lakes places also warrant mention, however: the National Marine Sanctuary System and the National Wildlife Refuge System.

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## The National Marine Sanctuary System

The first of these is the National Marine Sanctuary System. In 1872, President Ulysses S. Grant signed into law the legislation that established Yellowstone as the world's first national park.<sup>21</sup> A century later, the 92nd Congress took a significant step toward systematic protection of special places seaward of the coastline by passing the Marine Protection, Research, and Sanctuaries Act with overwhelming bipartisan support. President Richard Nixon signed the bill into law on October 23, 1972.

The legislation authorized the U.S. Secretary of Commerce to:

*... designate as marine sanctuaries those areas of the oceans, coastal, and other waters ... which he determines necessary for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or esthetic values.*<sup>22</sup>

Today, the National Oceanic and Atmospheric Administration maintains the National Marine Sanctuary System, which carries out this mandate for the 13 existing National Marine Sanctuary sites. NOAA also manages two marine national monuments designated under the authority of the Antiquities Act.<sup>23</sup> Like the NPS, NOAA's sanctuaries program provides a suite of legal and regulatory protections to the sites under its management, as well as federal resources to support public access, public education, stakeholder input, and scientific research and monitoring. At just 44 years old, however, and compared with the NPS's 100 years of existence and hundreds of park units, the sanctuaries system has substantial room to grow. Its fiscal year 2015 budget was slightly more than \$47 million—a decrease from FY 2014—while the NPS budget for the same fiscal year was \$2.61 billion.<sup>24</sup>

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## National wildlife refuges

The National Wildlife Refuge System, managed by the U.S. Department of the Interior’s Fish and Wildlife Service, is the third prominent federal program that conserves special lands and waterways and provides significant recreational opportunities for the public. Unlike units of the National Park System, the foremost statutorily defined mission and goals of the National Wildlife Refuge System center upon conservation and restoration of the nation’s flora and fauna.<sup>25</sup> Specific goals include conserving wildlife species; providing habitats for migratory birds, fish, and mammals; and conserving ecosystems and biological diversity.<sup>26</sup> However, the authorizing statute also supports “compatible wildlife-dependent use” of refuges, such as hunting, fishing, photography, and environmental education.<sup>27</sup> In other words, national wildlife refuges also embody nationally significant assets for outdoor recreation.

As of September 2014, the National Wildlife Refuge System comprised 562 sites nationwide, including partial jurisdiction of four marine national monuments: Marianas Trench, the Pacific Remote Islands, Papahānaumokuākea, and Rose Atoll. According to specialists at the Department of the Interior, 161 of these wildlife refuges are coastal, distributed over 26 Atlantic, Pacific, Gulf of Mexico, and Great Lakes states and territories. This indicates that the program has a substantial positive impact on providing Americans and other visitors with access to nature-based outdoor recreation.<sup>28</sup>

# Analytical synthesis of the economic contributions of coastal national park units

The intrinsic value of conserved public lands, waters, and wildlife has been apparent to generations of American politicians, and their recognition has been made manifest through the programs described above. However, the public interest is best served by seeking and applying new data as they become available to further understand the costs and benefits of government initiatives. Historically, setting aside special places—especially those on the coast where real estate commands a premium price—faced resistance from those that viewed conservation as the foregoing of economic development opportunities. Today, outdoor recreation represents a vast and multifaceted economic sector, one that annually generates hundreds of billions of dollars’ worth of economic activity.<sup>29</sup> And this sector is highly dependent on a basic infrastructure of conserved, accessible lands and waters.

Policymakers concerned with the present and future management of coastal lands and waters, including areas seaward of shore, face an extraordinary challenge in balancing the resource demands of a growing coastal population; accommodating a diversifying array of coastal industries jostling for finite space; and mitigating a plurality of concurrent environmental exigencies, including atmospheric and oceanic warming, ocean acidification, sea level rise, and nutrient pollution.<sup>30</sup> Accordingly, new data on the economic impacts of coastal land use policies—especially those with the potential to address multiple challenges simultaneously—should be welcomed.

From this basis, this report sheds new light on the economic impact of the conservation of coastal lands and waters as it relates to supporting the recreation and tourism industries within coastal communities.

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## Methodology

The following analysis is built on the findings of a 2016 NPS report that tallied recreational visits and estimated economic impacts for 372 of the National Park System's 412 park units.<sup>31</sup> The NPS estimated the economic impacts generated in nearby communities by each of the 372 units by compiling the results of spending surveys completed by visitors at a cross-section of 57 units. These data were then used to establish spending profiles for visitors to different categories of park units that were not surveyed, divided primarily by the existence of different overnight lodging opportunities within each park unit and the relative intensity of one-day visits. NPS researchers then applied these constructed profiles to the visitation data for each of the nonsurveyed park units in order to estimate total annual spending in the respective surrounding communities.

These spending figures then allowed the researchers to use the economic modeling platform IMPLAN to estimate the employment, wage earnings, and gross domestic product, or GDP, contribution stimulated by visitation to each park unit, factoring in the economic dynamics of its locality such as wage rates and ratios of economic output-to-income.<sup>32</sup> Specifically, the researchers modeled spending impacts within each park's "gateway communities," which they defined as the counties within or partially within a 60-mile radius of each park unit's boundaries.<sup>33</sup>

Separately, economists at the Department of the Interior generated an authoritative list of properties under its jurisdiction—including the units within the National Park System—that it considers to be coastal.<sup>34</sup> This was done as one component of the DOI's FY 2015 annual report on the economic impact of all of its programs.<sup>35</sup>

The DOI's summary of the economic impact of recreation on all coastal federal lands—including NPS units, wildlife refuges, and Bureau of Land Management lands—was modeled at the state level. This means that the resulting data cannot be parsed for a unit-by-unit comparison to examine the unique impact of coastal park units on local economies.

By referencing the list of park units that the DOI considers coastal, however, the Center for American Progress extracted the relevant visitation and economic impact data for coastal park units from the NPS report, facilitating the comparison of their economic performance with that of inland park units.

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## Findings

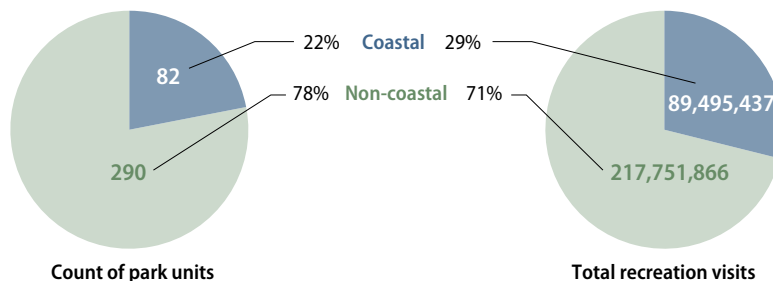
Overall, the NPS report found that the designation and maintenance of national park units serve as powerful economic drivers for surrounding communities. The 372 units in its study attracted more than 307 million visitors in 2015. These visitors spent an estimated \$16.9 billion in the gateway communities surrounding those parks, monuments, memorials, and seashores. This spending in turn stimulated the creation of 295,339 jobs and labor income of \$11.1 billion. Overall, the National Park System contributed an estimated \$32 billion dollars to U.S. GDP in 2015.<sup>36</sup>

Parsing the 82 identified coastal park units from the 372 units of the National Park System suggests interesting patterns beyond these impressive statistics. Compared with their inland counterparts, America's coastal parks, protected shorelines, and national monuments have outsized visitation and, correspondingly, an outsized economic impact on their local communities.

First, the data suggest that coastal parks tend to draw more visitors. The median visitation for coastal national park units was more than three times higher than the median visitation for noncoastal units. And despite comprising just 22 percent of national park units, coastal parks welcomed 29.13 percent of all recreational visits to the National Park System. (see Figure 1)

**FIGURE 1**  
**Coastal parks: Fewer units, more visitors**

In 2015, coastal park units hosted nearly one-third of the National Park System's visitors, despite comprising just over one-fifth of the system's inventory of parks

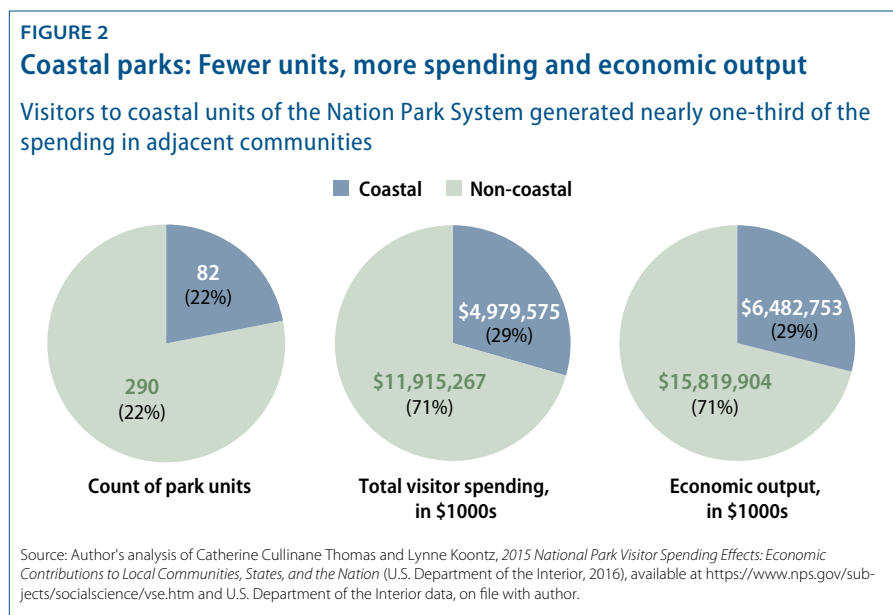


Source: Author's analysis of Catherine Cullinane Thomas and Lynne Koontz, *2015 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation* (U.S. Department of the Interior, 2016), available at <https://www.nps.gov/subjects/socialscience/vse.htm> and U.S. Department of the Interior data, on file with author.

Put another way, each coastal park unit hosted an average of 1.09 million recreational visitors per year, while inland parks took in an average of 751,869 visitors per year.

How do coastal national park units perform as economic assets for their surrounding communities? Because of the higher rates of visitation, surrounding communities enjoy higher rates of spending. Though coastal parks comprise just 22 percent of the National Park System, they contribute a disproportionate share of total spending by the system’s visitors, at 29.47 percent. (see Figure 2)

Similarly, comparing the medians of various measurements of spending impacts—such as employment, wage earnings, and economic output—of coastal park units with those of inland units also indicates a disproportionate impact.



Although calculated spending per visit at both coastal and noncoastal park units was roughly equal at about \$55, coastal park units in general seem to generate significant additional spending, employment, and overall economic activity within their surrounding communities as a result of higher visitation rates. See Table 1 for a comparison of the sums of coastal and noncoastal park unit visitation and spending impacts and Table 2 for comparisons of the median values for coastal and noncoastal parks for each variable this study analyzed.

**TABLE 1**  
**Economic overachievers**

Coastal national parks attract disproportionate visitation and pay outsized dividends to adjacent communities

	Count of park units	Percentage of total	Total recreation visits	Percentage of total	Total contribution of visitor spending					
					Total visitor spending, in \$1000s	Percentage of total	Jobs	Percentage of total	Economic output, in \$1000s	Percentage of total
Coastal	82	22.04%	89,495,437	29.13%	\$4,979,575	29.47%	71,189	28.25%	\$6,482,753	29.07%
Non-coastal	290	77.96%	217,751,866	70.87%	\$11,915,267	70.53%	180,841	71.75%	\$15,819,904	70.93%

Source: Author's analysis of Catherine Cullinane Thomas and Lynne Koontz, *2015 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation* (U.S. Department of the Interior, 2016), available at <https://www.nps.gov/subjects/socialscience/vse.htm> and U.S. Department of the Interior data, on file with author.

**TABLE 2**  
**Median local impacts of spending by visitors to units of the National Park System**

Comparison of the median economic impacts of spending within adjacent communities by visitors to coastal and non-coastal units of the National Park System in 2015

	Count of park units	Median recreation visits	Median visitor spending	Contribution of visitor spending		
				Median jobs	Median labor income, in \$1000s	Median economic output, in \$1000s
Coastal	82	403,016	\$29,066.10	402	\$13,396.80	\$36,877.25
Non-coastal	290	148,668	\$8,645.75	130	\$3,726.45	\$10,810.85

Source: Author's analysis of Catherine Cullinane Thomas and Lynne Koontz, *2015 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation* (U.S. Department of the Interior, 2016), available at <https://www.nps.gov/subjects/socialscience/vse.htm> and U.S. Department of the Interior data, on file with author.

## Discussion of findings

These results are best understood within a few points of context.

First, it is worth reiterating that the NPS constructed the spending profiles for each nonsurveyed park unit using survey-supplied spending data from visitors to 57 of the 372 park units in the data set, in combination with its park visitation data. The NPS report explicitly states that expanded surveying to gather empirical data from a larger and more diverse array of park units would enhance the overall accuracy of the spending profiles and, therefore, the accuracy of the spending impact modeling.

Second, IMPLAN modeling of the economic impact of each park unit errs on the conservative side: It does not capture visitor spending that occurs outside of gateway communities, even if it is related to park visitation, such as long distance transportation or online purchases of outdoor gear needed for a national park adventure. As the NPS notes in its report, model-generated estimates of state- and national-level spending impacts of park visitation—as opposed to the unit-by-unit analysis relied upon here to assess local impacts—successively produce results larger than the sum of local-level impacts. This is because they more thoroughly capture the full range of economic activity that recreational visits stimulate.

Third, this report's analysis does not reveal a causal factor for the higher rates of visitation and spending in coastal parks. For example, there are not sufficient data to test whether oceans and Great Lakes hold a special attraction for visitors or whether their appeal is simply due to coastal parks' proximity to the large population centers that occur along American coasts.

In fact, the top five coastal park units by visitation—Golden Gate National Recreation Area, Gateway National Recreation Area, Cape Cod National Seashore, Statue of Liberty National Monument, and San Francisco Maritime National Historic Park—all lie within or adjacent to the major U.S. metropolitan areas of the San Francisco Bay Area, New York City, or Boston.<sup>37</sup> This suggests that people go to parks wherever they exist, especially when they are close to home, which may appear to diminish any special attractive factor of coastal parks over their equally important inland counterparts. But it also reaffirms the importance of designating parks along the coast near population centers to ensure that the stated intent of the National Park Service Organic Act—to conserve natural and historic places for the enjoyment of all Americans, present and future—is carried out equitably and fairly nationwide, including for people within major cities.

As the U.S. population becomes increasingly coastal and urban, coastal parks will only become more important from an accessibility standpoint. A recent study by the Center for American Progress and Conservation Science Partners found, for example, rapid rates of urban sprawl in coastal cities in the West.<sup>38</sup> King County, Washington—where Seattle is located—lost 44 square miles of natural area to development between 2001 and 2011. Los Angeles County lost 52 square miles of natural area in that same period.<sup>39</sup> Unless local, state, and federal governments protect open spaces as coastal cities grow, it will become increasingly difficult for their residents to access natural areas. In fact, a new CAP report finds that low-income communities



and communities of color are most likely to experience diminished access to the outdoors as a result of urban sprawl in the West.<sup>40</sup> For residents of coastal communities in the West and nationally, the establishment and protection of coastal protected areas is critical to safeguarding access to the outdoors.

Although coastal parks in and near urban centers deliver significant economic and social benefits, even the more remote coastal parks draw remarkable visitation and, therefore, also pack an economic punch. By total visitor spending, the two coastal parks adjacent to the median are Pictured Rocks National Lakeshore on Michigan's Upper Peninsula, and Lake Clark National Park and Preserve in southwest Alaska. In 2015, visitors to these two sites generated 436 jobs and 361 jobs, respectively, in the surrounding communities; the total local economic impact of Pictured Rocks was an estimated \$31.1 million, while the impact of Lake Clark was an estimated \$39.1 million. For these spectacular but isolated corners of America, such robust visitor spending provides an economic lifeline. It also suggests that the appeal of visiting coastal parks transcends logistical convenience alone.



A visitor to Pyramid Point Trail at Sleeping Bear Dunes National Lakeshore in Michigan observes the view of Lake Michigan. Photo: Lauren Kokum.

**TABLE 3**  
**2015 visitation and economic impacts at two representative coastal park units**

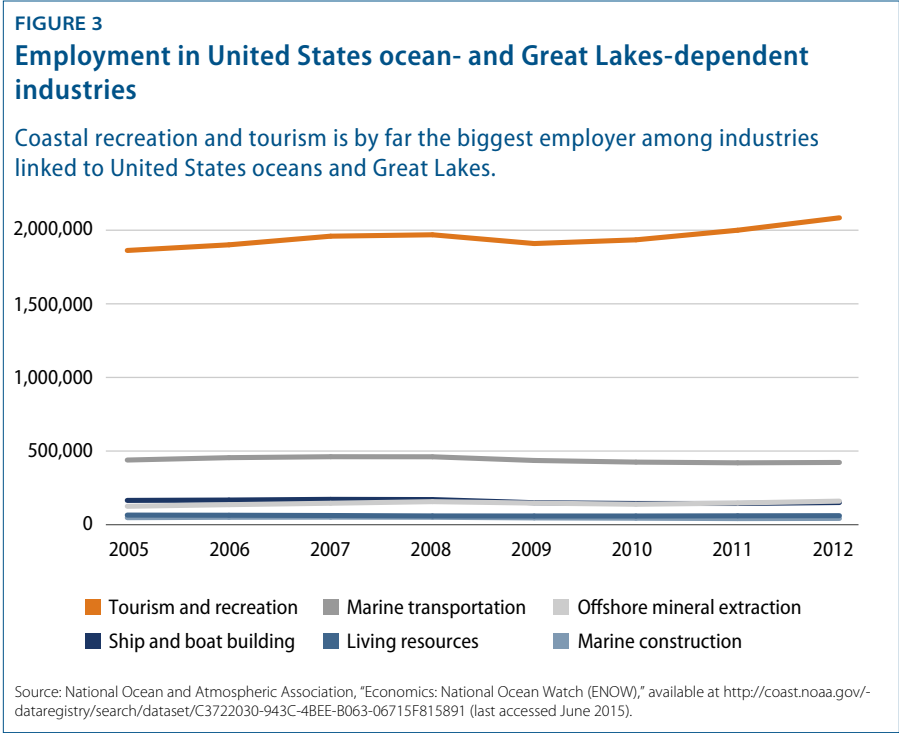
Even remote coastal national parks attract significant visitors and economic spending

Coastal park units adjacent to median for visitor spending	Total recreation visits	Total visitor spending, in \$1000s	Contribution of visitor spending		
			Jobs	Labor income, in \$1000s	Economic output, in \$1000s
Pictured Rocks National Lakeshore, Michigan	723,179	\$30,643.60	436	\$9,756.60	\$31,189.30
Lake Clark National Park and Preserve, Alaska	17,818	\$27,488.60	361	\$13,062.70	\$39,135.30

Source: Catherine Cullinane Thomas and Lynne Koontz, *2015 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation* (U.S. Department of the Interior, 2016), available at <https://www.nps.gov/subjects/socialscience/vse.htm>.

# Coastal recreation and tourism: A pillar of a sustainable Blue Economy

The ecological and climatological crises besetting the nation’s oceans mean that the patterns of natural resource governance and extraction applied in the 20th century to coast and ocean spaces are no longer sound options for a habitable planet—or for the wildlife, ecosystems, and coastal communities that depend on a healthy ocean.<sup>41</sup> Accordingly, there is an urgent need to evolve our country’s vision for the Blue Economy. Policies related to the management of coastal lands, waters, and natural resources need to foster the private enterprises that underpin coastal economies—including jobs in hospitality, recreation, science, and the sustainable harvest of living resources—and simultaneously sustain and restore the coastal ecosystems on which these businesses depend.



Coastal recreation and tourism can exemplify industry that links economic and ecological vitality along American shores. The data presented above show that protected coastal areas are a significant driver of economic activity for coastal communities: They attract visitors—and visitor dollars—at higher rates than inland parks and thereby generate an outsized economic impact within adjoining gateway communities. But how does coastal recreation and tourism compare with other coastal industries as an economic sector?



Kayakers navigate Channel Islands National Park and Channel Islands National Marine Sanctuary offshore of Southern California. Photo: Flickr/faungg.

The U.S. ocean and Great Lakes economy—which the National Oceanic and Atmospheric Administration defines as six core economic sectors that depend on the oceans and Great Lakes—generated \$343 billion in 2012, or roughly 2.1 percent of U.S. GDP that year, according to a NOAA report.<sup>42</sup> These sectors include living marine resources, marine construction, marine transportation, offshore mineral extraction, ship and boat building, and coastal tourism and recreation. Of the six sectors, tourism and recreation generated 28 percent of the economic output of the oceans and Great Lakes economy and by far the most employment—71 percent of oceans- and Great Lakes-dependent jobs.<sup>43</sup> The recreation and tourism industry’s support for the lion’s share of coastal employment appears to be a stable trend, as indicated by NOAA economic data going back to 2005.<sup>44</sup> While 2012’s average wages in the sector were quite low at \$22,000, they reflect the seasonality of the recreation and tourism industry, as well as the accessibility of the jobs to entry level workers.<sup>45</sup>

Beyond the raw statistics of the millions of jobs that the coastal recreation and tourism sector provides, the coastal parks data from the National Park Service reveal the potential for the sector to coexist with, benefit from, and even promote healthy ocean, coastal, and Great Lakes ecosystems. Even as coastal parks provide an economic boost to surrounding communities and states, their designations confer statutory and regulatory protections for the ecosystems and physical habitats within their boundaries. This prevents destructive coastal development, limits pollution, protects wildlife, and provides a focal point for environmental education and scientific research that help guide future natural resource management decisions.

Protecting special places on the coast and offshore, whether through designation as national park units or through any other federal programs that preserve ecological integrity and public access, provides a diverse and sustainable benefit stream to surrounding communities without putting other industries at risk or jeopardizing the ecosystems that underpin them.

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## Other benefits of coastal parks

Coastal parks deliver several other important economic, social, and environmental benefits to the nation that warrant recognition. First, U.S. coastal parks are a major component of America's vast outdoor economy, the economic sector that encompasses all forms of recreation and tourism linked to the great outdoors and that contributed \$646 billion in economic activity in 2012.<sup>46</sup> According to the Department of the Interior's FY 2015 economic report, the total economic contribution of the National Park System to the outdoor economy and the U.S. economy as a whole was more than \$32.04 billion, a more than tenfold return to U.S. taxpayers on the approximately 2.61 billion federal dollars invested in the National Park System for its FY 2015 budget.<sup>47</sup> In other words, the nation's parks are infrastructure for the outdoor economy, and coastal parks serve as an important part of that infrastructure by providing desirable and accessible outdoor recreational opportunities, especially for people in American coastal cities.

Second, the coastal recreation and tourism industry is the most labor-intensive coast- and ocean-related sector, providing more than 2 million entry level jobs along U.S. shores. NOAA data show that these jobs are insulated from the price volatility that plagues labor demand in the offshore oil and gas industry—a distant second in ocean-industry employment.<sup>48</sup> Because coastal parks are such clear drivers of recreation and tourism spending, at rates above the national average for national park units, federal policymakers should recognize that investments in maintaining, restoring, expanding, and—where supported by diverse local stakeholders—designating new coastal parks represent pro-employment policy.

Third, the legal protections afforded to the environment through the establishment of coastal and ocean parks, as well as the federal resources provided for ecosystem restoration, allow the ecosystems within them to generate additional economic benefits through their basic functions. These include the provision of valuable ecosystem services such as spawning and rearing habitats for commercially important fish; the capture and storage of atmospheric carbon; filtration

of pollutants; and the protection of adjacent communities from erosion, inundation, and storms.<sup>49</sup> At Cape Lookout National Seashore, for example, an ecosystem services modeling study determined that the park's 10,801 acres of coastal wetlands, as well as the 21,945 acres of seagrass beds within and adjacent to the park's boundaries, are directly responsible for an additional 167,038 pounds of southern flounder catch annually for regional fishermen, worth \$462,696. Using sophisticated modeling developed by the National Weather Service, the researchers also determined that those same coastal wetlands, along with Cape Lookout's protected land features, provide substantial storm protection benefits to the surrounding communities.<sup>50</sup> Evaluating the scenario of landfall by a Category 1 hurricane, for example, they estimated that the park would avert millions of dollars in storm damage within the local county and reduce the proportion of county structures that the storm would damage by 3.9 percent.<sup>51</sup>

# Policy recommendations

The current patterns of designation and fiscal support of coastal and ocean protected areas do not reflect their extraordinary social, economic, and ecological contributions to American society. Therefore, the government should enact and implement policies that protect, enhance, and expand coastal national park units, wildlife refuges, and marine sanctuaries. This will expand the ecological and economic benefits that coastal and ocean parks provide to the American public in a cost-effective manner, as well as the fairness and equality with which those benefits are enjoyed.

The following policy goals and reforms would improve these three systems and facilitate their management and growth to ensure that the coast can be enjoyed by future generations.

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## Regularly and systematically assess the economic impact of all coast and ocean parks

Sound public policy depends on good data. However, the economics of outdoor recreation and the non-extractive values of public lands and waters are just beginning to be systematically measured, despite mounting evidence of their national economic significance. Recognizing this, in April 2016, the Department of the Interior and the Bureau of Economic Analysis launched a novel joint study of the economics of outdoor recreation “to establish national and regional level statistics on the outdoor recreation economy.”<sup>52</sup> Variables included production, employment, compensation, and other impacts across the many industries that support outdoor recreation. The DOI noted that the new analysis:

*... allows resource agencies at the local, state and national level, as well as private industry, to more clearly measure their economic impact and promote a more comprehensive understanding of the wide range of benefits that flow from public resources.*

*Attaching a numerical value to recreation resources could help foster the appreciation for, and stewardship of, public lands and waters; help provide a more holistic understanding of local economies; and better support resilient economic strategies and business operations.<sup>53</sup>*

Several opportunities exist to build on this welcome and overdue effort to improve and, in some cases, institute the systematic measurement of the economic impact of all coastal and ocean parks.

First, Congress should pass an updated version of the Outdoor Recreation's Economic Contributions, or REC, Act of 2015, sponsored by Sens. Jeanne Shaheen (D-NH) and Cory Gardner (R-CO), which would have directed the Bureau of Economic Analysis to complete a study like the one now underway in partnership with the DOI.<sup>54</sup> A new version of the bill should require regular independent analysis of outdoor recreation's economic value. This way, such analysis will not be dependent on private industry or on the varying preferences of the executive branch.

Second, the National Park Service should allocate resources to expand and regularize the surveying of visitors to the nation's national park units. It should take steps to ensure that a full cross section of coastal park units is included in this effort. This will improve the accuracy of the agency's modeled estimates of its future spending impact assessments and help illuminate important visitation patterns. These patterns are relevant to the NPS's mission and to public and congressional interests in the geographic distribution of present and future national park units.

Third, all sites within the National Marine Sanctuary System should be systematically and regularly assessed for spending impacts generated from visitation and other recreational uses, in the same way that the NPS consistently analyzes units of the National Park System. Individual sanctuary sites have published relevant analyses of the socioeconomic impacts they generate, and the system's regional offices have conducted important studies on the economic impacts of specific types of activities within one or more sanctuary sites. For example, the West Coast regional office of the National Marine Sanctuary System recently released studies showing that visitors to the Greater Farallones and Monterey Bay national marine sanctuaries spent \$127 million on non-consumptive recreational activities such as bird watching, surfing, and diving in 2011, supporting 1,700 related jobs.<sup>55</sup> And Hawaiian Islands Humpback Whale National Marine Sanctuary is an important part of the state's ocean tour boat industry, which historically has supported thousands of jobs.<sup>56</sup>

California's four national marine sanctuaries hosted 13 percent of all recreational saltwater fishing in the state from 2010 through 2012; visitors spent an average of \$156 million per year in 2014 dollars on trip-related goods and services.<sup>57</sup>

Individual studies such as these provide important glimpses of the National Marine Sanctuary System's economic effects and the benefits from the protection of special places and cultural maritime heritage offshore. However, systematic economic impact assessments would provide a more accurate depiction of the role that sanctuaries play within their regions to the public, local stakeholders, and policymakers.

Fourth, federal agencies should conduct regular and systematic assessments of the value of the services provided by ecosystems harbored within protected national parks, marine sanctuaries, and wildlife refuges. This information would give appropriators a better understanding of the magnitude of public benefits flowing from protected areas, allowing them to improve decision-making on future funding levels for the protection and restoration of existing parks. It could also enhance cost-benefit analysis for policymakers considering future site designations. Such analysis and monitoring would also be an excellent opportunity for the relevant federal agencies to comply with the new executive policy on ecosystem services. In October 2015, the Office of Management and Budget, the White House Council on Environmental Quality, and the Office of Science and Technology Policy issued a joint memorandum requiring the heads of all federal agencies to develop and institutionalize policies that promote consideration of ecosystem services in their agencies' planning, investments, and regulatory activities, including permitting decisions.<sup>58</sup> Developing a longitudinal database of ecosystem services' values for the nation's premier public lands and waters would help fulfill both the letter and spirit of this executive memorandum.<sup>59</sup>



Kitesurfers enjoy the wind and waves of Monterey Bay National Marine Sanctuary offshore of California's Waddell Creek Beach. Photo: Flickr/Gwen.



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## Create more parks along the coast and offshore

Offshore parks have not been established or supported by the federal government with the same vigor applied to the designation of onshore sites. However, the observations and analysis presented in this report suggest that there may be unmet demand for coastal parks and that the maintenance of existing parks and the creation of new ones would be wise and highly cost-effective public investments. Congress and the president should seek to ensure that the U.S. system of protected areas is effectively conserving resources across all of the United States' geographies and is accessible to all Americans. By accelerating coastal and offshore conservation efforts, policymakers can help ensure that the next 100 years of the National Park Service and the next four decades of the National Marine Sanctuary System better reflect the fact that extraordinary natural and historic sites exist along and seaward of the nation's coasts. This can be done through the designation of new sites and greater funding for research, monitoring, education, visitor access, and ecosystem restoration.

Finally, the Antiquities Act empowers U.S. presidents to take action to protect and preserve areas of extraordinary value as they see fit, including when there is strong local, community, and regional support for a new park unit. In the context of steadily growing demand for recreation within parks—as demonstrated by 2015's record level of visits to units of the National Park System and the designation of more than 23 new national monuments in the past eight years—this authority remains an important conservation tool that must be preserved.<sup>60</sup> Furthermore, present and future administrations must continue to exercise this authority in the public interest and to advance the will of Congress articulated in the act—including to protect offshore areas within U.S. federal waters.

# Conclusion

On September 13, 1962, President John F. Kennedy signed legislation establishing the Point Reyes National Seashore, a short drive north of San Francisco, California. He then delivered remarks at the White House that remain perspicacious and relevant 54 years later. His short speech hailed the bipartisan efforts of the 87th Congress, which delivered the bill to his desk, and noted the urgency for such action “to preserve our Nation’s great natural beauty areas to insure (sic) their existence and enjoyment by the public in the decades and centuries to come.” President Kennedy also acknowledged that conservation must be pursued with a strong sense of fairness, so that all Americans can benefit from access to parks. “This is especially true,” he said, “about those areas close to the major centers of population.”<sup>61</sup>

As the population of the United States approaches 320 million people—and as the thin ribbon of land comprising American coastal counties becomes home for a steadily rising share of it—leaders and policymakers from both parties must closely heed President Kennedy’s call to balance the nation’s inexorable growth and concomitant economic development with the protection of nature. Such balance is needed to fulfill the democratic spirit of the visionary land and water conservation laws that provide for America’s commonly shared enjoyment of its natural beauty and cultural treasures. Accelerated pursuit of that balance is also needed because of the mounting evidence that functioning coastal ecosystems are essential for human survival and are one of society’s best defenses against the large scale changes underway, including sea level rise, ocean acidification, and global warming.<sup>62</sup>

However, President Kennedy also sounded a clear note of hopefulness:

*The Point Reyes National Seashore will preserve and make available to a great number of people the outstanding scenic and recreational characteristics of the area. This area is readily accessible to millions of our citizens, and its establishment as a National Seashore will pay vast dividends in the years to come.*<sup>63</sup>

This hope has been affirmed at Point Reyes and nationwide wherever Congress and the president have acted to protect the nation’s extraordinary lands, waters, and coastline.

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