Indigenous Cultural Landscapes: A 21st-Century Landscape-scale Conservation and Stewardship Framework

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Introduction

An "INDIGENOUS CULTURAL LANDSCAPE" (ICL) is a concept that depicts combined natural and cultural landscape features that together could have supported an indigenous community in its entirety. The concept originated as a way to translate intuitive environmental knowledge into defined criteria for which evidence-based data can be gathered today. For example, rich soils and varied topography are based on definitions around chemical composition and elevation change. Intuition about the landscape builds on observations gathered over millennia, and although unwritten, is scientific in its evidence-based nature. In pre-colonial times and today, the right combination of land and water characteristics creates optimal conditions to support a community and its cultural and spiritual identity.

Just as evidence and reflection informs intuition over time, years of applying scientific methods and observing the results enables subject-matter experts to develop intuition about their practice. A site visit can confirm or deny the validity of further study. An argument in this paper is that ICLs combine today's definitions of and methods for practicing science with the knowledge handed down through generations to reveal characteristics of the land-scape that academic language has forgotten. The term "traditional ecological knowledge" captures this transfer of scientific knowledge into the language and tools we use to document environmental characteristics today.

While the ICL originated as a landscape-scale conservation concept in the Chesapeake Bay watershed, in its application the work has enriched tribal relations with public agencies and institutions. More importantly the ICL concept has enabled communities who have been dispossessed of their lands to benefit personally from the opportunity to visit them again and to establish relationships with landowners and managers. The impacts of this engagement approach transcend geographic areas and are translatable elsewhere.

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In addition, the concept can empower land management agencies at all levels to see, feel, and understand more fully indigenous cultures as real and existing rather than as vestiges of the past. It may also enable management practitioners and others to understand that indigenous peoples remain continuously connected even to now-colonized modern landscapes.

Finally, while involvement of a descendant community enriches the process of identifying indigenous places, in landscapes where no local or culturally affiliated tribe or descendant community claims aboriginal relationship, the concept can still provide an effective means for providing interpretation that expands the public's understanding and awareness of landscape features and systems. It can also add sensitivity to how these features and systems connect to support human communities. In this way, the ICL concept has tremendous power to transform the way that the public sees the world around them, without distinction between "natural" and "cultural" elements as a dichotomy.

This paper intends to summarize how the ICL concept has developed in the context of the Chesapeake Bay watershed (Figure 1), evolved and become more sophisticated when applied in a new landscape, and tested and strengthened the validity of the criteria used to define it. As we reflect on why this is the case and on what we've learned, it is our hope that these reflections help others to carry the concept further as it is applied formally and infor-

mally beyond the Chesapeake Bay watershed. We believe that the ICL concept affords valuable and useful opportunities to provide a structure and language to work with tribes who still live on or near their ances-

Figure 1. Major nearby watersheds of ICL significance and of ancestral importance to Chesapeake Bay Indians in present-day Maryland and Virginia. Each of these were settlements represented on Captain John Smith's 1612 map, which recognized the extent of Native occupation in the region while appropriated by the Crown to promote colonization. Current tribal communities along the Captain John Smith Chesapeake National Historic Trail are located within or nearby their ancestral watersheds. Map by St. Mary's College of Maryland for the Chesapeake Conservancy and the National Park Service.



tral lands, and above all supports situations where people want to move beyond archaeology, craft, and ceremony to identify and describe the totality of the indigenous connection with place.

Origin of the ICL concept

The ICL concept originated as early as 2009 during meetings convened by the National Park Service (NPS) Chesapeake Bay Office regarding the protection of large landscapes. These meetings were held in response to Executive Order 13508, *Chesapeake Bay Protection and Restoration*, signed in May 2009. The order explicitly mandated coordinated implementation with the NPS-administered John Smith Chesapeake and Star-Spangled Banner national historic trails, and the Chesapeake Gateways and Watertrails Network. Thus, NPS's Chesapeake Bay Office was given the task of identifying landscapes of cultural significance to underrepresented groups, especially American Indians, in order to prioritize land conservation strategies.¹

During early meetings on the National Park Service's response to the order, most members of the work group were unsure as to what constituted large indigenous landscapes. An indigenous person's perspective providing explanation of large indigenous landscapes at the time of European contact was presented, as this was pertinent to the time of Captain John Smith's voyages as well as to the descendant communities of the tribes who met Smith who are still in thriving communities throughout the watershed. This description of the large areas of land and water which an indigenous community would know intimately, because it contained most of what they needed physically and culturally, resonated with the work group and caught the imaginations of conservation, cultural, and education leaders. A short essay describing such landscapes was drafted in early 2010 at the request of group members.

NPS adoption of the ICL concept

The ICL essay aptly described the features and characteristics of a type of cultural resource along the John Smith Chesapeake trail that the planning team concurrently drafting a comprehensive management plan (CMP) for the trail was struggling to define. The essay was incorporated into the CMP as one of seven trail-related cultural resources that collectively comprise the John Smith Chesapeake Trail, and to seed further definition and refinement as the concept was tested on the ground with tribes and other stakeholders.

Because the ICL concept was new to NPS but being used in an approved national historic trail plan as a trail-related cultural resource, an advisory group of NPS staff and management, officials of partner states, tribal members, academics, and staff from other federal agencies and non-governmental partners was formed to guide the concept's further definition and applications.

The first in-person meeting of the advisory group was held in October 2010. A set of criteria had been drafted previously by members of the group and these criteria were added to and adopted at the first meeting. Further discussion and subsequent conversations led to revisions in the essay through 2012. The concept and criteria were first presented publicly at the 2011 George Wright Society Conference. Over 25 presentations at national and regional

conferences have occurred since then to continually build awareness and test new thinking. Some of these presentations have taken place at land trust conferences where researchers explained that the concept does not have a legal preservation basis, but is meant to help inspire and motivate landowners and organizations working to conserve or preserve landscapes.

Development of the ICL methodology

In 2012, NPS collaborated with the University of Maryland's (UMD's) Center for Applied Anthropology to develop and describe a prototype methodology for conducting ICL research. The methodology was then tested with subject-matter experts and descendant communities of the Nanticoke River watershed on the Chesapeake's eastern shore in Maryland and Delaware.

The methodology built on an extensive bibliography (included in the methodology document) containing literature about the character-defining features of cultural landscapes, methods for identifying and working in cultural landscapes, cultural landscape management policy and legislation, landscape interpretation, and indigenous and aboriginal concepts of cultural and natural resources.

The methodology report² describes a 15-step process for gathering and testing information about environmental and cultural considerations. Steps include data collection, collaborative mapping, multiple site visits, and data refinement. A list of representative features (Table 1) provides a starting point for data collection that is refined according to the availability of data and in response to conversations and site visits with tribal members and subject-matter experts. This list of environmental characteristics is intentionally general to

 Table 1. Representative landscape features that serve as criteria for identifying an ICL in the Chesapeake Bay area (2016).

- Good agricultural soil (fine sandy loam, 1–2% grade)
- Freshwater source
- Transportation tributary adjacent
- Landing place (confluence of tributaries optimal)
- Marshland (supporting waterfowl, shellfish, reedy and tubular materials, muskrat, turtles)
- Brushy areas (supporting small game, berries)
- Primary or mixed deciduous forest (supporting larger game, nuts, bark, firewood)
- Proximity to known American Indian communities (documented through ethno-history or archaeology)
- Places known through subsequent written records to include paths, house sites, town sites, or other landmarks
- Terraced landform with protection from wind if near broader expanses of water
- Areas with recurrent use for food, medicine, materials acquisition
- Areas with high probability for ceremonial or spiritual use, or trading or meeting places
- Trails used as footpaths (usually became Colonial roads, then today's highways and local roads)
- Places that are spiritually or culturally important to a tribe

remain responsive to different situations. While the methodology specifically references the cultural and natural characteristics of a predominantly riverine ecosystem (including its upland relationships), it was designed to apply within other settings, not just the Chesapeake; features include high-quality growing soils, uplands for hunting and lowlands for fishing and gathering, a freshwater source, and proximity of grasses and wooded areas for building structures and objects.

The 15-step process was then tested along the Nanticoke River (Figure 2a). The watershed contains several excellent characteristics for conducting anthropological work. In addition to being a familiar landscape to UMD faculty and students, Nause–Waiwash and Delaware Lenape tribal leaders live within or just outside the watershed. Significant recreation and land protection opportunities exist for using the research to increase public access and conservation. Finally, historic preservation agencies and subject-matter experts from both states contributed their data and expertise.

The prototype methodology successfully held up when tested along the Nanticoke. It provided sufficient structure and flexibility to enable meaningful data collection and discussion, and generated mapping and data sets that have been incorporated into subsequent John Smith Chesapeake Trail planning work. The methodology has also held up in subsequent studies, as we will see below.

Tweaking the ICL methodology: Applying the concept in a landscape still inhabited by the descendant community

In 2015, the ICL methodology was applied a second time, this time within a watershed area where descendant communities still live and work. The Nanjemoy Peninsula along the middle Potomac River (Figure 2b) offered different challenges and opportunities that enabled new insights and more sophisticated and meaningful mapping. Among the challenges were planning and logistics for multiple groups of tribal members and stakeholders, incorporating schedules for both meetings and tours. Opportunities included the use of datasets from multiple sources for mapping, and the ability to graphically represent and compare more data than previously. The project itself became a way for researchers and the NPS to directly interact with indigenous residents more closely.

Building on previous planning work to identify recreation and conservation opportunities along the middle Potomac shoreline, John Smith Chesapeake Trail staff were interested in better understanding Native connections to the landscape. St Mary's College of Maryland maintains trusted working relationships with tribal members, and has conducted extensive archaeological investigations at Zekiah Fort and on other Piscataway ancestral lands. Piscataway tribal members were pleased to participate in identifying and describing landscapes that they think need to be protected.

The Nanjemoy–Mattawoman Creek Watershed ICL study³ incorporated geospatial predictive modeling, which was ground-truthed through site visits and Piscataway involvement and verification. The report is expected to fuel ongoing relationships with the Piscataway to identify interpretation, tourism, and conservation opportunities that can be funded through state and local appropriations and grants. Figure 2. An ICL criteria composite map in the 2013 ICL Nanticoke River Watershed study (2a, right) compared with an ICL composite map in the 2015 ICL Nanjemoy and Mattawoman Creek Watersheds study (2b, below). Between these two early studies, the incorporation of GIS geospatial predictive modeling based on indigenous stakeholder involvement evolved ICL studies for a more concise final report. Maps by St. Mary's College of Maryland for the Chesapeake Conservancy and the National Park Service.





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A third study conducted along the Lower Susquehanna River in 2014–2015⁴ has tested the ICL concept in a natural-appearing (largely forested with rocky outcroppings) landscape that is predominant in a riverine ecosystem largely altered by a railroad line and a series of dams. The area also differs in that the Lower Susquehanna lacks a strong association with any particular nearby descendant community. Native nations of the Iroquoian-speaking Haudenosaunee Confederacy, based in upstate New York, claim the area within their ancestral territory as descendants of the Susquehannock Indians, with whom known archeological sites in the area are associated. Other indigenous communities beyond the watershed also claim ancestral connections that have inspired an interest in its protection.⁵ Initial research focused on gathering archaeological data and information from subject-matter experts to identify high-probability areas for habitation and to articulate topics for further study. A follow-on study by Bucknell University⁶ provides a detailed narrative of probable American Indian habitation and a bibliography of sources. In 2016, NPS produced a framing narrative synthesizing the findings of both and clarifying from the NPS perspective the follow-on research, interpretation, and educational opportunities that could be fostered in collaboration with the Onondaga Nation and other interested federally recognized tribes.⁷

A fourth study within the Rappahannock River watershed in Virginia was completed in 2017.⁸ The study further refines the geospatial approach to modeling landscapes with a high probability of habitation and use. The report provides specific actions to increase public interpretation of important tribal lands, facilitate relationships and increased tribal access to private and limited-access federal lands, and bolster place-based education for tribal youth. Another outcome of the study was the return to the Rappahannock Tribe of a one-acre ancestral property on a landform known as Fones Cliffs.

Establishing priorities for continued investigation of ICLs in the Chesapeake

Less than 10% of the potential ICLs along major tributaries of the John Smith Chesapeake Trail have been documented. Since NPS has been the primary funder of ICL work, a geospatial analysis was conducted in 2015 to identify priority areas for further investing in ICL documentation. A survey of the tidal Chesapeake used geospatial data to identify trail segments with the highest probability of indigenous habitation or use.⁹ The report intends to define where limited funding would be most effective in supporting landscape protection, interpretation, and stewardship. The project team developed a series of assumptions about the land and water characteristics available to GIS analysts that could indicate a high probability of pre-colonial human habitation. The team then assembled and assessed GIS data on soil types, elevation, land cover, and archaeological sensitivity. The analysis identified 12 priority river segments that all have a strong correlation with pre-Contact/late Woodland period habitation, retain a sufficient level of natural-appearing landscape integrity to enable further protection and interpretation, and lie within the ancestral territory of one or more state- or federally recognized tribes.

Given existing funding and capacity constraints, the priority study enables a strategic focus on the landscapes and waterways most conducive to benefiting from the ICL concept—those where natural and cultural resources are most prevalent, and tribal interests enable

the concept to be fully expressed. The studies can also inform resource documentation and protection priorities articulated by the over 50 federal, state, and local agencies and regional and local nonprofit partners that comprise the Chesapeake Conservation Partnership.¹⁰ In particular, the authors want sharing of these studies to further raise awareness of the potential for factors such as bias and the influence of white privilege that often damage attempts to create community partnerships within the environmental sector. Acting early and often with descendant communities is prioritized by the ICL concept, which "recognizes that these indigenous communities still exist and that respecting them and their cultures is a valid and central goal of any land/water conservation effort" (Beacham 2010; Figure 3).

How can ICLs benefit our conservation and stewardship?

In at least two fundamental ways, the ICL concept challenges Western ideas of what constitutes a cultural landscape worthy of protection. One, it reminds us that cultural landscapes contain multiple layers of meaning beyond what may primarily be visible to an individual or group, and especially those who are looking for visible evidence of human-made character-defining features. Two, it forces us to recognize that "large landscapes" go beyond West-

ern notions about property that typically require boundary delineations—property lines, jurisdictions, the edges of an ecosystem—as a prerequisite for assigning significance.

In a specific example, NPS has recently put the ICL concept to work in the landscapes and along the waterways of the York-Mattaponi-Pamunkey river system to generate a large-landscape context to inform site-level planning at the newly acquired Werowocomoco site. Project scoping (includ-

Figure 3. ICL criteria represented in project area watersheds and rivers of ancestral significance to Chesapeake Bay tribal communities. Map by St. Mary's College of Maryland for the Chesapeake Conservancy and the National Park Service.



ing defining geographic and temporal contexts) will be conducted in coordination with local tribes and stakeholders. Here, the ICL approach to documenting the area around Werowocomoco will allow for early discussions around collaborative stewardship, management, and interpretation that build on a shared understanding of the area's layered historical and contemporary meanings. These conversations will be imperative to ensure that the significance, meanings, and uses of Werowocomoco itself consider the range of expectations that tribes, researchers, NPS, and the public have for this place.

As this example illustrates, in practice the ICL concept has proven flexible in its ability to recognize and suggest new ways of managing layered landscape values, and is a reminder that inviting historically associated communities in from the beginning to describe what they see as meaning in a landscape does not necessarily de-value other existing values and considerations. Instead, it encourages other stakeholders (such as planning and tourism officials and private landowners) to shift their thinking and perceive the area more holistically, thereby adding more value and meaning. At the same time, the ICL doesn't currently fit within existing preservation constructs (such as the National Register for Historic Places in the US) that could trigger legal and/or policy protections for that resource. However, members of the advisory group have begun conversations about the intersection of the ICL with such existing constructs.

Six years after NPS's adoption of the ICL into a trail management document, we believe the concept has sufficiently matured to be adopted by others within and beyond the agency. How can we—the authors, the ICL advisory group, and scholars who have added clarity and validity to all of our efforts—spread the principles of the ICL broadly? This paper is one step in that effort. We also want to be clear that the concept is not proprietary, and neither NPS nor the Chesapeake region "owns" it. This concept is ready for others, inspired by what this approach has accomplished for tribes and NPS in the Chesapeake, to adapt and apply it as their own. Nor is the idea sanctioned or codified in such a way that it has become rigid and difficult to apply—and we think it should stay that way.

The authors are aware that the ICL is echoed in similar values-based processes being expressed around the US and the world. In the US, for example, the National Oceanic and Atmospheric Administration (NOAA), Bureau of Ocean Energy Management (BOEM), and partners have developed tribal cultural landscapes guidance that uphold ICLs in recognizing the fluidity of boundaries, integrating traditional definitions of cultural and natural resources, and recognizing the layered meanings of a place.¹¹ In a site-specific example, tribal involvement of the Salish community in surveying high roadkill rates of the animals important to them helped influence the design of a highway, illustrating a values-based approach to landscape evaluation.¹²

Assuming that NPS is serious about embracing new ways to integrate identification, documentation, and stewardship of natural and cultural resources, how can the ICL most effectively inform a holistic and community-centered approach to resource management? How do we amplify and convey the ICL's scientific credibility while continuing to honor its flexibility? How can the ICL help put people and culture back into the landscape within contexts where the Wilderness Act continues to drive science, and, in reality, where "untrammeled

by man" is virtually never attainable? How can the ICL concept be used to document and recognize the cultural aspects of a natural-appearing landscape within the construct of the National Register of Historic Places?

We hope that our recent (ongoing in 2017) efforts in the Chesapeake to test the character-defining features of ICLs related to a National Register Multiple Property Documentation submission for the John Smith Chesapeake Trail may inspire other discussion about the abilities of existing laws and policies to recognize emerging 21st-century cultural landscape values. We strongly urge that new efforts by our colleagues around the country test similar laws and policies intended to protect the cultural values of natural areas, and understand that the combination of cultural with natural is of greater meaning than either alone or both separately. We believe it is likely that, as subsequent studies take place, agency members, academics, professionals, and indigenous people will think of more nuanced information and methods of application, and thus the "science of ICL" will grow.

Virtually none of our country, as natural-appearing as it is, has been truly "untrammeled by man." As the ICL concept is applied within varied landscapes and water systems across the continent, we believe we can collectively start to shift the conversation about the characteristics, boundary definitions, and stewardship of large landscapes. We believe strongly that the ICL's elegant expression of integrated conservation values can help inform conservation priorities and the design of landscape solutions that honor the many motivations for retaining large landscape integrity.

Endnotes

- 1. See https://executiveorder.chesapeakebay.net/.
- 2. Full reports available online at https://www.nps.gov/chba/learn/news/indigenous-cultural-landscapes.htm.
- 3. Full report available online at https://www.nps.gov/chba/learn/news/upload/NanjemoyMattawoman-ICL-FINAL-red.pdf.
- 4. Full report available online at https://www.nps.gov/chba/learn/news/upload/Contact-Period-Landscapes-of-the-Lower-Susquehanna-River-Barrett-Kramer-FINAL.pdf.
- 5. Federally recognized tribes, including the Oneida Nation and the Delaware Tribe of Indians, have proactively expressed interest in consultation in a project underway to explore the eligibility of the John Smith Chesapeake Trail for listing on the National Register of Historic Places.
- 6. Full report available online at https://www.nps.gov/chba/learn/news/upload/ICL-Study-of-CAJO-NHT_-Lower-Susquehanna-Area_Final.pdf.
- 7. Full report online available at https://www.nps.gov/chba/learn/news/upload/Framing-NarativefortheLowerSusquehannaICLMarch2016.pdf.
- 8. Full report online available at https://www.nps.gov/chba/learn/news/upload/Rappa-hannockReport-Final.pdf.
- 9 Full report available online at https://www.nps.gov/chba/learn/news/upload/NPS-ICLPriority-FinalReport.pdf.
- 10. See http://www.chesapeakeconservation.org for more information.

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- 11. A Guidance Document for Characterizing Tribal Cultural Landscapes. See https://www.boem.gov/2015-047/.
- 12. Eliminating Roadkill. See http://www.othernationsjustice.org/?p=9663.

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