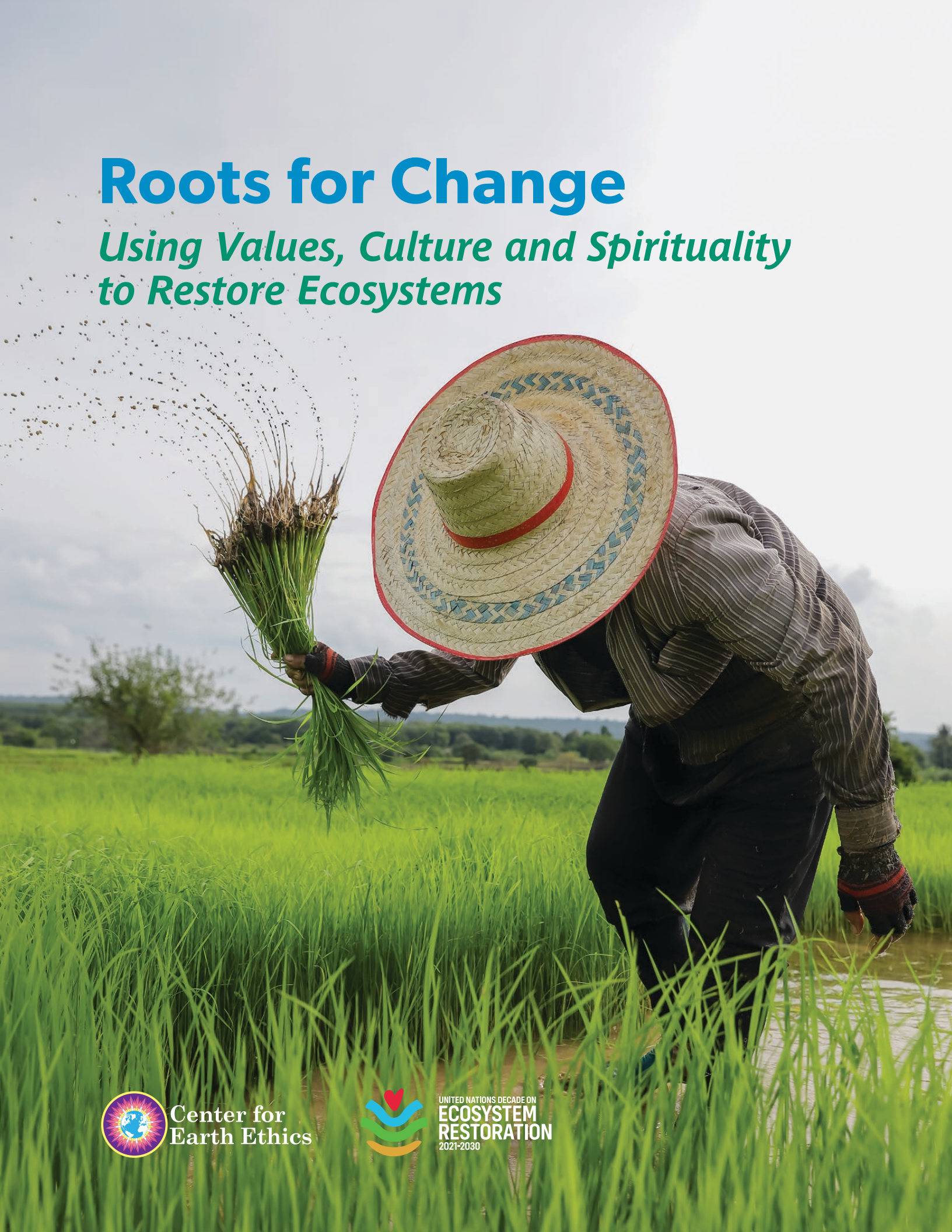
Roots for Change

Using Values, Culture and Spirituality to Restore Ecosystems



Center for Earth Ethics

UNITED NATIONS DECADE ON ECOSYSTEM RESTORATION 2021-2030

Contents

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INTRODUCTION

Ecosystem restoration is urgently needed. Whether replanting grasslands in America's Great Plains, reviving and protecting mangroves in Mombasa, or removing plastic pollution from any number of waterways around the world, these projects are a vital complement to existing conservation efforts. This is all the more true when it is done in a way that will last, which is why it is important to pay attention to the methodologies that work and to be in conversation with those leading successful ventures.

The process of restoring ecosystems is also the process of restoring our relationship to the Earth and how we live on it. At this time of great transition and crisis, we need to be asking fundamental questions about what the meaning and purpose of life is? How would you like for future generations to remember those of us who are here now? What distinguishes human beings as one species among many on this planet? These are the questions worth asking right now as the biosphere that sustains all life is under increasing strain and threat.

In 2022, the Center for Earth Ethics conducted a series of consultations to support the UN Decade on Ecosystem Restoration: St. James Parish in the United States, the River Yamuna in India, the city of Mombasa in Kenya, the sacred Philippine Eagle in the Philippines, and food and forests in Jordan. We focused on how values, culture, and spirituality can help anchor and accelerate these ecosystem restoration projects. We did this not only because they are powerful tools to bring people together to do the work of healing landscapes, but also because we know that this work involves an even deeper level of repair. In order to find our way through this time of biodiversity loss, pollution and climate change, we must do more than react to the effects of it. We must think and act on the level of cause, which means directly engaging the drivers of human behavior.

To be clear, ecosystem restoration is not a substitute for the decarbonization of our economies. By phasing out fossil fuels, we can prevent future pollution, degradation, and disruption of weather patterns—all of which cause considerable ecosystem damage. Climate change is already causing flora, fauna, and human populations to migrate to more habitable places, and it poses a present and future risk of extinction for many species, including our own. Confronting the climate crisis is critical in ecosystem restoration efforts.

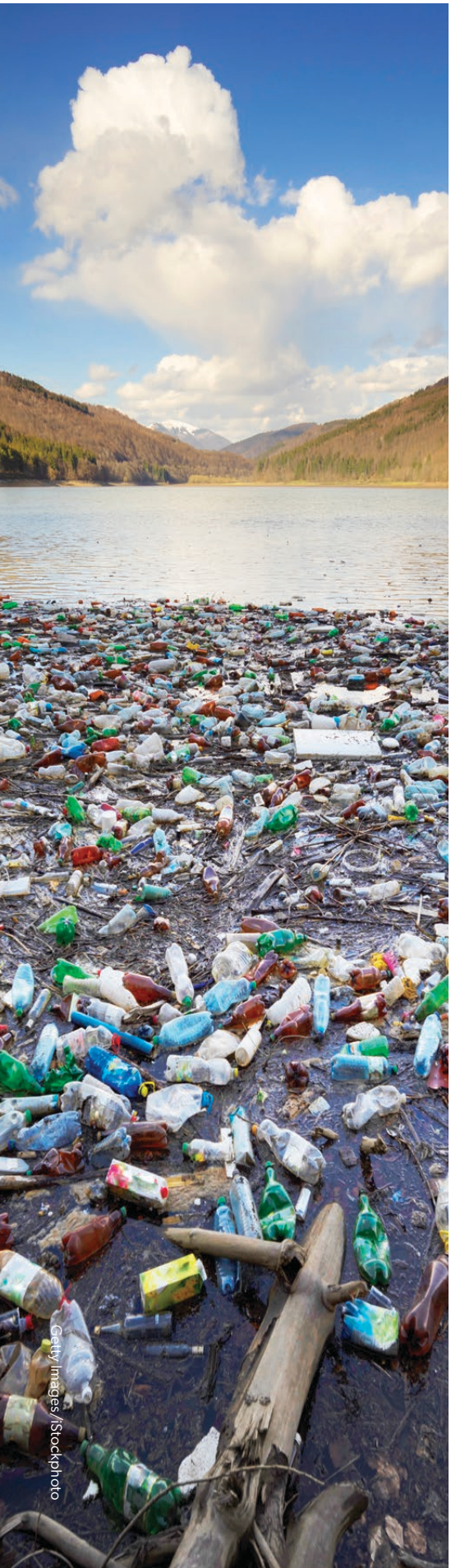
There must be a dramatic change in our relationship to the natural world. Ecosystem restoration signals that shift by calling attention to the symbiotic relationship between human and planetary health. But we must also repair and improve the relationships between people. Wherever there is a polluted river or landscape littered with trash or mountains made low by mining, you will find people who have been exploited and a culture that has been degraded. If we are sincere in our desire to heal the Earth we must attend to social issues along the way.

The consultations we conducted signaled the need for greater connection over *issues* and *relationships*. Activists in St. James Parish, LA USA raised concerns over unsustainable land use and the prevalence of polluting industries, making clear linkages between human and planetary health. In the Philippines, conservation efforts led by Indigenous peoples protecting the Philippine Eagle emphasize citizen education with the youth over the effects of climate change on the eagles' forest habitat.

Global environmental issues reveal just how interconnected we are to one another, to the planet, and the flora and fauna that populate it. Deforestation in one place can affect the hydrological cycle in another, and air pollution pays no attention to state or national boundaries. This is why supporting work at the local level is so important. What's happening in their backyard impacts all of us. Providing support for communities who are drawing from their own values, culture and spirituality, to restore their own ecosystems is not only an act of justice and fairness, it is an act of self care. Elevating this form of conscientiousness, we can transform a moment of peril into a new era of mutual flourishing.

Karenna Gore
Founder and Executive Director
CENTER FOR EARTH ETHICS

SUPPORTING THE UN DECADE ON ECOSYSTEM RESTORATION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Recognizing the critical need to halt and reverse ecosystem degradation, the United Nations General Assembly declared 2021–2030 as the United Nations Decade on Ecosystem Restoration, i.e., Generation Restoration (Resolution 73/284). This initiative aims to prevent, halt, and reverse the degradation of ecosystems on every continent and in every ocean. Generation Restoration has launched delegations around the world to support place-based projects that utilize innovative solutions to support ecosystem health and community initiatives. The 10 Principles of the UN Decade on Ecosystem Restoration (see p. 27) are a productive map to help guide projects to achieve short- and long-term success that is impactful, measurable, meaningful, and reproducible.

In December 2022, 196 countries adopted the Global Biodiversity Framework at the Convention on Biological Diversity (CBD) COP 15 in Montreal. The framework establishes four overarching goals and 23 action-oriented targets for the signatories to achieve by 2030. Restoration and conservation are crucial pillars of the framework, evidenced by the key targets to have at least 30% of degraded ecosystems under effective restoration and to conserve 30% of the world's land and water by 2030, with the latter known as "30x30". The framework will act as a guidepost to transform our active understanding of biodiversity and ultimately, support a world where humans live in harmony with nature.

Despite the major investment in landscape restoration and tree-planting projects around the world, there is a significant failure rate in-part due to incompatible growing conditions, planting the wrong species, and/or failure to follow up adequately. This gap between ambition and execution can be filled by strengthening engagement from civil society, local communities, Indigenous peoples, and others, as well as making investments that reach beyond the pursuit of metrics. This approach is not only more capable of meeting the immediate needs of the community—such as health care, jobs or housing—it also can nourish the narratives that hold the community together. A holistic approach to ecosystem restoration that resonates with existing values, culture, and spiritual traditions provides a better chance for longterm community commitment to the restoration project.[1] As Native American botanist Robin Wall Kimmerer has written, "We need acts of restoration, not only for polluted waters and degraded lands, but also for our relationship to the world."[2]

Why Values?

Global capitalism has become so strong, and the consumer economy it needs to make profits has become so ravenous, that it is hard to sustain a counterbalance. Even communities that are far from the center of this global economy's decisions or benefits feel pulled to exchange the aspects of life they hold most dear for the things it considers to be valuable. In addressing the role of values in ecosystem restoration, we must shift from seeing our current value system as inevitable. Instead, we must weigh it on its merits and ask how it needs to change to meet one's own needs and values, and the values and needs of the community that is affected. For example, if a community values the well-being of a river it considers a living relative or a stand of trees is held as sacred, that is worthy to set against a development pattern that views the natural world only as a set of resources to be harnessed for money.

As environmental lawyer and advocate Gus Speth has written, environmental deterioration is caused by two modern megatrends: increasing pollution and biological depletion.[3] The climate crisis, the pollution crisis, and the biodiversity crisis are the results of these megatrends, and are indicative of a crisis of communal values. Are our collective actions reflective of the values we want to pass on to the generations to come? At a time when so much is under threat and with so much already lost, re-examining the values that helped manifest these conditions is essential.

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Why Culture?

Culture is experienced. Culture is practiced. It can be tasted in food, seen in art and architecture, heard in music, felt in dance. Culture is the creation and reflection of meaning, an expression of what a group of people value the most. It can also be an expression of what people imagine and aspire to. What makes us feel alive and how do we get there together within our own communities as well as across our increasingly globalized society? How do we preserve and celebrate everything that we are and everything that we hope to become? How do we tap into the rituals and stories and triumphs of the past to prepare ourselves for the struggle and beauty that are to come? How do we tell these stories together? These are the questions that culture can help answer.

In the case of ecosystem restoration, we must take into consideration the biocultural heritage that informs culture. Across all places and peoples, modalities of expression have come about in conversation and community with the natural world: with other species, with the seasons, with the stars, with bodies of water, and with all manner of landscapes from mountain peaks to caves to vast forests and small groves of trees. Traditional harvest feasts illustrate how culture can connect people to the sources of sustenance within their own ecosystem. Celebrations centered on the time of spawning fish or wildlife migration are another. A healthy bioculture enables these relationships to be passed down through generations, and protects them from harm.

Why Spirituality?

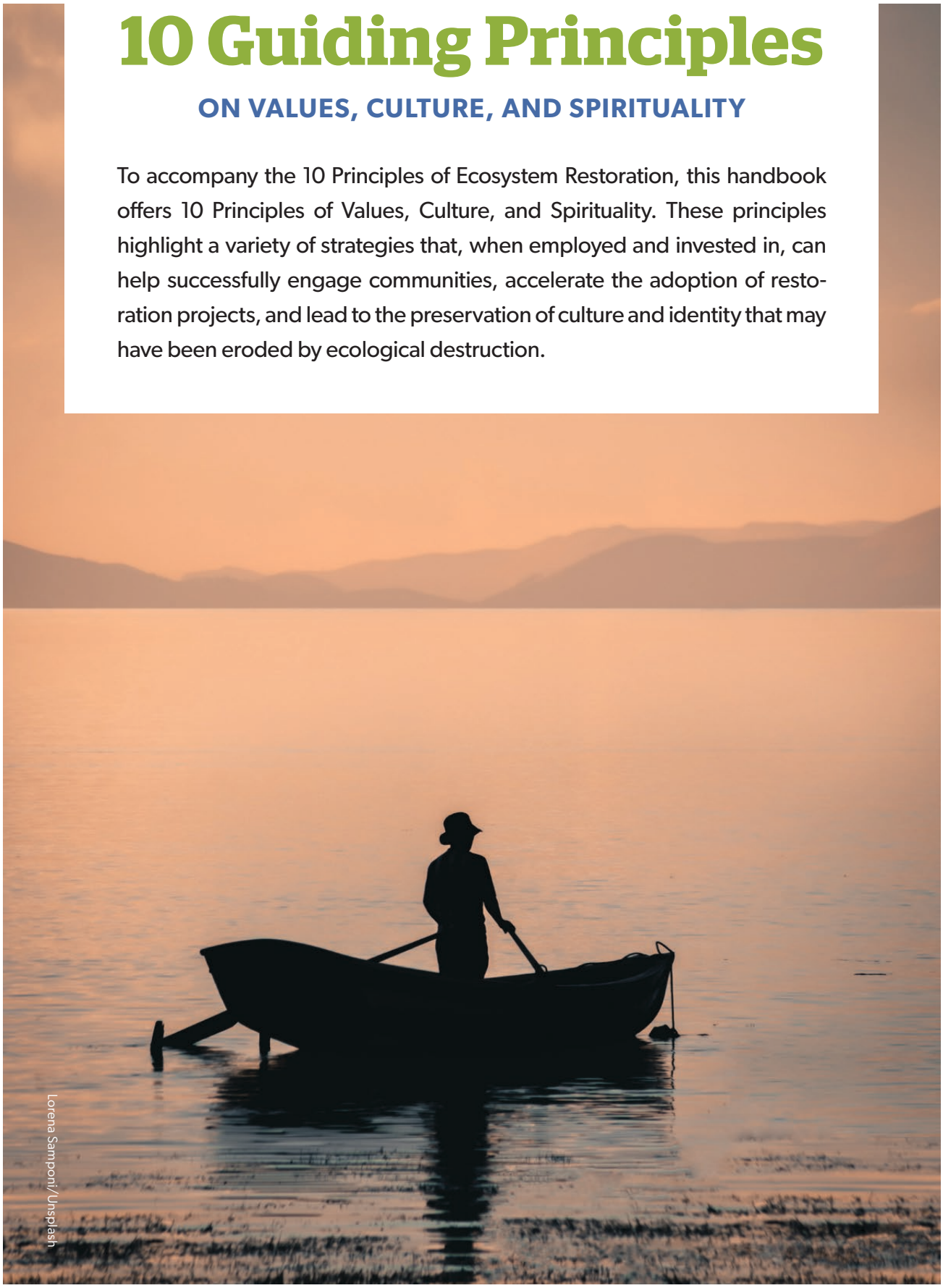
Spirituality gets at the nonmaterial aspects of our being, our purpose, of what comes next. It acknowledges the unseen world, the aspects of this earthly experience that inspire wonder even as they defy full understanding. A person does not need to be religious to be spiritual, nor is a spiritual person necessarily religious. All of us are left with more questions about this life than can be easily answered by information gathered in the material world. To borrow from the poet Mary Oliver: "To live in this world, you must be able to do three things: to love what is mortal; to hold it against your bones knowing your own life depends on it; and, when the time comes to let it go, to let it go."[4] This life is precious. It is delicate and fragile and can be so beautiful. It is also full of pain that we inflict on one another and on this earth, but it is in the work of redressing that pain that many find the greatest spiritual fulfillment.

Many also have a sense that there is more to each and all of us than our individual embodied lives, that we are connected to everything else. The belief that nonhuman life also has spiritual dimensions is, for some, a source of great inspiration in the work of ecosystem restoration. For others, there are spiritual connections to ancestors and future generations that carry meaning as well. And for many, there is a direct relationship to the divine, which goes by many names. In any case, allowing for full, free acknowledgment of the spiritual dimensions of ourselves and our cultures can help people experience a deeper meaning and connect to the web of life that is around and within us all the time.

10 Guiding Principles

ON VALUES, CULTURE, AND SPIRITUALITY

To accompany the 10 Principles of Ecosystem Restoration, this handbook offers 10 Principles of Values, Culture, and Spirituality. These principles highlight a variety of strategies that, when employed and invested in, can help successfully engage communities, accelerate the adoption of restoration projects, and lead to the preservation of culture and identity that may have been eroded by ecological destruction.



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1. Creating a Flourishing World

Ecosystem restoration is inextricably tied to human health and wellbeing. Without one there cannot be the other.

The health and wellbeing of all people is intrinsically linked to the health of the planet. [5]

The UN Sustainable Development Goals and the Decade on Ecosystem Restoration offer frameworks to create a flourishing world for all. These cannot be realized, however, if we do not restore our relationships with one another and the planet.

Throughout the development of the remaining nine principles we found that colonialism, racism, classism, and sexism facilitated the conditions and provided justifications for the dominance and exploitation of key ecosystems and the local communities which inhabit them. People and water and land in so many places around the planet have been reduced into the category of resources which can be used and abused with little regard to the consequences. For this reason, the principles that follow offer guidance on how to heal the wounds inflicted on the Earth, and on the people and species who suffer as a result.

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2. Uplift Stories, Narrative & History

Ecosystem restoration is the story of living in community with the Earth, its species, and one another.

What is this, and why is it important?

The history of a community and its culture is often intertwined with its ecosystems. This can be seen in the food that is eaten, the clothes that are worn, and the rituals that are performed in cultural or religious events. The stories and histories of a community inform the present and can help to frame a narrative for the future. They can also help to navigate the pitfalls and wounds that come from colonialism, environmental degradation, or internal conflict.

How to apply / integrate it

- Seek out stories from community leaders and representatives.
- Integrate wisdom from these stories in discussions with others.
- Adopt a mindset that the work we undertake is only a chapter in the larger community narrative about the ecosystem.

→ Case Study

Jordan was one of the first regions in the world to domesticate crops. However, the very ability to produce food is now under threat due to rising heat and diminishing access to water. TAYYŪN, a Jordanian based organization, is helping pioneer restoration efforts using the Miyawaki Forest Creation methodology to accelerate tree growth to provide habitat for native plants and foods. They are using stories from the past and methodologies from the present to help rekindle a relationship to nature and provide a new narrative for the future.

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3. Practice Humility

Ecosystem restoration requires us to learn from one another and from the Earth to create pathways for life to emerge.

What is this, and why is it important?

It's easy to make assumptions and pass judgment about what is or isn't working well in a place. These assumptions can lead to unwanted solutions which can leave the true problems unaddressed. Any solution should meet the lived needs of people and the ecosystems they occupy in ways that are familiar and can be instrumentalized within the bounds of existing societal, cultural or religious structures.

How to apply / integrate it

- Adopt an inquisitive mindset, ready to learn from others and nature.
- Acknowledge when we are wrong. Ask forgiveness where appropriate.
- Respect Traditions and ways of being that may be different or difficult to understand

→ Case Study

The Philippine Eagle Foundation is dedicated to saving the Philippine Eagle, a species on the brink of extinction due to habitat loss and poaching. However, their efforts were not making much headway until they began working with and learning from the Bagobo Tagabawa Tribe in the Philippines. The forest habitat in which both the tribe and the Philippine Eagle live is the foundation of the Bagobo Tagabawa culture. Working collaboratively with scientists and conservationists, they have been able to blend ancestral knowledge with modern scientific approaches to help restore the sacred forest and preserve the sacred Philippine Eagle.


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4. Find Ways to Be Inclusive

A healthy ecosystem is complex and accommodates a diversity of species and organisms. Foster a similar mindset when engaging community members and partners.

What is this, and why is it important?

The challenges that arise due to diversity, race, gender and class should not be avoided. This complexity gives texture to society, and must be understood both for the barriers and opportunities it creates. If done well, the work of ecological restoration can be a causeway for addressing unmet social needs. This can be done by inviting representative groups of stakeholders to help shape the process from the very beginning. By creating space to hear the authentic realities and struggles and dreams of people, there is a chance to create long lasting, meaningful solutions for community and ecosystem alike.

How to apply / integrate it

- Learn from and work with community structures, hierarchies and power dynamics.
- Try not to disrupt or impose what inclusion means. Ideological colonialism and paternal attitudes erode trust and confidence.
- If we experience community practices we find difficult, try to understand them and engage in respectful dialogue to offer alternatives.

→ Case Study

The mangrove forests that surround Mombasa have long acted as a cooling source for the city to cool, as well as acting as a natural sea wall. Urbanization, deforestation, and pollution have dramatically cut into these forests, prompting a concerted effort from the city government, along with civil society groups such as Brain Youth Group, to plant and restore mangroves. They group engaged the community to see what solutions were needed to deter illegal logging, and to place community needs at the center of their restoration initiatives. They provide training to community members, supporting monitoring activities, and training youth to serve as rangers. They have planted approximately 3.8 million mangrove seedlings along Tudor Creek with a survival rate of 87%.

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5. Restore Relationship

Ecosystem restoration rekindles a relationship between humans and nature, and is key to long-term sustainability and authenticity of the project.

What is this, and why is it important?

Climate change is complicating restoration efforts because what is "natural" is becoming a moving target. Flora and fauna have begun migrating towards habitable zones while other native species that are unable to adapt to rising temperatures and/or shifting rain patterns are dying. Faced with these challenges, ecological restoration can be a tool for helping communities cope with the changing complexion of their bioregion by participating in adaptation and mitigation measures.

How to apply / integrate it

- Explore how a restoration project can support a subsistence economy for surrounding communities.
- Identify the material and nonmaterial benefits of the restored ecosystem.
- Discover former cultural elements that supported the ecosystem, and how it may be possible to revive them.

→ Case Study

Trees for Life, a Scottish organization, works to rewild the Highlands through the restoration of the Caledonian Forest. All participants of the"conservation weeks" were interviewed during the weeks, and half were interviewed again once they had returned home. Research found that hands-on restoration created a positive connection between people and nature for most participants. They felt like they achieved something significant and felt like they earned their place in nature.[6]

6. Acknowledge Grief & Pain

Ecosystem restoration provides an outlet to transform the pain of loss and destruction into feelings of life and healing.

What is this, and why is it important?

Environmental degradation and destruction causes anxiety, grief, and despair. It can leave people and communities feeling a loss of identity and hopeless about the future. While eco-anxiety is growing across all demographics, young people and those in close proximity to ecological destruction are especially susceptible to these feelings.[7] By acknowledging grief and pain, there is an opportunity to create a space to healthily process these emotions and, as research shows, restoration projects can be a valuable tool for counteracting eco-anxiety and grief.

How to apply / integrate it

- Ensure the community feels safe to express their pain and grief.
- Demonstrate how the restoration project will help mitigate and/or help a region's ability adapt to climate impacts.
- Suggest resources for professionals—such as therapists, faith leaders, or counselors—who can help people process their grief and anxiety about climate change.

→ Case Study

The Mississippi River between Baton Rouge and New Orleans is home to nearly 150 petroleum and chemical facilities. It has become known as Cancer Alley because of the rate of cancer in the region. Faced with a seemingly unwinnable fight against petrochemical companies, Rise St. James, a faith-based nonprofit finds strength in Christian teachings around justice and hope, and comfort in times of grief and despair. Local churches and faith communities have opened their doors to give space for community-organizing meetings. The space and place provide room to grieve losses and celebrate victories, such as stopping new petrochemical plants from being built, in their long fight to create life in face of so much death.

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7. Honor Sacredness

Ecosystem restoration helps give reverence to the importance of life in all its different forms.

What is this, and why is it important?

When tied with metaphysical understandings of the world, ecosystems can be imbued with transcendent and sacred meaning. Communities may feel their health and prosperity are divinely connected to an ecosystem,[8] or that the ecosystem has been entrusted to their care by a higher power. While less verifiable than documented histories or stories, the sense of sacredness of a forest or river can be profound and a powerful motivator for action.

How to apply / integrate it

- Identify the stories, places and people the community holds sacred.
- Be aware of how the project may intersect with what the community holds as sacred.
- Ask questions to deepen your understanding.

→ Case Study

India's River Yamuna is sacred for Hindus worldwide. It is intimately linked with the Hindu god Krishna, and is the physical representation of a Goddess. Starting in the Himalayas, it flows down to Delhi where it becomes heavily polluted. Once it reaches the holy town of Vrindavan, the Yamuna is so full of toxins that it is impossible for any life to live in it. Religious leaders have initiated public-awareness campaigns, using the Hindu concept of Ahimsa (non-violence) to help change attitudes towards the river and its well-being.

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8. Integrate Rituals & Traditions

Ecosystem restoration is an opportunity for communities to connect with one another and nature.

What is this, and why is it important?

Rituals and traditions tell the stories of our past and of the things that we cherish. These rituals and traditions—whether coming-of-age ceremonies, a community thanksgiving, or songs that welcome the changing of seasons—help us point beyond ourselves and bring unity to a community. When appropriate, aligning ecosystem restoration projects with the rituals or traditions of a community can help foster a common sense of purpose.

How to apply / integrate it

- Learn and understand the rituals and traditions the community has in relation to the ecosystem.
- Find ways to integrate the work into these moments, if appropriate.
- Explore the possibility of creating new rituals and traditions that engages the community in the work being undertaken.

→ Case Study

For more than 25 years, Buddhist monks in northeast Thailand have been ordaining trees to stop deforestation.[9] The ordination process follows a similar ritual to the ordination process of a monk, and while the tree of course does not become a monk, it is symbolically given the prestige of a monk. The practice has found success because of the existing cultural and theological understandings that exist within the region. By conducting ceremonies and dressing trees in orange robes, they send a message to others that the trees are sacred. And while it's unknown how many trees have actually been saved or to what extent deforestation has been halted, it has led to increased awareness and other activities such as forest fire prevention.[10] The initiative has been so successful that it has spread throughout southeast Asia.


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9. Develop Inner Restoration

Ecosystem restoration helps us connect our inner and outer worlds.

What is this, and why is it important?

Many traditions speak of two worlds—the outer world and the inner world. They believe that the two are closely linked; that the outer world is a reflection of our inner state of being. These traditions sometimes teach that a reason for environmental degradation is due to humanity losing connection with their inner selves, and that environmental restoration requires individuals and communities to rebuild their inner lives. Understanding the inner/outer paradigm will better equip us in knowing how a community thinks and feels about its place in the world.

How to apply / integrate it

- Recognize the spiritual practices of the community—be it prayer, meditation and contemplation. These practices may be the most pronounced in spiritual and faith communities, but can be found in the whole of the community, even if they are not necessarily understood as "spiritual."
- Appreciate how spiritual practices associate with or are informed by a connection to the natural world.
- Understand how a community undertakes inner development and awakening.

→ Case Study

In Punjab, India, the organization EcoSikh has helped Sikh communities in planting sacred forests. Each forest is 200–300 square feet with 30–35 native species of trees. Through their efforts, they have planted 300 Guru Nanak sacred forests which are host to more than one million trees.[11] By engaging Sikh values and utilizing the strength of their institutional infrastructure and land, they have rapidly expanded their impacts. Their programming includes community education and engagement to help parishioners understand the ecological importance and its theological significance. The sacred forests illustrate what happens when you connect the transcendent to the physical, and lead with faith, hope, and love.

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10. Encourage Celebration & Gratitude

Ecosystem restoration gives cause to celebrate new life.

What is this, and why is it important?

Creating moments for a community to come together to celebrate and give thanks are important. It creates space for levity and joy, and a reminder to share love and appreciation for the work being done. For some, Celebration may feel inappropriate when so much crisis abounds but we cannot allow the shadows to cast out the light. Showing gratitude and respect builds community and trust, and creates moments for humanity and hope.

How to apply / integrate it

- Find regular ways to bring people together, such as over shared meals.
- Celebrate large milestones, including the start and end of a project, but also key moments in between.
- Create an atmosphere of celebration and joy.

→ Case Studies

Every culture, country, and tradition has rituals to celebrate or show gratitude. It could be Diwali in Hinduism to celebrate the triumph of light over darkness or the Obon Festival in Japan which honors the spirits of ancestors. In Brazil, Carnival is a centuries old tradition that brings people in costumes to dance and celebrate in the streets. In America, the Burning Man festival has grown to mythic proportions and draws people together from around the world to celebrate art and life. What matters is that the celebration, whatever it is, reflects the values and existing rituals of the community and helps create feelings of belonging and gratitude.

CONSULTATIONS

Stories of Place

To support the UN Decade on Ecosystem Restoration, the Center for Earth Ethics launched the Values, Culture, and Spirituality Consultation series. The series was a year-long effort of research and conversations with groups around the world who used the strengths of their culture or spiritual traditions to launch and sustain ecosystem restoration projects. The consultations put religious, spiritual, and Indigenous groups in conversation with UN partners, advocacy groups, and local government officials, to exemplify what is possible when restoration projects weave values and culture and spirituality into its plans.

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CONSULTATION 1

Air + Plastic Pollution

ST. JAMES PARISH — USA

St. James Parish is an 85-mile (137-kilometer) stretch of land along the Mississippi River between Baton Rouge and New Orleans, Louisiana, in the Barataria Basin. The Barataria Basin was once home to some of the most robust wildlife and fish habitats in the world, including freshwater and estuary, and coastal ecosystems that helped sustain countless generations of people along its banks. It was home to the Choctaw and the Chitimacha, among other Indigenous communities before they fell victim to European colonialists, who in their own turn, trafficked countless enslaved Africans to the region. Their stories, their cultural heritage, and their gravesites checker the region, but even those are being covered by rising tides and deteriorating ecosystems.

Forty years ago, a person could still swim freely in the levee waters, fish, and catch crawfish. People could supplement their grocery purchases with kitchen gardens full of sweet corn,beans, and other fruits and vegetables. Hurricane Katrina (2005) and the Deepwater Horizon oil spill (2010) severely damaged the area's ecosystem. The region also has become home to more than 150 petrochemical plants and refineries. As a direct result of pollutants from heavy industrial and plastic production, residents in St. James Parish are 50 times more likely to develop cancer than other Americans. The water is undrinkable, the air toxic, and the ecosystem nearly uninhabitable for aquatic species and migratory birds. Resistance is the first step in restoration, and St. James residents have successfully stood up to petrochemical giants like Formosa to keep new plants from being built. These groups have raised global awareness about the threat of plastic to human and planetary health, and helped spark the landmark UNEA Plastic Pollution Treaty, Science Body on Chemicals negotiations that will create new global legal requirements for plastic production and disposal.

Adam Jones/ flickr

CONSULTATION 2

Water

THE RIVER YAMUNA — INDIA

The River Yamuna is one of India's most sacred rivers. From its source is the Yamunotri Glacier of the Lower Himalaya in Uttarakhand, it wends from the highlands to the lowlands and eventually to the Indian Ocean. Along the way, it provides water to nearly 57 million people and accounts for 70% of the water used in Delhi.

Loosely connected to stories of the Hindu deity Krishna, the Yamuna is venerated and worshiped by Hindus worldwide. According to Hindu tradition, the baby Krishna was carried over the Yamuna by his father to escape death. Krishna is said to have lived by the river as a youth and to have found relief from the heat and quenched his thirst by drinking the river's clean, cool water.

For countless generations, tens of thousands of devotees come to the River Yamuna every year to pray and to drink and to bathe, believing that they will be cleansed of their sins. Much has changed to the river over the years. Now instead of clean and pristine waters, devotees are met by sewage from the capital and neighboring states. Industrial runoff and pesticides from farms along the river creates bergs of pink foam that slowly float past penitential seekers who are left to wash their sins away with water stained by pollution. The waters of the Yamuna is considered alive though severely degraded upriver of Dehli, but once it passes through the city, the pollution in the river becomes so profound that the river is considered dead. Hindu temples along the river have stepped up their advocacy in recent years and are continuing in their attempts to encourage meaningful environmental legislation from their lawmakers while also liaising with development groups and environmentalists to create place-based solutions to clean the river and encourage wildlife to return to the river.

Hamid's Lens/iStock

CONSULTATION 3

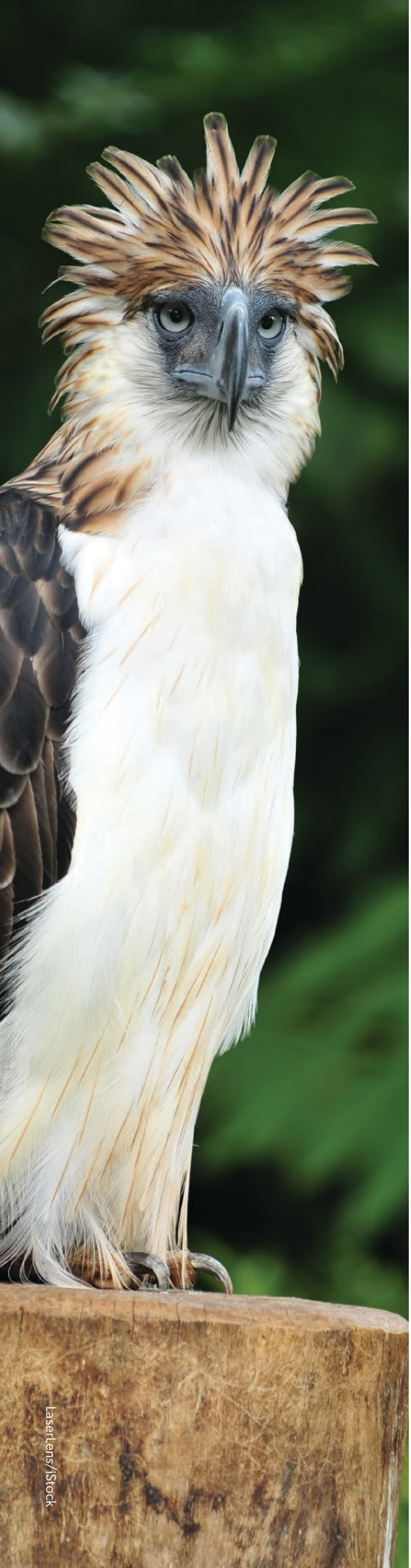
Urban Restoration

MOMBASA — KENYA

Mombasa is an old city. It was home to the Bantu before the waves of mariners, fisherman, merchants, imperialists, and missionaries came. Persian, Omani, Arab, Portuguese, and British influences can be seen in the architecture and tasted in its foods. And while the dynasties have come and gone, Mombasa and the mangroves that surround it have remained. They serve as a storm wall against the sea, provide a habitat for fish and wildfish, and cool the city.

Due to colonial vestiges of city planning, there are few communal green spaces or parks. Those that do exist are in more affluent areas that colonists constructed for themselves and their fellow Europeans, but excluded native Mombasans. Recognizing the value green spaces hold both for mental and physical health, as well as ameliorating the urban heat island effect, advocates are working with city officials to integrate green spaces into city plans—but this needs greater diversity and more robust partnership frameworks.

Similar efforts are underway to preserve the mangrove forest that ring Mombasa, which provide home to fish—and countless birds, and form an important barrier protecting the city from the swelling ocean and sweltering heat. Yet like all forests, these mangroves are under threat. The challenge is to raise community awareness about why it is important to protect the existing forests while also planting and restoring degraded areas.



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CONSULTATION 4

Species

THE SACRED PHILIPPINE EAGLE — THE PHILIPPINES

The Bagobo Tagabawa have made their home in the Philippines' Apayao region located within the Cordillera Central Mountains for generations. The region is home to rain forests in its lower elevations and tropical pine forests in elevations above 1000m. It is here that the Sacred Philippine Eagle, the primary apex predator in the region, has made its home alongside the Bagobo Tagabawa tribe and countless other species of flora and fauna. For the Bagobo Tagabawa, the forest is not only their ancestral domain, the land also serves as their hospital, their market, and their source of community and relationship to one another, and to the plants and animals they cohabitate the space with.

The Philippine Eagle is critically endangered—with only 300 breeding pairs left—but a bonded alignment of conservation values with cultural traditions, knowledge, and practices is creating the conditions for their return.

The forests where the Eagle roosts are endangered by illegal and legal logging, and landowners were keen to lease or sell their land to loggers and developers. Conservationists at the Philippine Eagle Fund were unsure how they were going to preserve the forest land until they began partnering with the Bagobo Tagabawa, who using the *lapat*, which is not a conservation method but rather a respected religious rite rooted within the culture, which encouraged land owners to set their forestland aside for protection and conservation. The Philippine Eagle Fund has provided essential education and philanthropy to support, that in tandem with the structures of *lapat*, has spanked the community to enforce protections for the eagle, the forest, and several other species.

Marc Osborne/iStock

CONSULTATION 5

Food Security

JORDAN

Jordan sits at the crossroads of the continents of Asia, Africa, and Europe. Along with its neighbors in the Fertile Crescent, Jordan was home to some of the first domesticated crops and irrigation systems, which laid the foundations for modern agriculture. Mostly known as an arid region, Jordan once hosted an abundance of biodiversity including elephants, rhinos, cedar forests and the Asiatic lion.

Today, the Jordan Valley in northwest Jordan is responsible for most of the country's agriculture. The region has historically relied on seasonal rains, river water, and clever irrigation methods to provide water for its crops but climate change induced heat, drought, and decreased rainfall and river flows have severely threatened Jordan's agricultural yields. Jordan's agriculture uses more than 50% of all water resources to produce some 45% of the country's dietary requirements. 55% of the food consumed is imported.

In addition to its climatic challenges, Jordan's borders have become home to over 1.3 million Syrian refugees line the border in camps plagued by water and food insecurity, in addition to refugees from past wars and conflicts, like Palestine and Iraq.

A Note on the Role of Race, Gender, Class and Colonialism

The deleterious effects of racism, sexism, classism, and colonialism—both past and present—emerged throughout the consultations. These issues help create and exacerbate conditions for ecosystem devastation through forced labor, enslavement, and exploitative practices that rob individuals and groups of their autonomy and their ability to manage and be in relationship with the land and water that sustained them. The triple planetary crises disproportionately impact those who are most marginalized and exploited, so the work of ecosystem restoration in historically exploited areas will not only heal the Earth, but will also serve to heal those who have suffered the most.

A Note on Indigenous Rights, Safety, Sovereignty and Wisdom

Although they make up less than 5% of the world population, Indigenous peoples protect 80% of the Earth's biodiversity in the forests, deserts, grasslands, and marine environments in which they have lived for centuries. This work is sacred, and it is dangerous. The Guardian reports that, "Indigenous communities suffered more than a third of [environment-related] killings." Along with ongoing violence towards Indigenous peoples, groups throughout Latin America are exploiting policies meant to empower Indigenous stewardship to [il]legally harvest trees and other natural resources on Indigenous lands.[12]

While this is true of many religious and spiritual traditions, Indigenous spirituality is particularly tied to place: a river, a forest, a mountain range. When these places are damaged or destroyed so too are the traditions, ceremonies, and knowledge that were tied to them.

For these reasons, we must adopt the practices and principles of inclusive conversation to help meaningfully engage Indigenous groups so that their knowledge, experience, and safety are integrated at the very beginning of ecosystem restoration design, implementation, and the subsequent management of those projects.

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Footnotes

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The 10 Principles of the UN Decade on Ecosystem Restoration

1. **Global Contribution:** Ecosystem restoration contributes to the UN Sustainable Development Goals and the goals of the Rio Conventions.
2. **Broad Engagement:** Ecosystem restoration promotes inclusive and participatory governance, social fairness, and equity from the start and through the process and outcomes.
3. **Many Types of Activities:** Ecosystem restoration includes a continuum of restorative activities.
4. **Benefits to Nature and People:** Ecosystem restoration aims to achieve the highest level of recovery for biodiversity, ecosystem health and integrity, and human well-being.
5. **Addresses Causes of Degradation:** Ecosystem restoration addresses the direct and indirect causes of ecosystem degradation.
6. **Knowledge Integration:** Ecosystem restoration incorporates all types of knowledge and promotes their integration throughout the process.
7. **Measurable Goals:** Ecosystem restoration is based on well-defined short-, medium-, and long-term ecological, cultural, and socio-economic goals.
8. **Local and Land/Seascape Contexts:** Ecosystem restoration is tailored to the local ecological, cultural, and socioeconomic contexts, while considering the larger landscape or seascape.
9. **Monitoring and Management:** Ecosystem restoration includes monitoring, evaluation, and adaptive management throughout and beyond the lifetime of the project or program.
10. **Policy Integration:** Ecosystem restoration is enabled by policies and measures that promote its long-term progress, fostering replication and scaling-up.

Center for Earth Ethics

UNITED NATIONS DECADE ON ECOSYSTEM RESTORATION 2021-2030

This handbook was created by the Center for Earth Ethics.

The Center for Earth Ethics (CEE) works at the intersection of values, ethics and ecology to confront the climate crisis. CEE works to change the dominant value system from one based on short-term material gain—no matter the pollution, depletion and inequity that result—to one based on the long-term health of the whole community of life. Through education, convening and advocacy, we engage individuals and communities to raise public consciousness as well as shift policy and culture.

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