

LANDSCAPE PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT: ACHIEVING THE SDGS THROUGH INTEGRATED LANDSCAPE MANAGEMENT

A White Paper to discuss the benefits of using ILM as a key means of implementation of the Sustainable Development Goals produced by the Landscapes for People, Food and Nature Initiative



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LANDSCAPES FOR PEOPLE, FOOD AND NATURE INITIATIVE

The Landscapes for People, Food and Nature Initiative is a global network of more than 70 conservation, development, and agriculture organizations who champion integrated landscape management at landscape, national and international levels. Founded in 2011, the Initiative is co-organized by Bioversity International, EcoAgriculture Partners, the Food and Agriculture Organization of the United Nations (FAO), Ministry of Economic Affairs of the Government of the Netherlands, the United Nations Environment Programme (UNEP), World Agroforestry Centre (ICRAF), World Bank, and World Resources Institute. The Initiative links and adds value to the many landscape initiatives and networks already in place worldwide, and coordinates action to improve the enabling environment for integrated landscape management. To learn more, visit us at www.peoplefoodandnature.org.

LPFN SDG TASK FORCE MEMBERS



KEY MESSAGES

- ▶ Integrated landscape management offers an action-oriented means to achieve multiple SDG targets simultaneously at local and subnational levels.
- ▶ National governments can readily build integrated landscape management into their national sustainable development strategies and utilize the approach as an integration and implementation mechanism for achieving multiple SDGs.
- ▶ The International community, donors, investors, and national governments should prioritize support for integrated *place-based* - rather than sector-based - development finance.
- ▶ Since UN Member States have recognized that the Sustainable Development Goals are indivisible and should be implemented in an integrated manner, achieving the goals will require intentional actions to overturn the business-as-usual single-sector and siloed approach to development.
- ▶ Collaborative planning, negotiation, and action at *landscape scale* in particular is essential to support improved coordination, the identification of synergies, and the management of trade-offs among diverse stakeholders.
- ▶ Integrated landscape management has been implemented and successful in a wide range of environments and cultures across the globe, providing practical examples of place-based implementation to enhance ecosystems and livelihoods.

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INTRODUCTION

In September 2015, the United Nations General Assembly adopted the 2030 Sustainable Development Agenda, with its 17 Sustainable Development Goals (SDGs) and 169 associated targets, universally applicable to all nations.ⁱ This agreement marks a momentous opportunity to catalyze new and innovative efforts to improve human well-being and social equity, while also conserving Earth's natural resources and the vital ecological functions on which we all depend.

Considering interlinkages between SDGsⁱⁱ and the urgency to achieve SDGs simultaneously, a global coalition of leading agriculture, environment and development organizations – the Landscapes for People, Food and Nature Initiative – proposes integrated landscape management (ILM) as a fundamental means of implementation of the Sustainable Development Goals.

ILM is an approach to land management that supports integration across sectors and scales; increases coordination; and ensures harmonization of planning, implementation and monitoring processes at the landscape, sub-national and national levels.¹ ILM ensures that by managing the underpinning natural resource base and ecosystem services in a coordinated way, societal needs can be met in the short and long term.

In this paper, the partners of the Landscapes for People, Food and Nature Initiative lay out the rationale for countries to use integrated landscape management as a fundamental means of implementation of the SDGs and recommends actions governments can take to get started. The paper first summarizes the opportunities and challenges of SDG integration and how ILM can contribute to the achievement of the Goals (section 1); explains the key features of ILM and how the approach could be used to implement the SDGs, with case examples from around the world (section 2); describes what policies and institutional investments support ILM (section 3); and makes recommendations for action to national governments and to the international community to advance integrated landscape management to fully meet the SDGs (section 4).



1 INTEGRATED LANDSCAPE MANAGEMENT: A FUNDAMENTAL MEANS OF IMPLEMENTATION FOR THE SUSTAINABLE DEVELOPMENT GOALS

To achieve the Sustainable Development Goals will require member States and the international community to resist the business-as-usual single-sector and siloed approach to development. Member States have acknowledged that the Sustainable Development Goals are indivisible and should be implemented in an integrated manner.ⁱⁱⁱ This provides the opportunity to achieve coherence in policies and actions across all levels and scales, from local to global. Collaborative planning and action at landscape scale in particular is an essential foundation for maximizing synergies across multiple sectors.ⁱ

An integrated landscape approach encourages stakeholders to weigh competing demands and balance trade-offs between different land uses in a given geographical area. It involves those stakeholders in a collaborative management process to achieve their multiple objectives. ILM necessarily requires that stakeholders share evidence, information and best practices, and that a shared vision for sustainably managing the landscape is articulated and agreements are made to advance the vision.²

1.1 ILM CAN HELP ACHIEVE INTER-CONNECTED SDGS

Thematic interlinkages between the SDGs—that is, the crosscutting and multi-dimensional nature of the goals—are numerous and well-documented.^{iv} Recognizing these dependencies requires us to consider very carefully how progress on one goal may have contingent positive or negative impacts on other goals, and anticipate such outcomes in our development projects and programs. With a limited land base for food, fiber, fuel and conservation uses, for example, sector-specific approaches to achieving the SDGs will be ineffective in the long-term. Systematic mechanisms for learning and negotiation among stakeholders and deliberate efforts to reduce tradeoffs and enhance synergies are imperative to ensure sufficient natural resources to meet all the Goals.^v

Sustainably managed landscapes serve as the life raft system on which the world's population—9 billion people by 2050—depends. A multi-functional landscape simultaneously meets a full range of local needs (e.g. ensuring water availability for households, farms, businesses and wildlife; biodiversity for crop pollination and wildlife tourism; producing nutritious and profitable crops for families, markets and industry; enhancing human health), while also contributing to national commitments for global targets (e.g. net reductions in land-based greenhouse gas emissions; the Aichi targets for biodiversity conservation; providing rural employment; generating power from renewable resources; reducing incidence of illness and disease).

Because of these interlinkages and the complexity and interrelated nature of local needs and current global challenges, integrated landscape management can contribute significantly to implementing the SDGs.^{vi} Specifically, ILM can *directly* support the achievement of 16 SDGs and advance progress toward at least 38 targets (Table 1.1).

1. A landscape is a socio-ecological system that consists of natural and/or human-modified ecosystems, and which is influenced by distinct/unique ecological, historical, economic and socio-cultural processes and activities. It is at the landscape scale that the complexity of integrating these processes is more manageable.
2. There are many paths to ILM, and landscapes often employ different entry points, negotiation processes, and institutional arrangements. More than 80 communities of practice have been documented rising to the challenge of managing landscapes to achieve positive outcomes across multiple sectors, including those undertaking participatory watershed management, pastoral community conservancies, ecosystem management, forest landscape restoration, climate smart territorial development, indigenous landscape management, agricultural green growth, climate-smart landscapes, food-energy-water nexus systems, and city-region food systems (S. Scherr and S. Shames, *Defining integrated landscape management for policy makers*, 2013).



Diverse, well-sited, sustainably-managed agricultural systems improve the food security, resilience and livelihoods of farmers and their neighbours in town and downstream, while providing and protecting habitat, renewable building materials, clean water, and carbon sequestration.



Inclusive natural resource management empowers women and youth, which often leads to an increased focus on the local social and health outcomes of development activities. Actions that improve food security without harming ecosystem health also improve the wellbeing of all community members.



By considering the interconnectedness of the landscape, managers realize how actions in a landscape influence the flow of water from agricultural, forest, and natural areas to key areas for human use, especially downstream to cities. Cost-effective upstream water management practices can be crafted to have positive impacts on food security, livelihoods and biodiversity.



Restoring degraded land for both forests and agricultural production stores carbon in trees and in the soil, while reducing the need for further agricultural expansion that exacerbates climate change. Planning locally-appropriate and synergistic renewable energy sources, like biogas, solar, and wind power, reduces greenhouse gas emissions, empowers communities, and improves human health.



Sustainably managed and lightly used habitat for native plants, birds, bees and beasts provides critical ecosystem services like pollination, pest predation, and wildfire and land slip protection, along with being culturally significant, beautiful and valuable in its own right.

Figure 1.1. A sustainably managed, multi-functional landscape. In this example, we highlight five SDGs that are inter-connected in a single landscape. By taking an integrated landscape approach, the Goals can be achieved simultaneously.

SDG	TARGETS THAT CAN BE ACHIEVED THROUGH ILM
1. End poverty in all its forms everywhere	1.2 Reduce by at least half the proportion of men, women and children living in poverty in all its dimensions 1.4 Ensure all men and women have equal rights to economic resources 1.5 Build the resilience of the poor and vulnerable
2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	2.1 End hunger and ensure access by all people to safe, nutritious and sufficient food all year round 2.3 Double the agricultural productivity and incomes of small-scale food producers 2.4 Ensure sustainable food production systems and implement resilient agricultural practices 2.5 Maintain genetic diversity of seeds, plants and animals
3. Ensure healthy lives and promote well-being for all at all ages	3.9 Reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
4. Ensure inclusive and equitable quality education	4.7 Ensure all learners acquire the knowledge and skills needed to promote sustainable development
5. Achieve gender equality and empower all women and girls	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making 5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources
6. Ensure availability and sustainable management of water and sanitation for all	6.3 Improve water quality 6.4 Improve water use efficiency 6.5 Implement integrated water resources management 6.6 Protect and restore water-related ecosystems
7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.2 Increase the share of renewable energy in the global energy mix
8. Promote sustained, inclusive and sustainable economic growth	8.4 Improve global resource efficiency in consumption and production and decouple economic growth from environmental degradation
10. Reduce inequality within and among countries	10.2 Empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas
12. Ensure sustainable consumption and production patterns	12.2 Achieve sustainable management and efficient use of natural resources 12.3 Reduce food losses along production and supply chains 12.6 Encourage companies to adopt sustainable practices 12.8 Ensure that people have relevant information and awareness for sustainable development and lifestyles in harmony with nature

SDG	TARGETS THAT CAN BE ACHIEVED THROUGH ILM
13. Take urgent action to combat climate change and its impacts	13.1 Strengthen resilience and adaptive capacity to climate-related hazards 13.2 Integrate climate change measures into national policies, strategies 13.3 Improve human and institutional capacity on climate change mitigation, adaptation, impact reduction
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	14.1 Prevent and reduce marine pollution, particularly from land-based activities 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems
15. Protect, restore and promote sustainable use of terrestrial ecosystems	15.1, 15.2, 15.4 Ensure conservation, restoration and sustainable management of all terrestrial ecosystems 15.3 Combat desertification, and restore degraded land and soil 15.5 Take urgent action to reduce degradation of natural habitat, halt the loss of biodiversity 15.9 Integrate ecosystem and biodiversity values into national and local planning
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

Table 1.1: ILM can help achieve many of the Sustainable Development Goals and Targets

1.2. BENEFITS OF AN INTEGRATED LANDSCAPE APPROACH FOR MEETING SDGS

Achieving long-term economic, environmental and social goals depends increasingly on our ability to understand and account for interdependencies and to employ approaches which can support improved coordination, the identification of synergies, and management of trade-offs. Integrated landscape management offers specific advantages in these regards.

Integrated landscape management:

- ▶ **Generates solutions that achieve multiple objectives at once.** For example, a cross-sector program for watershed restoration can spur economic activity, improve agricultural productivity, foster biodiversity and contribute to climate change mitigation and adaptation, as well as improve water availability and quality and thus help enhance the health conditions of the entire population. Adopting a landscape approach that systematically considers multiple sectors and diverse stakeholder needs enhances overall policy and program coherence and effectiveness.
- ▶ **Improves inter-sectoral coordination and cost-effectiveness at multiple levels.** Coordinated strategies and plans encourage synergies among national, sub-national, and local governments, and make best use of scarce financial resources by reducing redundancies and increasing sustainable development returns on investment through effective planning and decision making at all levels of government.
- ▶ **Empowers communities through multi-stakeholder processes and inclusive governance.** ILM is a participatory, collaborative process that engages all stakeholders—including women, youth, mobile communities, indigenous peoples, and other marginalized and vulnerable peoples—in decision-making and management of natural resources, agricultural lands, biological diversity, and culturally important resources.
- ▶ **Enhances transboundary and regional cooperation.** An integrated landscape approach considers ecological connectivity, economic cooperation, and labor migration all in one framework. By providing a platform for multi-stakeholder participation and negotiation and shared learning, ILM promotes dialogue and cooperation at all levels.
- ▶ **Contributes to national and regional strategies for addressing climate change.** By bridging science, practice and policy, sustainably managed landscapes can achieve mitigation, adaptation, and agricultural production objectives while ensuring environmental sustainability.

2 DEVELOPMENT OF INTEGRATED LANDSCAPE MANAGEMENT WORLDWIDE

The past decade has seen the rise of integrated landscape management, in diverse forms, all around the world, in places where challenges and opportunities call for simultaneously increasing food production, improving livelihoods, and protecting biodiversity and ecosystem services.^{vii}

2.1. KEY FEATURES OF INTEGRATED LANDSCAPE MANAGEMENT THAT HELP ACHIEVE MULTIPLE SDGS

Five key features characterize ILM, all of which facilitate the achievement of multiple SDGs: 1) shared or agreed upon management objectives that encompass multiple benefits from the landscape; 2) practices that are designed to contribute to multiple objectives; 3) management of ecological, social, and economic interactions for the realization of positive synergies and the mitigation of negative trade-offs; 4) collaborative, community engaged planning, management, and monitoring processes; and 5) the re-configuration of markets and public policies to achieve diverse landscape objectives.^{viii} Though ILIs are necessarily designed to be ecologically, economically, and culturally appropriate, and therefore unique to their environments, these five features form the foundational pillars of effectively implemented ILIs spanning regions and continents.

2.1.1. SHARED LANDSCAPE MANAGEMENT OBJECTIVES

Strong and effective multi-stakeholder platforms and collaborative management are imperative to realize synergies and manage trade-offs at a landscape scale. Broad stakeholder participation—including farmers (both smallholder and large-scale), representatives

from the various industries in the landscape, representatives of differently sized settlements that are within the landscape, women, youth and indigenous groups, community action organizations, NGOs, and local government representatives—in shared learning and negotiation ensures a more democratic process of community management and planning, increases local empowerment, and facilitates locally appropriate planning objectives (see Case 1).

Ensuring that stakeholder engagement is inclusive and collaborative bolsters community buy-in to a shared vision for landscape management, and makes certain that objectives seek to improve and support the full array of services provided by the landscape, including social, economic, and environmental. Defining near-term, accessible targets can initiate the process of multi-stakeholder collaboration, and allows for shared learning that builds confidence and trust needed to confront longer-term and more complex issues.

Integrated landscape management can also help foster larger-scale cooperation. By focusing on developing a shared vision and achieving multiple objectives simultaneously, ILM can help overcome transboundary, inter-jurisdictional, and inter-agency conflicts. In some cases, e.g. where rivers form the boundaries between states or sub-national jurisdictions, integrated landscape management may provide the only practical platform for sustainable long-term resource management (see Case 2).

CASE 1

STAKEHOLDER APPROACH TO RISK-INFORMED AND EVIDENCE BASED DECISION-MAKING (SHARED): SHIFTING DECISION CULTURE FOR SUSTAINABLE DEVELOPMENT IN TURKANA COUNTY, KENYA

Kenya's new constitution mandated devolved governance to the county level and requires each county to develop and implement their own County Integrated Development Plan (CIDP) and establish inclusive consultative planning processes. The Turkana County Government was one of the first counties in Kenya to develop a CIDP and has since recognized that the "integrated" aspect could be greatly enhanced. Thus, the County requested an interactive process and tools to take inclusive and evidence based decisions.

The Stakeholder Approach to Risk Informed and Evidence Based Decision Making (SHARED) method explicitly brings together processes, evidence, experience, and tools to assist in carrying out multi-stakeholder negotiations and decision-making that are more inclusive, inter-sectoral and inter-institutional. The SHARED process offers stakeholders from different sectors, levels and affiliations a space within which to interact with and interrogate evidence, in order to understand the risks and opportunities—that exist across sectoral and spatial boundaries—associated with potential investment options and decision outcomes. Innovative processes to address complex issues such as SHARED can help make integrated landscape management a reality for communities and authorities across scales around the world.

Working in close partnership with the United Nations Children's Fund (UNICEF), World Agroforestry Centre (ICRAF), and the National Drought Management Authority (NDMA), as well as Kenya's Finance and Planning Ministry, the Turkana County Government chose to refine their planning, decision making and allocation processes used for their annual development and investment plans, as well as to review and revise their CIDP going forward. The revised process includes: a) data, evidence and trends using the Resilience Diagnostic and Decision Support Tool developed by the ICRAF GeoScience Lab to determine priority landscape and livelihoods investments; b) collectively established criteria for testing investment allocations both within the county and with investors to maximize advances toward the county's articulated development outcomes; and c) mechanisms for greater community engagement in data collection, analysis, and use in local decision making.

The Honorable Governor, Joshat Nanok, directed that the SHARED process be used to ensure inclusive and integrated negotiation and decision making among government actors, communities and other stakeholders, and to establish a real-time knowledge center to collect and integrate data and evidence for negotiations. The SHARED process has been put in place to simultaneously achieve the CIDP, Arid and Semi-arid Land (ASAL) Resilience and Sustainable Development Goals, and has contributed to enhanced landscape governance within the context of official administrative boundaries.

Case by C. Neely, S. Chesterman, T-G.Vagen. World Agroforestry Centre.

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CASE 2

INTEGRATED LANDSCAPE MANAGEMENT IN THE TRANSBOUNDARY KAILASH SACRED LANDSCAPE

Mount Kailash, located in the Tibetan Autonomous Region of the Peoples Republic of China, has been for thousands of years a sacred site of supreme importance for the majority of religious groups in Asia, namely Buddhism, Hinduism, Jainism, Sikhism and Bon. Every year a hundred thousand pilgrims visit this sacred mountain and surrounding sites in a remote part of western China.

The Mount Kailash region is also the source of four major river systems for South Asia including the Indus, the Karnali/Ganges, the Brahmaputra and the Sutlej. The water sources are used for multiple purposes like irrigation, hydropower generation and are a source of life for millions of households downstream in the joining parts of Nepal and India. This region is characterized by various eco-systems ranging from subtropical in the south to temperate alpine and cold high altitude desert types in the north with high biodiversity of flora and fauna.

National governments of the three surrounding countries, namely China, India and Nepal, as well as local communities, are aware of the rich and diverse ecology and culture of the region. They are also aware of the future challenges linked to climate change, the interface of upstream-downstream disasters and knowledge gaps on long term climate, ecological degradation and other data. Their different interests and the different ways in which they are approaching such challenges had for a long time, hindered collaboration.

However, in 2005, with the encouragement of the International Centre for Integrated Mountain Development (ICIMOD), the three countries agreed to take an integrated holistic approach towards the different conservation and development issues within this unique landscape, which includes parts of the southwestern Tibetan Autonomous Region, China, the north-western part of Nepal and north-eastern part of Uttarakhand State, India.

During the initial years of the project, partners worked to develop a common approach to transboundary landscape management that incorporated the different interests of the stakeholders involved and that also considered the varied national policies and capacities of the partner institutions in each country. Several frameworks and strategies were developed in a consultative process to guide long term cooperation, clarify ways of working together, and determine which methodologies to use and the modes of implementation. The initial implementation phase started in 2011 and will conclude in 2017.

The partners agreed on five overarching objectives for the Kailash Sacred Landscape during the collaborative planning process: developing improved livelihood systems, improved eco-system management for sustainable services, access and benefit sharing, long term socio-ecological monitoring, and regional cooperation, enabling policies and knowledge management systems. Partners worked to ensure that project plans were linked to national plans in each country.

Despite the challenges faced, the project has already achieved significant impacts in terms of improving regional cooperation and collaboration between the various stakeholders in the field. The nomination of the Kailash Sacred Landscape as a transnational World Heritage Site by UNESCO is under discussion, and if successful, will help to cement future cooperation at the landscape scale between the three states.

Case By Corinna Wallrapp, Advisor of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

2.1.2. MULTI-OBJECTIVE PRACTICES

Once a diverse and inclusive stakeholder group has adopted locally appropriate objectives that recognize the full array of services provided by the landscape, farm and field practices must be designed to improve conditions for working toward multiple objectives. Examples of such practices include utilizing integrated pest management (IPM), tillage regimes and crop rotations, and agroforestry, amongst many others. Sustainable practices such as these protect wild habitats, sustain land quality, efficiently use water and energy, contribute to food and nutrition security, and minimize pollution from nutrients, pest control, and waste, thus positively affecting human health.

Rural landscapes are not the only ones that benefit from ILM. Urban sustainability can be enhanced by leveraging rural development in ways that positively impact sustainable food systems. City region food systems (CRFS) link rural and urban sustainable development, and promote sustainable consumption and production. Cities and their territories are increasingly incorporating sustainable food systems amongst their priorities to address hunger and improve nutrition while also addressing overall resilience of urban systems (see Case 3). The new goal for sustainable urbanization also addresses the rural dimension of urban expansion, calling for integrated urban, peri-urban and rural planning. ILM can help its regions in many countries achieve this target. Mayors and urban planners have begun to think “outside the urban box” as represented by the provisions of the Milan Urban Food Policy Pact, signed by over 120 municipalities around the world.^{ix}

CASE 3

CALGARY EATS: CREATING A SUSTAINABLE CITY THROUGH A FOOD SYSTEM ACTION PLAN

Spurred by food price surges, land scarcities, rapid urbanization, national security concerns, and adverse effects of climate change – including water and heat stress, damaged ecosystems and rising sea levels - some cities have begun to adopt regionally focused food action plans, most within the past 10 years.^x Among these policy leaders is Calgary, Canada, which adopted its Calgary EATS! Food Action Plan in 2012. The plan and corresponding assessment is part of the city’s ImagineCALGARY 100-year urban sustainability action plan, which identifies food as a critical issue for Calgarians and its quest for creating a sustainable future for its citizens.

Based on community surveys and policy gap analyses, the CalgaryEATS! plan visualizes the development of a sustainable food system in its entirety, from production to waste disposal. In order to develop a holistically sustainable food system, the plan establishes six food-related targets that are included in the imagineCALGARY initiative. These targets include: producing 30 percent of food consumed in the City locally by 2036; improving accessibility; developing a secure supply by raising consumption of locally produced food to 30 percent by 2036; improving environmental sustainability by sourcing 100 percent of food from “sources that practice sustainable food production” by 2036; ensuring a healthy society by ensuring that all Calgarians have access to “nutritious foods;” and fostering community development through urban agriculture while raising urban food production to five percent of local consumption by 2036.^{xi} Additionally, the plan identifies key actors involved in the food system chain and identifies specific responsibilities of various actors in supporting and furthering the objectives of the food action plan.

2.1.3. ILM PROVIDES PLATFORMS FOR TURNING SPATIAL ANALYSIS INTO ACTION

A wide variety of recent research initiatives have focused on generating spatial information about ecosystem services, development, conservation and restoration opportunities, and the interactions between social, economic, and environmental forces shaping land use change. Yet, much of this spatial information falls short of delivering sustainable long-term land use planning at actionable levels. Foreseeing and understanding implications of potential trade-offs and making informed decisions about the best course of action is an important part of the land use planning process. Integrated analysis and planning tools are critical to finding acceptable courses of action in the near-term and that will prove sustainable in the long-term. ILM provides an integrated, evidence-based, and risk-informed decision making process that can be supported by monitoring and evaluation metrics that recognize cross sector synergies (see Case 1). In this way, international and national spatial analysis expertise can find its way into on-the-ground implementation.

Spatial information, such as maps of important areas for biodiversity, agriculture and hydrology, is essential to plan strategically for a multi-functional landscape. Many of the processes which govern landscapes are unseen and difficult to detect; from plants' roots slowing run-off and holding topsoil to encourage groundwater recharge, to forest patches that house pollinators and improve nearby crop yields. Maps of where and how manifestations of these processes occur can be particularly enlightening, showing how one farmer's decisions trickle down to affect many more people in the landscape. For example, in the framework of the United Nations Environment Programme (UNEP) 'ecosystem management of productive landscapes' project, the World Conservation Monitoring Centre (UNEP-WCMC) conducted spatial analysis and mapping in the Great Lakes Region of East Africa, Peru, and the Mekong River Basin to determine how commodity-driven scenarios of agricultural development affect biodiversity and ecosystem services at regional levels.

In another example, as part of a larger CGIAR project with the Water, Lands and Ecosystems program, Bioversity International is working with the Volta Basin Authority in West Africa to evaluate the potential impact of conservation and management actions in the basin on ecosystems and human-wellbeing. A suite of spatial models are being built around the InVEST tool set to quantify the contribution of specific ecosystem services to attainment of SDG targets around food security, health and water across a landscape. The models will be used to evaluate outcomes of different national land use policy and infrastructure investment scenarios. With ILM, model outputs can be used to visualize trade-offs between the multiple ecosystem services-based indicators evaluated in each landscape.^{xii}

Additionally, monitoring integrated metrics—bio-physical factors such as carbon storage, water quantity and quality, and other ecosystem services, as well as socioeconomic and cultural variables that can reduce conflict and encourage continued stakeholder engagement—provides critical information to land managers to inform coordinated responses at the landscape scale. Advances in technology and ecological monitoring significantly aid the ability of locally-generated data to contribute to national data-collection efforts to assess progress toward the SDGs.

2.1.4. COLLABORATIVE, COMMUNITY-ENGAGED PROCESSES

Beyond promoting greater democratic control and improving public support for ILI programs, collaborative community management bolsters local autonomy by building local capacities for governance and management and reducing dependence on exogenous support. For instance, the Model Forest Network approach to landscape governance entails encompassing all aspects of activity within a geographic area, with the aim of making sustainable development a reality through collaboration, adaptation, social learning and innovation. In Africa, Model Forests function as social infrastructure - with resilience, reactivity and the ability to be sustained with or without external funding, as well as the capacity to respond quickly and consistently to opportunities. Partners work through collaborative challenges and conflicts, resource crunches and crises to find solutions to their collective needs.^{xiii}

Indigenous, local or community-led integrated landscape management initiatives have also emerged to empower marginalized communities to manage their community resources sustainably for their long-term wellbeing. The Northern Friesian Woodlands (NFW) Agricultural Cooperative is a territorial cooperative in the Netherlands that combines sustainable farming with nature conservation and landscape management. This self-regulated cooperative employs locally-adapted farming and management practices to deliver material and social benefits at a landscape level.^{xiv}

Effective ILIs facilitate collaborative stakeholder management and dialogue throughout the initiation, negotiation, planning, and monitoring processes (e.g. see Cases 2 and 4). Ensuring the effectiveness and ongoing reliability of stakeholder management requires structuring local institutions and agreements to support and perpetuate community and stakeholder empowerment.

CASE 4

INCORPORATING CLIMATE-SMART-TERRITORY PRINCIPLES INTO REGIONAL PLANNING FRAMEWORKS IN THE TRIFINIO TERRITORY, USING A COLLABORATIVE APPROACH

The Trifinio territory lies in the border area of El Salvador, Guatemala and Honduras, comprising 45 municipalities and a population of over 800,000. Trifinio is historically marginalized, with little development and an impoverished population dependent on subsistence farming. Slash and burn agriculture and lack of infrastructure have led to unchecked degradation of key ecosystems. Revival of Trifinio's ecosystems is in the national interest of all three countries, since watersheds that

originate in Trifinio flow through each country, providing hydropower and water for human consumption and industrial uses. The region also boasts high biological diversity, including some endemic species, found in the Montecristo Cloud Forest.

In 1987, El Salvador, Guatemala and Honduras came to a tri-national agreement to finance scientific analysis, regional capacity and reforestation and flood control in Trifinio. After nearly 30 years of cooperation in the area, strides towards achieving these objectives were made, but progress was hindered by the centralized design of the agreement, which excluded local communities from having a say in the management of the area. Thus, challenges remained, including extreme poverty; overexploitation leading to erosion and degradation of rivers and forests; and increased climate variability.

To address these challenges, direct engagement of the people working and shaping the land would be essential. This gap was addressed in 2014 with the assistance of the Mesoamerican Agroenvironmental Program of the Tropical Agricultural Research and Higher Education Center (CATIE-MAP), a regional center that champions the Climate-Smart Territory (CST) model, a type of integrated landscape management.

The CST model assumes that rural people depend heavily on natural resources and are therefore affected by the quality of ecosystems. The management of these resources implies the involvement, and buy-in, of local actors operating within a geographic area, the boundaries of which are defined by how stakeholders interact with ecosystems. Commonalities in land use create the foundation of a group bounded by a shared sense of place. The resulting stewardship establishes the unit's authority to guide and lead land use decisions for challenges tied to climate change. The input of local people, who have intimate knowledge of climate change impacts in the landscape, offers insights on how best to target investments, how to build capacity for land use planning and how to support climate change resilience on-the-ground.

By supporting multi-stakeholder platforms, CATIE-MAP builds the capacity of local peoples to improve the management of natural, human and social capital, effectively increasing climate change resilience. The platforms take shape as field schools, units of farmers and producer organizations. This enables stakeholders to promote sustainability practices and identify wider issues that require assistance from municipal or national government. This linked communication and action empowers a previously marginalized population to shape policies that define their living conditions.

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2.1.5. POLICIES, MARKETS AND FINANCIAL INVESTMENTS SUPPORT THE DIVERSE SET OF LANDSCAPE OBJECTIVES

Public policies, markets and financial investments create the context for ILM, but ILM is also critical for shaping these conditions, generating knowledge of and creative ways to overcome political, financial, and market barriers to sustainable development. Coordinated landscape strategies and plans encourage synergies among national, sub-national, and local government actions, and make best use of scarce financial resources by reducing redundancies and increasing returns on investment for sustainable development through effective planning and decision making at all levels of government. Integrated Landscape Initiatives regularly find innovative ways to help shift local and regional market incentives towards sustainable development and reduce environmental and social risks for both local entrepreneurs and large companies operating in the landscape.

Integrated landscape management can play a key role in coordinating finance for landscape investment. Meeting the many Sustainable Development Goals will require a dramatically higher degree of coordination of landscape finance and investment. Innovative mechanisms for and types of integrated landscape investments are needed to help overcome constraints to mobilizing private finance –such as high investment risk and a mismatch between the time horizons required by investors for a return on their investment and the time horizons of the investment opportunities.

Importantly, ILM provides a stable and long-term system of landscape governance, which helps create resilient institutional arrangements, decision-making processes, and underlying values in which multiple actors can pursue their individual and shared interests.^{xvi} These systems help to reconcile among diverse actors what functions will be located where, determine resource rights and benefits, and develop mechanisms to enforce the landscape's rules (Case 5).

CASE 5

DEVELOPING MULTI-STAKEHOLDER OBJECTIVES: THE CASE OF IMARISHA NAIVASHA, KENYA

As a home to national parks and bird sanctuaries and over 700,000 people, and the focal point of Kenya's export flower industry, the Lake Naivasha Basin of Kenya epitomizes a diverse landscape. However, poor agriculture practices, over abstraction of water, and uncoordinated resource management have put strain on the environmental health of the basin and the floriculture, horticulture, agriculture, and tourism industries that support the majority of the local economy.

In response, the Imarisha Naivasha Board was created to coordinate restoration by bringing diverse stakeholders together, including local government, non-governmental organizations, commercial flower growers, small scale farmers, pastoralists, community groups and citizens, to develop an integrated basin management plan and cooperate to restore the water catchment area. Towards this end, Imarisha Naivasha adopted the "Lake Naivasha Integrated Management Plan" laying out the goals of development in the basin and a "Sustainable Development Action Plan" outlining specific objectives to be accomplished in five year increments. These stakeholder-developed planning documents form the basis of Imarisha Naivasha's current endeavors in pursuit of sustainable development in the basin.

By including all stakeholders, interventions are targeted more strategically and everyone is invested in the fairness of benefit distribution, preventing political and social opposition to development plans.

Water action without collaborative management would have failed to create progress toward other goals within the Naivasha landscape: strong institutions, decent work and economic growth, gender equality, and responsible consumption and production. A coordinated response to myriad environmental and social risks identified synergistic investments and interventions, lowering costs for both mitigation and adaptation. Federal government support for the initiative has lowered barriers to multi-jurisdictional management and helped convene key stakeholders, important examples of the key role national policymakers have to play in supporting ILM.^{xvii}

ILM also helps establish landscape-friendly market mechanisms that help to properly value landscape products and services. The success of these markets requires that information on the value, origin and modes of production of the products and services from sustainable landscapes is available to buyers. Integrated landscape management provides platforms for community-based monitoring & evaluation of the multiple factors required to receive many sustainability certifications that are the most common way to convey this information.

Recently, private investors and companies have begun to recognize the importance of using a landscape approach to mitigate environmental, health, and social risks that threaten the profitability and long-term viability of their business models. By participating in integrated landscape management, the private sector buys down environmental and social risks, builds community goodwill, and secures the long-term sustainability of supply regions. For example, the Initiative for Sustainable Landscapes (ISLA), funded through the Dutch Sustainable Trade Initiative (IDH), engages companies as key partners in the management of six resource vulnerable sourcing areas around the world.^{xviii} Unilever, IKEA, Olam, Starbucks and SABMiller (see Case 6) are just some of the major multinational businesses with stakes in sustainable resources across the globe that are already adopting integrated landscape approaches to safeguard ecosystems and reduce their environmental footprint.^{xix}

CASE 6

PUBLIC-PRIVATE PARTNERSHIPS CAN ENSURE LANDSCAPE HEALTH AND PROFITABILITY: CASE OF SABMILLER AND THE WATER FUTURES PARTNERSHIP

SABMiller, the world's second largest brewer, found it needed to implement a landscape approach to secure water and its reputation in South Africa, and around the world.

The company faced operational, reputational and regulatory risks to the business based on water quantity and quality concerns, including risks to its agricultural supply chain from water scarcity. They determined that the most appropriate scale to address shared risk was with local communities, governments, stakeholders and businesses involved in the water catchments and ecosystems.

The company looked “beyond the breweries” to the landscape and communities it operates in to identify shared responsibilities and to craft shared solutions. Specifically, they focused on establishing a farmer-led water user initiative and a groundwater monitoring process and working with municipalities to improve water treatment facilities.

Water scarcity for its hops suppliers could increase production costs at least \$700,000 per year. This was roughly SABMiller's cost for collaborative action. However, by mitigating this risk, SABMiller also contributed to the creation of 50 jobs, benefitting 900 people in a region faced with high unemployment. This created reputational benefits and helped SABMiller nurture a local workforce that it depends on for more skilled labor in hop cultivation. The intervention also promoted local ecosystem resilience.^{xx}

2.2 PROLIFERATION OF INTEGRATED LANDSCAPE INITIATIVES

Integrated landscape management has been implemented and tested in a wide range of environments and cultures across the globe, providing practical examples of place-based implementation. A recent continental review by the Landscape for People, Food and Nature Initiative identified 365 programs in Africa, Latin America and the Caribbean, and South and Southeast Asia that are utilizing methods and practices that characterize them as integrated landscape initiatives (ILIs). Many others are known in Europe, North America and Australia.^{xxi} Results from the continental reviews show that simultaneous improvements in conservation, agriculture, livelihoods, and institutional capacity and coordination can be achieved using an ILM approach (Table 2.1, select findings).^{xxii}

AREAS OF INVESTMENT BY LANDSCAPE INITIATIVES	CONTINENT			IMPACTS ON SDGS (GOAL #)	
	SUB-SAHARAN AFRICA	SOUTH AND SOUTHEAST ASIA	LATIN AMERICA AND THE CARIBBEAN		
Total Number of Integrated Landscape Initiatives	87	166	104		
Agriculture	ILIs that invested in one or more areas of agriculture (%)	97	89	95	
	ILIs that invested in agriculture and saw results (%)	74	63	79	
	ILIs with increases in yield	40	46	38	1, 2
	ILIs with increases in profitability	29	53	37	1
	ILIs with reduced environmental impacts	39	57	56	6, 12, 15
Conservation	ILIs that invested in one or more areas of conservation (%)	93	93	85	
	ILIs that invested in conservation and saw results (%)	84	80	93	
	ILIs with improved biodiversity protection	51	87	66	15
	ILIs with improved water quality and regularity	29	52	42	3, 6
Livelihoods	ILIs that invested in one or more areas of livelihoods (%)	90	91	93	
	ILIs that invested in livelihood improvements and saw results (%)	80	76	74	
	ILIs with improved food security	46	69	42	2
	ILIs with higher income for low-income households	46	96	52	1, 8
	ILIs with improved access to healthcare	6	20	17	3
Institutions	ILIs that invested in one or more areas of institutions (%)	94	95	91	
	ILIs that invested in institution strengthening and saw results (%)	94	92	100	
	ILIs that improved coordination between stakeholders	67	130	83	17
	ILIs that saw greater empowerment of women	45	83	55	5, 10, 16
	ILIs that preserved/used indigenous and local knowledge	37	88	67	10, 16

Table 2.1: Integrated Landscape Initiatives (ILIs) in Three Regions* Reporting Improved Outcomes in Select Areas and Related Sustainable Development Goals

* In these studies, hundreds of landscape-level conservation and development programs were surveyed, and responses were screened to produce the list of ILIs cited in the table. Screening criteria were: “a project, program, platform, initiative, or set of activities that: (1) explicitly seeks to improve food production, biodiversity or ecosystem conservation, and rural livelihoods; (2) works at a landscape scale and includes deliberate planning, policy, management, or support activities at this scale; (3) involves inter-sectoral coordination or alignment of activities, policies, or investments at the level of ministries, local government entities, farmer and community organizations, NGOs, donors, and/or the private sector; and (4) is highly participatory, supporting adaptive, collaborative management within a social learning framework.”

3 INSTITUTIONAL SUPPORT FOR INTEGRATED LANDSCAPE MANAGEMENT AT NATIONAL AND REGIONAL LEVELS

Strategies that integrate the SDGs are important at all scales, especially for the interdependencies around natural resource management. Some resource issues can only be addressed at a national level, such as determining the overall role of biomass in national energy strategies, setting national targets for slowing deforestation, or approving commercial agricultural concessions.

Other social and environmental challenges, such as reducing global inequality and halting the illegal trade in wildlife, supersede national boundaries, due to the interconnectedness of the global marketplace. Sustainably managing and protecting global public goods, such as biodiversity, oceans, and the global climate, requires concerted action and cooperation at many levels, local to global. Nonetheless, we argue, alongside others promoting sustainable urban and territorial development, that many local and national strategies designed to achieve the SDGs are most effectively implemented at landscape scale.

3.1 LAW AND POLICY TO SUPPORT ILM

Laws and regulations on natural resource rights, planning and management should support stakeholders in establishing and maintaining the structures or processes necessary to implement ILM. Governments can take measures to ensure greater coordination between the different government ministries and agencies responsible for natural resource management at different scales within the national territory. As ILM helps landscape stakeholders identify resource tenure conflicts, national governments should take in these lessons and clarify tenure rights and responsibilities. Clear and culturally appropriate tenure systems are critical for successful sustainable development.

It is also important for central governments to provide clear leadership and messaging to relevant ministries and agencies developing land-use plans within a jurisdiction that these plans should be multi-sectoral in scope. An integrated land-use planning approach often requires legislative provisions governing land-use planning that are generally dispersed across different sectoral legislation, as they are linked to the mandates and powers of individual ministries and their relevant agencies. Ensuring cross-sectoral, jurisdictional land-use planning may require a consolidated spatial planning policy to compel ministries to coordinate their planning activities.

For example, the Government of Colombia has taken major steps to align its national development priorities with the international commitments laid out in the 2030 Development Agenda; by doing so, it has created a policy environment that is conducive to collaborative and integrated approaches to development (see Case 7).

CASE 7

COLOMBIA PREPARES FOR SDG IMPLEMENTATION

In February 2015, Colombia's President Juan Manuel Santos approved Decree No. 280, which established the creation of the Inter-Agency Commission for the Preparation and Effective Implementation of the Post-2015 Development Agenda and the SDGs (the "Commission"). The Commission involves a range of ministries—including the Ministries of Foreign Affairs, Environment and Sustainable Development, and Finance, as well as the Department for Social Prosperity, the National Administrative Department of Statistics, and the National Planning Department—reflecting an acknowledgment of the cross-cutting nature of the new agenda and the inter-sectoral coordination needed to deliver it. At the same time, the country has used the SDG framework to highlight its own national priorities.

Colombia's National Development Plan, "Todos por un nuevo país" (2014 – 2018) articulates the government's priorities. The Development Plan also serves as the main platform for the Commission's work on the SDGs and will form the basis for achieving the political coherence needed for effective SDG implementation at the national level.

These important first steps – aligning national priorities with the new 2030 Development Agenda and establishing a high-level inter-ministerial Commission on the SDGs to ensure policy coherence, coordination and accountability – reflects the country's choice to take a strong international leadership position on this agenda. Other national governments will have much to learn from Colombia's example.^{xxiii}

National programs to support the development of integrated landscape management have begun to emerge and should be refined to address subnational integration of SDGs. For example, Rwanda has adopted a national landscape restoration strategy with a goal of improving rural livelihoods while enhancing forest and land resources, and Ethiopia is overcoming chronic food insecurity with landscape approaches to agricultural restoration and water management.^{xxiv} In Australia, the National Landcare Program has mobilized over 5,000 community groups to sustainably manage Australia's productive landscapes.^{xxv} And in Colombia, public-private partnerships for integrated watershed management are improving water quality and lowering municipal water treatment costs while also reducing business risks for food and beverage companies.^{xxvi} Indonesia is adopting integrated landscape approaches to conserve forest in areas of rapid agricultural development.^{xxvii} These programs can and should be replicated in many more countries around the world.

3.2 FINANCE FOR ILM

Finance is needed primarily to cover the costs of transforming farming and other land and water management practices, setting up and operating multi-stakeholder platforms, and developing shared understanding across landscapes. This requires financing for 1) investments that generate tangible financial, environmental or social returns (also referred to as 'asset investments') including sustainable practices on-farm, restoration or protection of forests, and large-scale green infrastructure, among other things; and 2) investment that supports the process, governance or underlying policies crucial to the development of integrated landscape management (also referred to as 'enabling investments').

Fortunately, many donors are recognizing the value of integrated landscape management and supporting it through innovative new initiatives. The German Government for example, is providing leadership in the support of multi-sectoral landscape approaches to development. In 2014, the German Federal Ministry for Economic Cooperation and Development (BMZ) launched its "One World – No Hunger" Initiative. The Initiative aims to support the implementation of several Sustainable Development Goals—including eradicating hunger and malnutrition and safeguarding food security (SDG 2), ending poverty (SDG 1), promoting health (SDG 3), ensuring quality education (SDG 4), and building peaceful and inclusive societies (SDG 16).^{xxviii} Donor governments should look to follow this example.

Additionally, regional programs, such as TerrAfrica and the Great Green Wall Initiative support numerous countries in Africa to sustainably manage natural resources using integrated approaches. The African Union/NEPAD, national governments, and civil society stakeholders, in collaboration with the TerrAfrica Partnership, the World Bank and international partners have launched the African Resilient Landscapes Initiative (ARLI), which will combine geographical and socio-economic strategies to manage land, water and forest resources to meet the goals of food security and inclusive green growth.

The Global Environment Facility (GEF) developed an Integrated Approach Pilot (IAP) program that focuses on the sustainability and resilience for food security in sub-Saharan Africa. The Central American Strategy for Rural Development (ECADERT), an initiative of the Central American Agricultural Council, provides a framework for strengthening rural territories in eight Central American countries through an area-based approach to sustainable development (Case 8). United Nations Environment Programme (UNEP) and the GEF have supported the initial establishment and consolidation of the Landscapes for People, Food and Nature Initiative, which UNEP continues to support through its new global 'Ecosystem Management of Productive Landscapes (EMPL)' programme and UN-REDD. International institutions should continue to scale up and replicate such programs.

Some portion of finance for integrated landscape initiatives must come from an increase in demand for products and services from landscapes, and this can be achieved by leveraging company commitments on sustainability, improving government procurement policies, and by supporting the development of markets for a more diverse range of products within a landscape. Other mechanisms create or strengthen markets for products and services that can only be delivered at landscape scale – examples include REDD+ at national or sub-national jurisdictional levels, economic incentives for watershed protection services for large watersheds, and some forms of ecotourism.

CASE 8

CENTRAL AMERICA STRATEGY FOR RURAL TERRITORIAL DEVELOPMENT (ECADERT): A REGIONAL APPROACH TO SUSTAINABLE DEVELOPMENT AND RESILIENCE

Started in 2010 by the heads of state of the Central America Integration System (SICA), the Central American Strategy for Rural Territorial Development (ECADERT) was created to support and coordinate rural development through coordinated participatory local action and policy. Since its inception, ECADERT has facilitated USD 4.8 million in investments involving 76 municipalities and over 40 local organizations in eight countries.

The program supports rural area-based development through five main components; 1) facilitating institutions and local governing capacities, 2) strengthening the “social fabric” for innovation in rural development and management, 3) strengthening rural-based economies, 4) promoting cultural preservation in local communities, and 5) supporting environmental protection by facilitating the shift of local groups to environmentally beneficial practices.

In Danlí, Honduras, local stakeholders have directed ECADERT investments to capture multiple benefits from rainwater storage tanks, water catchment and gravity fed drip irrigation equipment, development of crop diversification strategies to improve food security, and technical and institutional capacity development to manage and sustain development efforts. Ultimately, ECADERT’s support for area-based development will build more economically secure, peaceful and resilient communities throughout Central America.

3.3 INITIATIVES WORLDWIDE INCORPORATE ILM

A wide range of institutions and programs provide technical support to landscape management initiatives. These include networks to support practitioners such as:

- ▶ African Heartlands Initiative, which uses a large-landscape approach to conservation
- ▶ Landscapes for People, Food and Nature Initiative, an international collaborative initiative for knowledge sharing, dialogue and action to support integrated landscape management
- ▶ International Model Forest Network, which supports the sustainable management of forest-based landscapes in seven regions around the world
- ▶ FAO’s Globally Important Agricultural Heritage Sites (GIAHS) initiative, which promotes public awareness and recognition of agricultural heritage systems
- ▶ New Generation Plantations, which is a platform that brings together leading plantation companies and government agencies to learn about sustainable plantation management, among others.

A growing number of international policy initiatives and programs have also been developed in recent years with the goal of supporting integrated landscape approaches. For example, the Bonn Challenge is an international initiative, supported by the Global Partnership on Forest and Landscape Restoration and Initiative 20x20, to restore 150 million hectares of degraded lands by 2020, including agricultural land, using a multi-functional landscape approach.^{xxx} The European Landscape Convention, which was ratified by the Council of Europe member states in 2004, promotes the protection, management and planning of European landscapes and organizes European co-operation on landscape issues.^{xxx} And the City Region Food Systems (CRFS) Alliance promotes integrated urban rural approaches to strengthen the resilience and sustainability of food systems.

4 RECOMMENDATIONS FOR ACTION

Integrated landscape initiatives are more likely to succeed under certain enabling conditions, as described in Section 3. Those same factors provide the foundation for successful ILM strategies to achieve the SDGs at national and international levels. Key recommendations for embracing ILM as the means of implementation for the SDGs are distilled from those factors here.

4.1. RECOMMENDATIONS FOR NATIONAL GOVERNMENTS

Countries will need to develop their own development strategies that highlight national priorities in the context of the SDGs. An implementation plan will serve as the country's "roadmap"—adopted at the highest level—which identifies the specific actions to be undertaken and monitored, and which provides the policy framework for sub-national and local governments to work within. The following six recommendations will support national governments to build ILM into every level of their strategy development and utilize it as an integration and implementation mechanism for achieving the SDGs.

- 1. Utilize landscapes as the building blocks for development of socio-ecological resilience.** Governments will play a key role in strengthening the resilience of local populations to endure and overcome social, economic, and environmental shocks and stresses. To do this, place-based landscape planning is essential to achieve improved socio-ecological resilience.^{xxxi} Landscape planning incorporates all voices, including those of the public, private, and civic sectors, and serves as the fundamental starting point for building resilient communities and ecosystems. To initiate this approach, governments should conduct a national level scoping of existing integrated landscape initiatives and analyze the opportunities available for implementing ILM.
- 2. Institute a “whole of government” approach.** Institutional integration is critical to achieving the SDGs. This integration requires legal and regulatory reform to breakdown institutional siloes. National governments can empower a high-level and devolved interagency coordinating mechanism to drive the collaboration of different ministries across sectors. This empowerment would include a mandate from the highest level in the national government, allowing the coordinator to encourage the cooperation of ministers and other directors regardless of their own internal mandates.
- 3. Structure policy and public budgets to enable adaptation to the local context and empower sub-national actors.** National governments can provide forums for actors to address their own local contexts. This can be done through many mechanisms, including restructuring budgeting and planning processes at different levels, encouraging policy dialogues between local and national actors, incentivizing local cross-sectoral partnerships between public-private-civic actors, and decentralizing decision-making so that local government and communities are empowered to manage their own resources sustainably. In order to overcome the limitations of current budgeting processes, finance needs to be based on place rather than sector. Encouraging cross-sectoral planning and integration, place-based budget allocations at the landscape level will promote synergies and reduce redundancies. It also empowers local actors to have more ownership of landscape investments. Place-based allocations can encourage private sector investment in harmony with locally-defined objectives and desired outcomes. It is also important to extend the time-horizon of ILM initiatives, as opposed to the current short-term investment frameworks adopted by governments, development partners and the private sector.

- 4. Use integrated landscape management as a central feature in ‘inclusive green growth’ economic development models.** Economic growth is a critical objective of countries around the world. In order to achieve the sustainable development, nations are beginning to move beyond “business-as-usual” economic growth models and embrace inclusive green growth. The inclusive green growth model is an integrated strategy for accelerating economically, socially, and environmentally sustainable development.^{xxxiii} Inclusive green growth describes a path of economic growth that recognizes the fundamental uses of natural resources and ensures their use in a sustainable manner. This strategy requires embracing the private sector as a critical partner in the green economy. It also requires empowering local communities to plan, manage, and benefit from the sustainable use of resources. Therefore, partnerships are needed between governments, local communities, companies, and others at national and sub-national scales. Only through these public-private-civic partnerships can countries craft an inclusive green growth strategy capable of achieving the SDGs.
- 5. Catalyze knowledge sharing and the adoption of best practices.** To support these strategies, governments will benefit from intentionally promoting knowledge sharing between sectors, institutions and agencies, drawing upon diverse local and international experiences to define and adapt best practices. They should build upon regional and international technical capacity development efforts, such as south-south cooperation. Furthermore, governments can incentivize the adoption and implementation of these identified best practices, ensuring their relevance and applicability within local contexts. Governments are positioned to encourage private sector participation and leadership within this knowledge sharing as well.
- 6. Identify and adopt integrative and leverage indicators to track coherence of SDG progress.** An integrative indicator, such as land cover, reveals information about multiple landscape functions and goals for landscape performance. A leverage indicator, such as soil fertility, provides information about an element of a landscape system that is anticipated to affect many other elements of the system. Understanding and selecting such indicators can save resources and time in data collection. National governments, international actors, and the research community should work together to develop integrative and leverage indicators that are economically viable to track and align with national development priorities. Developing appropriate integrative indicators is crucial because these indicators track progress towards multiple goals simultaneously. Locally-generated data should be emphasized, which will enable integrated landscape initiatives and local actors to contribute to the national monitoring effort.

Year 1 Action Steps for National Governments

- ▶ Form multi-stakeholder learning group on ILM and SDGs at national and sub-national levels where appropriate, which includes government and non-government actors.
- ▶ Take stock of existing landscape initiatives and assess their present and potential future contributions to the SDGs.
- ▶ Undertake a scoping exercise on available evidence and experience to support knowledge sharing and underpin negotiated decision making.
- ▶ Develop an inter-agency task force to review national/sub-national development plans to evaluate their alignment with integrated landscape management strategies.
- ▶ Review the existing policy framework and enabling environment for ILM.
- ▶ Explore ways to institutionalize a shift from sector-based to placed-based government financing, and move toward implementation.
- ▶ Institute a nationwide educational campaign on ILM and the SDGs to promote awareness and dialogue.
- ▶ Include language about ILM in key national policy and strategy documents.

4.2. RECOMMENDATIONS FOR THE INTERNATIONAL COMMUNITY

The international community plays a key role in promoting ILM as an integration strategy for the SDGs, and supporting national governments in utilizing ILM. Making these five changes would help scale integrated landscape management around the world to help states realize the sustainable development agenda.

- 1. Improve coordination, integration, and representation within the United Nations system.** The United Nations can improve the integration of its institutions. As a first step, the UN can identify and empower a high-level SDG integration advocate with the explicit mandate to link agendas and information among institutions, promote cooperation, and monitor progress towards a coherent effort to achieve all SDGs. ILM promotes the interlinkages between like-minded sectors, so there is a need to reduce the division between agriculture and environment, rural and urban, and social and economic institutions. This will require a stronger mandate and allocation of dedicated resources for inter-agency collaboration (such as in the intent of the recent UNEP-FAO MoU signed in September 2014). This would be supported by (a) creating a more favorable environment and incentives for inter-agency collaboration, and (b) increasing the cross-sectoral representation within agencies, such as more agricultural representation within UNEP, more environment representation within FAO, or more rural representation within UN Habitat, for example through a joint Habitat-Committee on World Food Security (CFS) task group. Finally, the UN could improve the representation of local authorities within international processes such as the Convention to Combat Desertification, the Convention on Biological Diversity, and the Committee on World Food Security. This means empowering local authorities, including rural institutions and municipalities, to take action and participate in setting the agenda of these efforts.
- 2. Stimulate NGO and civil society landscape and policy partnerships.** NGOs and civil society actors are also limited by their siloes and require improved integration. They need to actively seek partnerships with diverse institutions to enable synergistic action. These partnerships could take many forms, such as those between institutions with sectoral focuses (an agriculture NGO and an environmental NGO) or those between institutions with different mandates (academic institutions partnering with programmatic or advocacy NGOs). NGOs and civil society actors should also pursue partnerships with the private sector for improved investment and implementation of integrated sustainable development efforts. Farmer, community and indigenous organizations should pursue leadership roles in these initiatives.
- 3. Adapt international finance and investment strategies to the needs of ILM.** Currently, funding streams are limited by sectoral siloes. The international community needs to reduce these siloes and promote multi-objective investment mechanisms, as well as mechanisms to facilitate coordinated investment within landscapes to achieve multi-stakeholder development plans. These coordinated investment mechanisms need to be attractive to the financial community (multilateral finance institutions, private finance, civic finance, philanthropic donors and the private sector), allowing blended finance and diverse investors to support ILM and the SDGs. More financing mechanisms that focus on integrated solutions to complex problems are also needed, such as the Global Environment Facility's Integrated Approach Pilots which fund integrated efforts to improve food security, conserve biodiversity, build sustainable cities, and combat deforestation and land degradation.

- 4. Mobilize the private sector to build collaborative landscape partnerships into business models.** The private sector is a key partner in ILM, and a critical actor in achieving the SDGs. The international community needs to encourage private companies' participation in ILM and encourage them to build landscape thinking and collaborative action into their global supply chains and business models. International actors should engage businesses in educational efforts to understand how ILM can reduce risk for investors and promote sustainable growth over the long term. Businesses then need to build ILM into their business plans and engage with landscape partners in coordinated management. Also, consumers need to advocate for products from sustainably managed landscapes, providing the demand needed by these business partners. The international community needs to educate and support these consumers in order to achieve the SDGs.
- 5. Advance integrated landscape research and knowledge platforms.** The international community needs to invest in the research and science communities. Research institutions can support collaboration across sectors, and investors can fund and support these partnerships. The international community is positioned to catalyze ILM-related research through the CGIAR system and other knowledge platforms like the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and the Economics of Ecosystems and Biodiversity (TEEB) that provides the evidence to support sustainable development investment decisions. Furthermore, the international community needs to invest in further developing landscape science at the university level and promoting the participation of doctoral candidates in integrated research at the landscape scale. All types of international actors, including the private sector, need to engage in more coordinated knowledge exchange between sectors and regions.

CONCLUSION

The human community has rallied behind a new Sustainable Development Agenda. While the agenda is global, solutions will be landscape-scale, where the natural resources and ecosystem services that are humanity's life raft are most comprehensively managed.

The world needs, and is ready for, a new paradigm for development: one that acknowledges the inherent interconnectedness of human and natural systems and the resources that underpin them. Integrated landscape management allows local people to manage those resources so that development interventions capture synergies, mitigate trade-offs, and create local value and social capital. This practice is already at work around the world. A wide variety of examples of this approach in action have been presented above: transboundary landscapes, micro watersheds, lake basins, sacred sites, city regions and more. These examples are just the tip of the iceberg. But to achieve the sustainable development goals universally, we will need to do much more.

Governments should include this approach in their plans for implementation of the sustainable development agenda, in everything from financing strategies to development indicator selection. The international community should support these efforts through increased and better coordinated finance, stronger coordination between international agencies, and support for global knowledge sharing. The future we want lies ahead, if we are willing to take the necessary action and implement integrated landscape management around the world.

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MORE INFORMATION

The Landscapes for People, Food and Nature Initiative welcomes new collaborators in all components of the Initiative. For additional information, please contact Melissa Thaxton, Initiative Partnership Coordinator, at mthaxton@ecoagriculture.org.

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