THE 4 RETURNS FRAMEWORK
FOR LANDSCAPE RESTORATION

UNITED NATIONS DECADE ON
ECOSYSTEM
RESTORATION
2021-2030

'Biodiversity is the manifestation of the spirit',

Oral McGuire, Director of the Noongar Land Enterprise Group

This publication is the result of a close collaboration between Commonland, the Landscape Finance Lab and Wetlands International, with support from the IUCN Commission on Ecosystem Management.

This publication was funded by Commonland through support of the COmON Foundation.

Dudley, N., Baker, C., Chatterton, P., Ferwerda, W.H., Gutierrez, V., Madgwick, J., 2021, The 4 Returns Framework for Landscape Restoration. UN Decade on Ecosystem Restoration Report published by Commonland, Wetlands International Landscape Finance Lab and IUCN Commission on Ecosystem Management.

The 4 Returns Framework offers a science-based, long-term initiative for restoring healthy landscapes. If all sectors of society can support and adopt this framework, we will protect intact ecosystems vital for a healthy planet and thriving communities. I offer my gratitude and congratulations to the team at Commonland and their partners for this inspiring yet practical approach.

Ryan Gellert, CEO, Patagonia

PREFACE

We live in a period of instability: suffering from the impacts of a crippling pandemic, climate change and witnessing an accelerating loss of biodiversity. The degradation of our life support system – our planetary ecosystems – is leaving the human race vulnerable. The acceleration of our economic development at the expense of nature during the last two centuries is now massively affecting human well-being, our food production and our health. But even more: it is impacting our soul. Many people have lost a connection to nature and are seeking purpose.

Restoring ecosystems is one of the great works of our time and a rewarding vocation for our youth. Restoring and protecting the ecological foundation of our planet is not only the best thing we can do from a scientific and economic viewpoint, it becomes increasingly its own reward as we recognise that healing the planet is also about healing ourselves.

It's time to re-focus our economic model on restoring and regenerating ecosystems as a core part of resilient landscapes, for the sake of future generations and biodiversity: our fellow other species. But how do we do this at scale, while meeting the needs of growing populations and taking the complexity of ecosystems and human interactions seriously? It means we need to develop a new, systemic and inclusive narrative that can connect the rural world of farmers, fisherfolk, indigenous people and conservationists with the world of finance, big business, governments and research institutes.

The 4 Returns Framework for landscape restoration that is presented here is a practical method that brings people together within landscapes and enables others outside those landscapes to participate. This approach has been tested for many years in several large landscapes and it is now time to present it to the world, to use it, to improve it further, and to co-create a new, shared language for a restoration economy and society. This is our task. Together.

We know that with only 0.1% of the global GDP per year[1] we can realise these 4 returns at landscape or ecosystem scale. This publication is a great contribution to realise the goals of the UN Decade on Ecosystem Restoration, as the 4 Returns Framework is a pathway to achieve long-term success in restoring living, productive and resilient landscapes. It is a well-received offer for the health and well-being of our generation and of many more to come. Or in business terms: to increase returns and reduce risks in every landscape on this planet.

Tim Christophersen
Coordinator for the UN Decade on Ecosystem Restoration,
United Nations Environment Programme (UNEP)

EXECUTIVE SUMMARY

Concern about the environment has moved decisively from niche to mainstream. Although carbon markets are coming up to speed, shareholders are asking business to become carbon neutral, massive tree planting campaigns have started and circular economic thinking is taking off, the current attempts to address the biodiversity and climate crisis continue to fail. We need a common language and new approaches that inspire optimism, long-term solutions and systemic change at scale. All are inherent in rebuilding resilient living landscapes, our global life-support system.

The 4 Returns Framework for landscape restoration is a practical and tested system-change framework used by stakeholders to undertake a landscape approach.

It seeks to balance competing stakeholder demands in a mosaic of different management approaches, to supply a full range of natural, social and economic returns.

Successful holistic landscape restoration is a long-term endeavour that only works if it is grounded and owned by the people in the landscape. Finding the balance between top-down decision and inclusive bottom-up approaches to ecosystem restoration is critical to success.

The 4 Returns Framework connects ecology, community values, spirit and culture, business and long-term economic sustainability at landscape level. It allows government, business and communities to co-create and deliver a common vision for a resilient landscape:

- It is a conceptual and practical framework to help stakeholders achieve **4 RETURNS** (inspiration, social returns, natural returns, financial returns);
- by following five processes (**5 ELEMENTS**: a landscape partnership, shared understanding, landscape vision and collaborative planning, taking action and monitoring and learning);
- within a multifunctional landscape (**3 ZONES**: natural, combined and economic zones);
- with this transformation taking place over a realistic time period (**MINIMUM 20 YEARS**).

The 4 Returns Framework supports achievement of most of the Sustainable Development Goals and is itself based particularly around SDG 17 (building partnerships).

Social tools can help stakeholders navigate this rather complex process: neither simply leading from the front, nor handing decision making over to someone else. Theory U is an example of a practical and powerful method for co-creation, sensing, exploring, guiding and managing group processes, systematically reaching out to the inner purpose of people.

Cases are described from India, Fiji and Spain to demonstrate these principles in practice. ‘Use cases’ explain what this means for governments, communities, and the business and finance sectors.

The 4 Returns Framework is not a utopian dream; it is a practical approach that works in the real world, with real people, within conventional social, corporate and government frameworks. It represents a distillation of wisdom that has been brought together over many years and has been tested in practice. The aim of this report is to ask others to join us in using this common language to scale up restoring billions of degraded hectares and together heal the relationship between people and within ourselves.

INTRODUCTION

Concern about the environment has moved decisively from niche to mainstream. But current attempts to address the biodiversity and climate crisis continue to fail. We need new approaches that inspire optimism, long-term solutions and systemic change. All are inherent in rebuilding resilient living landscapes, our global life-support system.

"Making peace with nature is the defining task of the 21st century, it must be the top, top priority for everyone, everywhere", says António Guterres, Secretary-General of the United Nations.[2] Many echo these sentiments,[3,4] identifying the costs – including economic costs – that result.[5]

Recognition of the need for fundamental change came decades ago from indigenous people and NGOs.[6,7] Significantly, it is now also coming from the World Economic Forum,[8] governments, finance and industry actors who have hitherto seen biodiversity conservation as an optional extra. In January 2021, over 50 countries committed to set aside at least 30% of the world's land and oceans in protected and conserved areas by 2030.[9] The UN Decade on Ecosystem Restoration[10] is promoting an optimistic message that we can restore much of what has been lost.

Yet biodiversity is still declining.[11] What is going wrong? Current responses are too small-scale and often tacked onto unsustainable economic development. They function as little more than sticking plaster, addressing the most urgent local problems. They fail to tackle underlying causes of degradation, act on too short a timetable to succeed and rarely reach scale.

Conservation actions fall into two main types. ***Area-based responses*** include protected and conserved areas, managed for the conservation of species and to maintain ecosystem services. The establishment of national parks and reserves has stopped many species from becoming extinct.[12] But these protected areas are often too small and isolated, vulnerable to offsite changes, underfunded and too weakly protected to deliver long-term results at the scale needed. ***Impact-based responses*** usually consist of laws or guidelines that address specific problems – e.g. pollution, deforestation or poaching. These efforts, often resisted by vested interests, typically take years to agree, are challenging to enforce and monitor and can be reversed by unsympathetic governments.

These piecemeal approaches fail to deliver a wider vision of a sustainable world. They contribute to a sense of hopelessness that whatever we do, things will carry on getting worse. We need integrated and systemic responses, which provide people with hope. A return of inspiration and enthusiasm is essential if communities are to turn back

A practical framework for landscape restoration is needed, which is holistic, reduces complexity and convinces new actors about the need to partner with others. A common language can help balance the various needs of landscape recovery initiatives by making it easier to engage and connect to sectors. This is essential for building partnerships to drive restoration.

decades or centuries of degradation and rebuild a living landscape. Such an initiative must be based on long-term visioning, operating at a landscape scale and implicating the full range of societal stakeholders in conception, planning and implementation. This all driven by a common recognition that we need to reconnect with nature, creating optimism that the environment is not a lost cause and that we have the power to turn things around.

Clearly, the need for a more fundamental system change is emerging, but this can appear as a complex and challenging undertaking.

A practical framework for landscape restoration is needed,[13] which is holistic, reduces complexity and convinces new actors about the need to partner with others. A common language can help balance the various needs of landscape recovery initiatives by making it easier to engage and connect to sectors. This is essential for building partnerships to drive restoration.

In 2000, the UN Convention on Biological Diversity identified the need for an ecosystem approach, to integrate the management of land, water and living resources, promoting equitable conservation and sustainable use. This recognizes that humans, with their cultural diversity, are an integral component of ecosystems.[14] Application of the ecosystem approach is intended to help to balance the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of benefits from genetic resources.[15] Its 12 principles[16] form the starting point of the 4 Returns Framework.[17]

THE LANDSCAPE APPROACH

The 4 Returns Framework for landscape restoration described in this report is a practical and tested system-change framework that can be used by stakeholders to undertake a landscape approach. The "landscape approach" seeks to balance competing stakeholder demands in a mosaic of different management approaches, to supply a full range of natural, social and economic returns.

Some useful definitions follow:

- **Landscape**: a socio-ecological system that consists of interconnected natural and/or human-modified land and water ecosystems and which is influenced by distinct ecological, historical, economic and socio-cultural processes and activities.[18] Where water is the dominant feature, this can also be referred to as a waterscape; where oceans are predominant, this can be referred to as a seascape. Water systems (including all kinds of wetlands) connect different zones across every landscape, regulating flows, transmitting water and water-borne materials and providing pathways for biodiversity.

- **Resilience**: the capacity to persist, adapt and transform in the face of change.[19]

- A **resilient landscape** consists of a landscape, waterscape or seascape that is able to sustain desired ecological functions, robust native biodiversity and critical landscape processes over time, under changing conditions and despite multiple stressors and uncertainties, to enable the principles of sustainable development to be met as defined by the UN 2030 Sustainable Development Goals.

- **Landscape approach**: a conceptual framework whereby stakeholders in a landscape aim to reconcile competing social, economic and environmental objectives. A landscape approach aims to ensure a full range of local-level needs are met, while also considering goals of stakeholders, such as national governments or the international community.[20] A minimum 100,000 hectares is generally needed to implement a landscape approach, although there may be exceptions (e.g. offshore islands).

Farming, fishing, recreation, nature conservation, disaster mitigation and industrial activity are not necessarily compatible in a single space, but they can generally all be accommodated in a landscape. The critical condition is that the ecological foundation of a landscape remains intact or will be restored and sustainably managed. A landscape approach involves many actors as part of a collaborative, multi-stakeholder process to find the best solution to maximise the values and benefits of that place.

STAKEHOLDERS

Successful holistic landscape restoration is a long-term endeavour that only works if it is grounded and owned by the people in the landscape. Switching from top-down to democratic, inclusive bottom-up approaches to ecosystem restoration is a critical success factor.

Transformative change needs to involve enough people so that sceptics are persuaded to join as well. Individual actions and initiatives are important, but they must address the underlying drivers of degradation and be unified into a wider, coherent approach.

Three groups need to play a critical role. First, the people on the ground, whether farmers, fisherfolk, indigenous peoples or other local communities, are all crucial partners to success. They are central to the process and are often drivers of positive change; their views and understanding are critically important. Their engagement helps to ensure that trade-offs are addressed within a large landscape setting that includes conservation, restoration and sustainable land use. If the people living in the area are not actively engaged or do not support an initiative, it has far less chance of succeeding or of meeting wider considerations of fairness and social justice.

Second, the business and finance sector. Company executives, staff and – in particular – shareholders, the finance industry, institutional and impact investors are all increasingly recognising the benefits of supporting ecosystem regeneration on a far larger scale than has been generally recognised to date and along far longer time frames.

And third, governments need to engage in a shift of perspective and set the regulatory framework for cooperative action. A range of government ministries should participate and not simply environmental ministries.

All these stakeholders interact. The long-term, bottom-up approach described here puts great emphasis on the needs and wants of people on the ground, and on ways of reconciling these with national and global needs.

> *"The adoption of the post-2020 Global Biodiversity Framework will require innovative tools that cut across disciplines to deliver on the multiple benefits from the conservation, sustainable use and sharing of the benefits of biodiversity. I congratulate all partners on the development of the 4 Returns Framework for landscape restoration, which is based on the Ecosystem Approach adopted under the CBD. This framework provides a way for holistic large-scale ecosystem restoration to realize benefits for biodiversity, people and climate, and I hope that interested countries can be supported to take full advantage of it."*
>
> Ms. Elizabeth Maruma Mrema,
> Executive Secretary of the UN Convention on Biological Diversity

HERE, WE PRESENT THE **4 RETURNS FRAMEWORK FOR LANDSCAPE RESTORATION** AS A PRACTICAL AND TESTED SYSTEM-CHANGE FRAMEWORK THAT DELIVERS INSPIRATIONAL, SOCIAL, NATURAL AND FINANCIAL RETURNS.

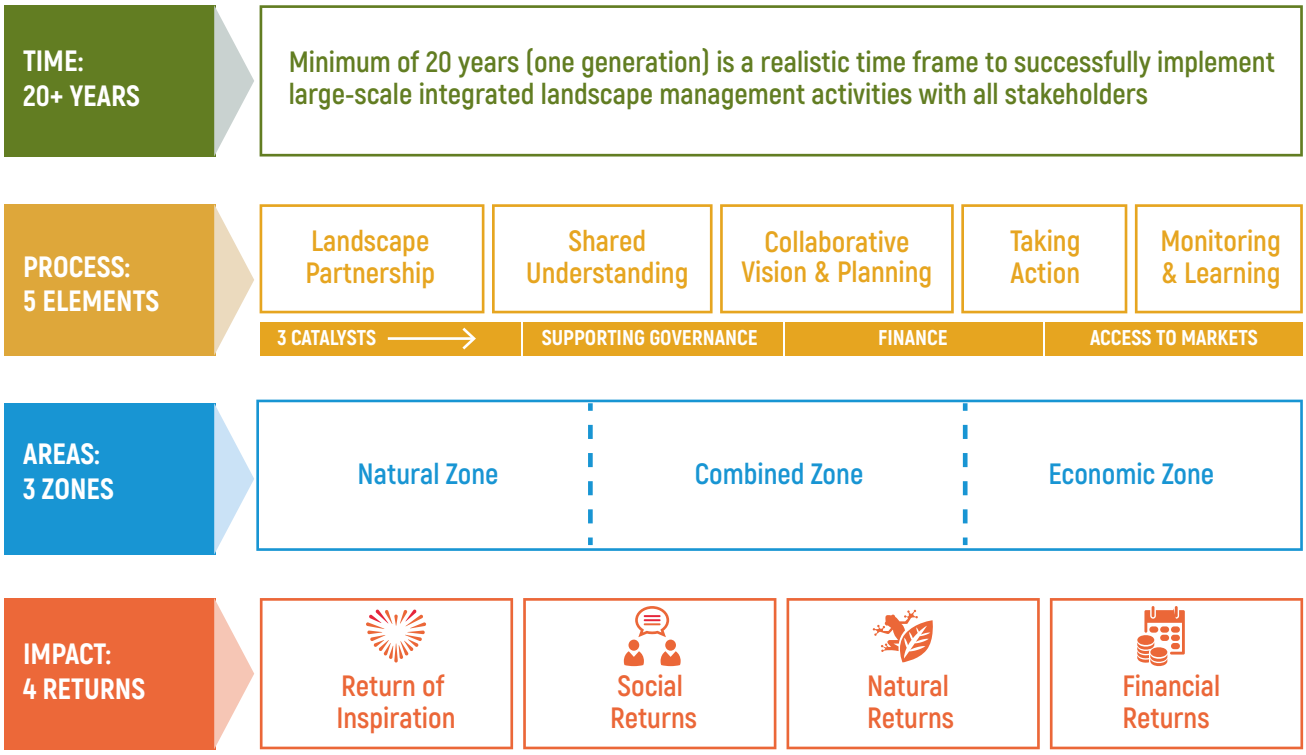
The 4 Returns Framework combines methodologies developed by leading organisations and people that have been working in the area of landscape management and restoration for over three decades, with the aim of creating a common language and reducing complexity. It brings together Commonland's **4 Returns** and **3 Zones** approach[21] with the **5 Elements** approach: a framework developed by a consortium of five organisations[22] and endorsed by fifteen organisations in the Little Sustainable Landscape Book.[23] Wetlands International brings more than 25 years of practical field experience from implementing landscape approaches in large wetlands around the world and working with myriad communities and partner organisations from multiple sectors. The 4 Returns Framework is also adopted by the 1000 Landscapes for 1 Billion People consortium (see box on page 8).[24,25]

We describe the reasons for using the 4 Returns Framework, and the steps needed to implement it within a landscape over a realistic time frame (**minimum 20 years**).

THE 4 RETURNS FRAMEWORK FOR LANDSCAPE RESTORATION

The 4 Returns Framework offers a simple formula to create a common understanding of what a healthy landscape means. Landscapes are complex: diverse groups of people, interests, ideas and cultural meaning are attached to land. The 4 Returns Framework connects ecology, community values, spirit and culture, and long-term economic sustainability at the landscape level. The approach allows people from across the spectrum — government, business and communities — to co-create and deliver a common vision for a resilient landscape. Together, a diverse community can start imagining how a landscape can become sustainable, liveable and financially attractive to as many people as possible. It is a conceptual and practical framework that aims to help stakeholders achieve **4 returns** by following five processes (the **5 elements**) within a multifunctional landscape (the **3 zones**). This transformative approach takes place over a realistic time period (**minimum 20 years**). The process recognises the importance of: inclusive governance and the role of laws and policies; finance to fund the transition to landscape restoration; and the importance of markets, to ensure the long-term security of sustainable enterprises.

> *After years of testing, the 4 Returns Framework for restoring landscapes is building a sound concept that can go to scale. It will be a valuable tool to achieve the goals of the UN Decade on Ecosystem Restoration.*
>
> Tim Christophersen, UNEP



Source: The Little Sustainable Landscape Book, GCP, WWF, IDH, EcoAgriculture Partners, TNC (2015); 4 Returns, 3 Zones, 20 Years, IUCN CEM, RSM (2015)

THE AMBITION: RESILIENT LANDSCAPES AND THE SUSTAINABLE DEVELOPMENT GOALS

We must restore natural systems to full functionality. We need to do this in such a way that natural, social and economic systems are able to cope with internal and external shocks – that they can be resilient landscapes.

In 2019, the UN General Assembly proclaimed 2021–2030 as the **UN Decade on Ecosystem Restoration**.[26,27] Ecosystem restoration improves livelihoods, helps to regulate disease and reduces climate related disasters. **The Bonn Challenge**[28] **and the New York Declaration on Forests**[29] laid the foundation for the Decade with an aim to bring into restoration 350 million hectares of degraded and deforested land by 2030. Both are associated with **Forest Landscape Restoration (FLR).** Restoring an area slightly larger than India by 2030 could generate US$9 trillion in ecosystem services, remove 13 to 26 gigatons of greenhouse gases and create economic benefits nine times the cost of investment.[30]

We have to ensure each landscape achieves the **Sustainable Development Goals (SDGs)** – that each is able to sustain present and future generations. The UN adopted **17 SDGs** in 2015 to mobilise efforts to end poverty, foster peace, safeguard the rights and dignity of all people and protect the planet.[31] The SDGs are linked and inter-dependent,[32] requiring actors across public and private sectors to work together to manage competition for natural resources and avoid over-exploitation. All SDGs rely on ecosystem restoration.[33] The UN itself divides the SDGs according to the 4 Returns.

- **Inspiration -** SDG 17 (building partnerships) is the key to successful landscape management by facilitating local (bottom-up) and global (top-down) collaboration.
- **Natural -** Four SDGs relate to restoring nature: 6 clean water, 13 climate action, 14 life below water and 15 life on land.
- **Social** - Eight SDGs strengthen society: 1 no poverty, 2 zero hunger, 3 good health and well-being, 4 quality education, 5 gender equality, 7 affordable and clean energy, 11 sustainable cities and communities and 16 peace and justice.
- **Financial** - Four SDGs cover the economy: 8 decent work and economic growth, 9 industry innovation and infrastructure, 10 reduced inequalities and 12 responsible consumption and production.

The SDG objectives are unlikely to be met unless ecosystem restoration is undertaken at enormous scale. And they have to be met in an integrated fashion. **Nature-based Solutions (NbS)** provide a tool for this and are defined by IUCN as *"actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits"*.[34] Both FLR and NbS rely on approaches similar to the 4 Returns Framework.

The 1000 Landscapes for 1 Billion People initiative (**1000L initiative)** was started in 2019 with a goal to support one thousand landscape partnerships to deliver sustainable and resilient solutions for a billion people. 1000L shares the same conceptual framework as the 4 Returns Framework and, with over 30 organisations as members, it seeks to 'turbo-charge' landscape partnerships by:

- Building a digital platform to connect landscape leaders to technical experts, businesses, investors and learning networks.
- Strengthening capacity through using tested methods and tools that facilitate collaborative landscape planning and action.
- Connecting landscape initiatives with businesses and finance to build robust portfolios of sustainable production and impact investment.

Return of Inspiration

Social Returns

Natural Returns

Financial Returns

IMPACT – THE 4 RETURNS

There are no long-term winners if an ecosystem collapses. The 4 Returns Framework aims to provide a common language and practical instrument to halt and reverse the losses from landscape degradation and stimulate thriving landscapes and communities at scale.

Across the world, land management based on maximisation of profit per hectare ultimately leads to degradation and broadly four losses. People become estranged from their landscape and lose pride, hope and direction. There are fewer jobs and a weaker social fabric. Biodiversity loss means less ecological resilience, leaving communities vulnerable to flooding, drought and landslides, increased global carbon emissions and risk of disease emergence.[35] Economically, these impacts can also affect business and production, create higher risks for investors and lead to financial breakdown that triggers migration and abandonment. Life for many becomes a hardscrabble existence of just hanging on, even in wealthier countries, with little thought for the future. Globally, this drives instability, displacement and conflict.

These losses can be transformed by working with the 4 Returns Framework, through developing a landscape restoration plan rooted in innovation and sustainable business models. This turns around the loss of hope and pride (inspiration); moves from job loss to job creation (social returns); from species loss to the restoration of biodiversity (natural returns); and from economic loss to sustainable economic profit (financial returns). Each return will be measurable with a set of key performance indicators.[36]

Fundamentally, the 4 Returns Framework seeks to build ***inspiration***, mobilising energy, hope and confidence, enabling stakeholders to envision their dreams for a landscape, encouraging a collaborative approach to build a long-term and ambitious vision and the optimism to look beyond everyday reality to a richer, more purposeful future. People can believe in the opportunities inherent in their lands and waters, in the power of collaboration and partnership, even if they still seem to be a long way away. We can learn from one another: communities, landowners and farmers, indigenous peoples, faith groups and leaders, artists, poets and sportspeople, the old and the young, all tap into the kinds of energy and ideas that we need to embrace. Inspiration is the fuel for a successful landscape and the most important of the returns.

Critical to the 4 Returns Framework is rebuilding ***natural capital***. Large-scale restoration efforts ensure the abundance of critical ecosystem functions and biodiversity that come along with a healthy environment. This can build healthy soil and water security while providing protective, permanent and connected vegetation covering much of the land. Deciding where and how to carry out restoration in a landscape involves broadly defining 3 zones that give space for nature, regenerative production and people. These zones will often be mixed up in the landscape like a jigsaw puzzle. Rebuilding natural returns requires careful planning, and identification of suitable species and crops, methodologies and the time and resources needed to achieve a positive result.

But ***social returns*** are just as important, such as social network building and job creation, income security through livelihood diversification, improved social services, increased social cohesion, gender equity and resilience. The world is littered with failed restoration projects that overlook social factors such as exclusion and inequity and fail to see the links between climate and restoration. Unless the causes of degradation are addressed at the same time, technical restoration efforts will provide only temporary respite. Drawing on the inspiration and vision for a restored landscape, a collective effort is needed whereby people see improvements to their own lives alongside improvements to the health of the natural world.

A well-prepared vision of a restored landscape can drive investment and attract commerce. A restored landscape can generate significant interest and investment from ***financial returns***. Money in people's pockets is a necessary and powerful motivator. The 4 Returns Framework helps to ensure that the restored landscape offers attractive opportunities for investors so that sustainable businesses can thrive. It directly addresses the majority of the UN Sustainable Development Goals, thus providing additional incentives for government, the finance sector and industry to get involved.

MOVING AWAY FROM MAXIMISATION OF RETURN ON INVESTMENT PER HECTARE TO 4 RETURNS PER LANDSCAPE

ECOSYSTEM DEGRADATION LEADS TO 4 LOSSES:

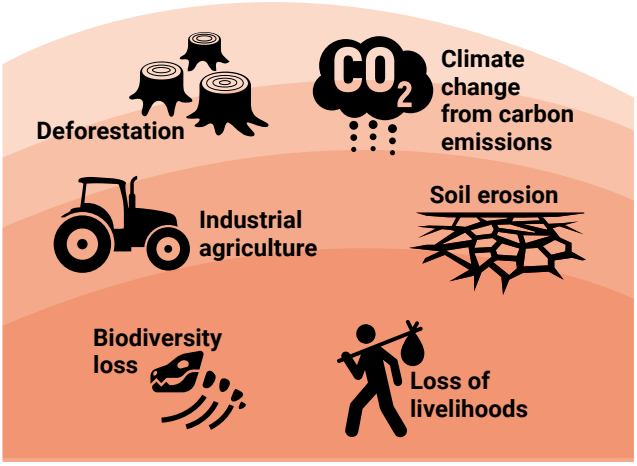
- Loss of purpose or hope
- Loss of employment and security
- Loss in biodiversity, soil & water
- Loss of economic activity

ECOSYSTEM RESTORATION LEADS TO 4 RETURNS:

- Return of inspiration
- Social returns
- Natural returns
- Financial returns

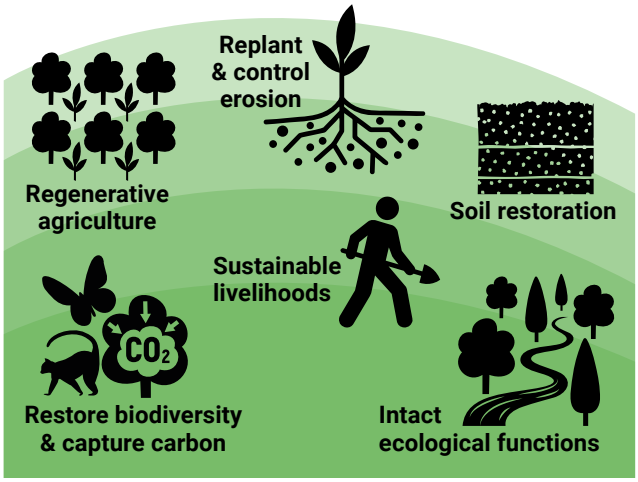
POOR LAND AND WATER MANAGEMENT

leads to drought, soil erosion and desertification



ECOSYSTEM RESTORATION

restores soil and water cycles and reverses desertification



PROCESS – THE 5 ELEMENTS

The landscape approach can reconcile competing interests and create synergies that connect people, businesses and organisations towards the joint vision of a healthy, sustainable and productive landscape for the long-term. Several steps are needed to guide the process; all are important.

There are 5 elements in achieving the 4 returns. Each step has a set of clear outcomes that landscapes can work to produce.[37]

Although listed sequentially below, several steps often take place simultaneously, or overlap. It is also important to note that the 5 elements can vary a great deal from place to place, according to a variety of contextual factors. For example, some landscape partnerships operate based on ad hoc meetings of stakeholders who promise to work together towards a common goal, while others have set up formal decision-making bodies with clear accountability frameworks and detailed monitoring and evaluation strategies in place.

1. **Landscape partnership: Interested rightsholders and stakeholders come together for dialogue and action in a common platform for action.** This involves careful stakeholder mapping and continuous and systematic engagement with a range of groups. This is necessarily an evolving process that needs careful management to maintain energy and enthusiasm, build trust and understanding of common purpose. It is important to ensure that no minority groups are left out. Outcomes can include a stakeholder map and the establishment of a multi-stakeholder platform.

2. **Shared understanding: Partners exchange information and discuss perspectives to achieve a shared understanding of landscape conditions, challenges and opportunities, and each other.** The stakeholders need to engage with the full range of needs and desires relating to the landscape. Only then is there a chance to work towards how the landscape might be managed in the future and how to get there. Important in this stage is also for stakeholders to take time to understand each other, their motivations and limits, as this builds fundamental trust and will allow much more efficient problem solving in later stages. Most people will never have done anything like this and may initially be suspicious of the process; this part takes time. Professional facilitators may help, and early support from a range of respected individuals or organisations in the area can also build confidence, trust and capacity. Outcomes can include an analysis of natural and social returns and an investigation of the underlying drivers and causes of economic, environmental and social degradation.

3. **Landscape vision and collaborative planning: The exchange of information and reaching shared understanding leads to a landscape vision and the collaborative development of an agreed action plan.** An overall vision shared by people to address a core problem in the landscape is a remarkable motivator. This might be a commitment to return life to degraded farms, to bring dry rivers back to full flow or to restore the habitat of iconic wildlife. A vision will be simple, clear, ambitious and measurable and, most importantly, it should be meaningful to all in the landscape. The landscape action plan then takes this vision and defines a way to achieve it with clear targets, results, responsibilities and indicators of progress. The landscape partnership identifies, quantifies and balances the expected returns from restoration at landscape level. This is where the partnership agrees on issues such as spatial planning and zoning, using the 3 zones. It is important to prioritise actions depending on stakeholder capacities, interests and expectations and to look at where one actor can help another. Building synergies between actors and actions is a critical element of success. Foresters may help water managers by planting forests in the right locations. Farmers can help fisherfolk by using organic fertilisers that do not poison waterways. Comparison with places where successful conservation and

restoration has taken place can be helpful, especially when working in degraded landscapes where people may no longer recognise what options exist. Outcomes for this stage include a landscape vision, an agreed action plan and a zoning plan.

4. **Taking action: Stakeholders implement the plan with attention to maintaining collaborative commitments and transparency and to the finance that can make it happen.** Implementing the plan may seem obvious but it is often the hardest part. It is important to show some successful milestones that demonstrate the effectiveness of working at landscape scale and provide benefits.[38] A realistic investment plan is needed and, if carefully planned, can deliver major resources to scale restoration. Some landscapes today are receiving millions and even hundreds of millions of dollars of investment.[39] Some practical solutions might also need to be trialled to test approaches in context and win trust from stakeholders, before they can be scaled up. It is important to keep in mind that this will always be learning by doing. Outcomes include an investment plan, actions funded and successful implementation of actions.

5. **Monitoring and learning: Stakeholders undertake monitoring for adaptive management and accountability**. This feeds into subsequent rounds of dialogue, knowledge exchange and learning, and the design of new collaborative action. This is hugely important and often overlooked. Measuring and communicating progress helps maintain interest, reassure government, donors and others, focuses the team on delivering results and catches emerging problems fast enough to adapt management if necessary. Outcomes include a monitoring system and learning strategy.[40]

CASE STUDY

FIJI'S GREAT SEA REEF RESILIENCE PROGRAMME

The Great Sea Reef Resilience Programme was launched in 2017 to provide an integrated response to the threats facing Fiji's Great Sea Reef (GSR) by climate change and land-based pollution. The GSR, which covers more than 700,000 ha, has been central to Fijian life for thousands of years and provides food, income and natural protection to coastal communities. Some 40% of Fiji's population directly depend on the reef for their food and livelihoods. In addition, 65% of foreign exchange earnings and 20% of GDP in Fiji is directly derived from the reef either through tourism or from other reef-related activity. However, due to climate change and rapid economic development, the GSR is under tremendous pressure leading to biodiversity loss (e.g. the adverse effects of climate change have led to bleaching and acidification) and loss of livelihood opportunities (e.g. depletion of fishing stocks due to overfishing).

To reverse this trend, in 2017, WWF Pacific with support from the Landscape Finance Lab[41] engaged key stakeholders in the landscape with a view to mobilising action to reduce anthropogenic pressures and regenerate the GSR. This followed the 5 process elements to initiate this landscape programme.

Landscape partnership: A national stakeholder consultation was launched in September 2017 to identify key threats and opportunities from the perspective of stakeholders and to agree on the outline of a draft landscape vision for the GSR. WWF was able to build on the political momentum created by COP23 that was to be held two months later and where Fiji held the Presidency. This led to the **creation of a landscape partnership entitled the "Great Sea Reef Resilience Programme" (GSRRP),** with a steering committee made up of 15 partners including various government agencies, farmer associations, Fiji's Development Bank, research institutes, international development agencies and NGOs[42]. Over time, additional local and regional stakeholders have come on board, and the GSRRP now brings together more than 50 partners including government agencies, farmers associations, local producers, investors, research institutes and NGOs.

Shared understanding: The programme built on decades of work on reef science and community engagement in locally managed marine areas. In addition, the partners examined commercial and non-commercial opportunities for addressing threats to the reefs. An economic analysis proposed a number of priority pathways and examined the costs and benefits of each.

Collaborative planning and landscape vision: Understanding the biophysical and social environment, and motivations of stakeholders, provides a strong basis for planning. The GSRRP Steering Group agreed on a **common vision for the landscape:** to ensure, by 2030, that the Great Sea Reef and coastal ecosystems are healthy and resilient to a changing climate while supporting regenerative business, food security and the building of livelihoods and community wealth.

The Steering Group also agreed on **a detailed action plan** with the following objectives: engage in holistic land and marine use planning; forest restoration; organic agriculture; and to facilitate the much-needed flow of finance into the various components of the programme.

Effective implementation: The Steering Committee has supported the government of Fiji to submit a USD 30 million proposal to the Green Climate Fund to fund climate change adaptation measures. This aims to address the destruction and clearing of habitats, reduce overfishing and unsustainable production, and find solutions to solid and chemical waste treatment and disposal. It will establish a reef governance system not unlike the Great Barrier Reef Marine Park Authority in Australia, with incentives for private sector action and a strong monitoring system to guarantee reef health. Specific targets include: shifting in-shore and off-shore fish catch to sustainability; restoring mountainous and riverine forests and mangroves; and transforming conventional agriculture to organic within the intervention area.

In parallel, a development and investment partnership for green and blue businesses in Fiji (Matanataki) was launched to deliver the goals of the GSRRP. Matanataki aims to channel impact investments to projects and businesses that contribute to GSRRP objectives. It is a dedicated financial partnership which sources investable businesses and attracts international investors, including private investors and international development institutions. Matanataki has screened more than 150 business and investment opportunities and currently holds a pipeline of 50 businesses and projects at various stages of development. Matanataki's investment vehicle, the Great Sea Reef Development Company (GSR DevCo), aims to secure $50 - 75 M investment for reef health and climate resilience. Three pilot projects in the waste management sector (disposal, composting and recycling) are currently in execution, in collaboration with donors and investors, such as the Global Fund for Coral Reefs.

Monitoring and learning: The work of the Steering Committee has led to a refining of the programme's objectives, which are now being designed into investments under Matanataki.

PROCESS: 5 ELEMENTS

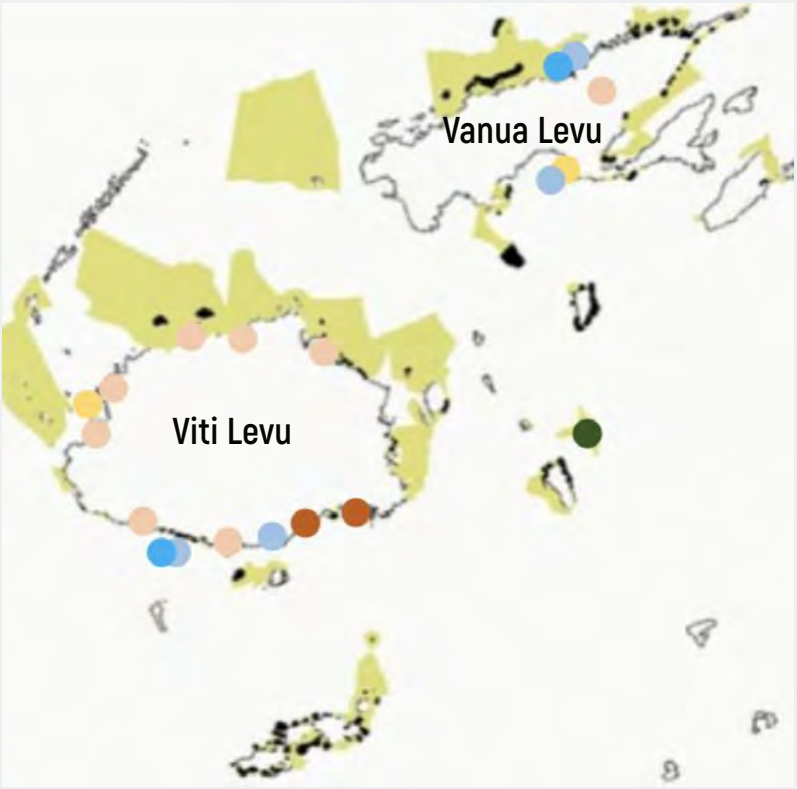
Element	Indicator	Status
LANDSCAPE PARTNERSHIP	Stakeholder map	→
	MSP agreement	→
SHARED UNDERSTANDING	Natural/social capital	→
	Drivers analysis	→
VISION & PLANNING	Vision	→
	Action plan	→
	Spacial plan	↻
TAKING ACTION	Investment plan	→
	Actions funded	→
	Implementation	→
IMPACT AND LEARNING	Monitoring system	→
	Learning strategy	→

→ In place → Underway ↻ Adapted

IMPACT: 4 RETURNS

Returns	Indicator	Target 2030	Status 2021
INSPIRATION	Seascape vision	1	1
	Organizations involved	50	50
	Community consultations	50	10
SOCIAL	Institutions created	5	3
	Certified production ha	3,000	0
	Direct jobs created	>50	3
NATURAL	Pollution reduced ha	8,000	0
	Waste reduced tonnes pa	17.5k	0
	Carbon reductions tCO_2e	66k	0
	Farms moved to organic ha	3,000	0
	Mangrove/forest restored	8,000	0
FINANCIAL	Business pipeline	200	120
	Proposals submitted USD	30M	30M
	Investment secured USD	50M	15M
	Businesses invested in	10	3
	Invest vehicles created	1	1

AREAS: 3 ZONES



GSR Actions

	Planned	Underway
Economic zone		
Waste / recycling	●	●
Ecotourism	●	
Combined zone		
Organic agriculture	●	
MSC fisheries	●	
Natural zone		
Mangrove restoration		
Forest restoration		
Marine PAs	●	

THEORY U

Social tools can help stakeholders navigate the 5 elements that will require skills that are often lacking among restoration practitioners. For many people this will be a very new way of working; neither simply leading from the front and taking decisions, nor handing decision-making power over to someone else. Theory U is an example of a practical and powerful method for co-creation, sensing, exploring, guiding and managing group processes in a systematic way, for building inclusive and collective stakeholder engagement.

Theory U builds on two decades of action research based at MIT's Presencing Institute and has become a common tool in business. It is a process that reveals how all actors inside a system can work together to identify the deep root of a challenge and co-create solutions that respond to this shared understanding. It identifies what capabilities are needed to enable a transformative shift away from an ego-centric society to an eco-centric society. It identifies the blind spots that repeatedly lead to interventional failure and works at all levels, starting with the individual, often neglected when looking to large-scale intervention work.

The process works as a five-step U journey, where (1) we first connect to the common intent that brings us together – the *why*. We then move (2) into a profound attempt to understand the world that lies outside of our organisational or individual periphery. Then, (3) the process of presencing is a critical step, in which we pause and ask what is needed to be let go of, or to be let in, to achieve true transformative change. Next, we start (4) to build on the collective understanding and applying any new principles identified in the presencing stage into collective action. We start to prototype and co-create possible solutions to the challenge. Finally, (5) through this co-creation process, we start to collectively embody the new system that wants to emerge, and the system begins to evolve. In this sense it is very much parallel and mirroring the 5 elements.

Theory U in landscapes is a process that engages diverse stakeholders, identifying what leadership capabilities are present, or missing. It identifies gaps in the system, especially "unrepresented voices", which can often be the natural environment, as well as minority groups repeatedly excluded from landscape intervention work. It is a process that requires commitment on all levels, starting with the I, moving towards the We, which in turn makes up the whole. Theory U is increasingly being used by governments and industry.[43]

THE THEORY U IS A PRACTICAL METHOD FOR GUIDING AWARENESS-BASED SYSTEM CHANGE WITHIN A LANDSCAPE PARTNERSHIP

This image shows how to move through the 5 elements whilst applying the principles of Theory U

Credits: Presencing Institute and Living Lands

AREAS – THE 3 ZONES

Dividing a landscape into natural, combined and economic zones is a handy way to help understand the different needs and values in any one area and to ensure equal space for nature and people.

Some ecosystems and habitats, for example freshwater systems such as rivers and lakes, act as links between different zones. This helps species mobility and nutrient transport, acts as nurseries for commercially exploited fish or shrimps and forms communications pathways for trade and leisure. Such systems also distribute pollution and influence water security. The resilience of these systems is vital for supporting the delivery of returns across a land or seascape. Stakeholders may also need to collaborate to influence development and management actions taken in these systems, but outside their landscapes, to ensure that these do not threaten their own plans and achievements.

Natural zones contain natural habitats and ecosystems. Very few are intact. But areas with predominantly native flora and fauna and long-developed ecological systems have biodiversity richness and ecosystem services far greater than in the rest of the landscape. People will be present, but their impact is minimal. The aim here is to restore natural habitats and increase connectivity so as to also increase benefits for humans from ecosystem functions. Actions range from natural regeneration to protecting existing areas of habitat, creating linking corridors and supporting threatened wildlife populations. They provide resilience against climate change, safeguard water availability and avoid the conditions that encourage new diseases to spill-over into human populations.

Combined zones are places where sustainable production and regeneration of biodiversity are combined. They are places where natural, economic and cultural ecosystems exist side by side, typically agriculture and agroforestry, fisheries and smaller human settlements. This is where the need and potential for rebuilding functioning ecosystems, including healthy soils, is often the greatest and is increasingly becoming a priority for business and communities alike. Actions range from creating agroforestry islands and buffer zones to more subtle improvements to existing management, such as regenerative or agroecological production systems, rotational grazing and holistic pasture management, agroforestry, sustainable forest management, changes to fishing and aquaculture practices. Critical in this zone is a diversification in products and move to polyculture, a reduction of inputs and restored hydrology. Sustainable production certified by an iSeal accredited certification scheme such as FSC or RSPO would be an ideal. These approaches allow gradual rebuilding of biodiversity.

Combined zones restore soil health through practices encouraging carbon, micro-organisms and regenerative agriculture,[44,45] remove pressure from natural zones, and act as buffer zones that can function as biodiversity steppingstones. They are vital for healthy food and fibre production while enabling biodiversity to increase landscape connectivity and conservation. Their health is linked to the health of the natural zone via ecological and hydrological corridors, providing exchange of biodiversity and water.

Economic zones have undergone the greatest changes. These include urban and peri-urban areas, industrial complexes and other infrastructure and some intensive monoculture plantations. It is usually neither practical nor necessary to restore these, but management choices can help to maintain hydrological and ecological corridors, reduce off-site impacts such as pollution, soil erosion and biodiversity loss, and reduce stress in other parts of the landscape through improvements in e.g. energy efficiency, recycling and circular economy and improve quality of life through nature based solutions. Economic zones contain most people, who often have a strong influence on what happens in the rest of the landscape, so it is critical to ensure that stakeholders here support the overall vision.

RESTORATION OF THE ALTIPLANO, SPAIN ACROSS 3 ZONES

NATURAL ZONE

5 YEARS

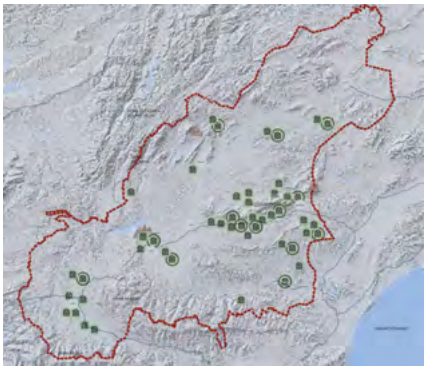
10 YEARS

20+ YEARS

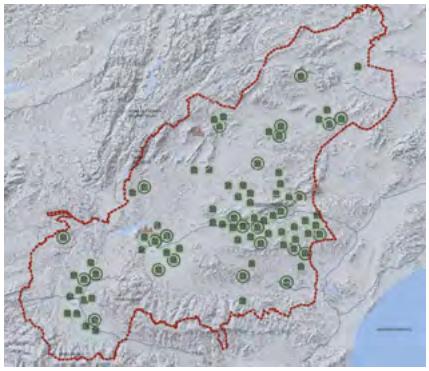
New Natural Area Restored Natural Areas Fauna Passage

COMBINED ZONE

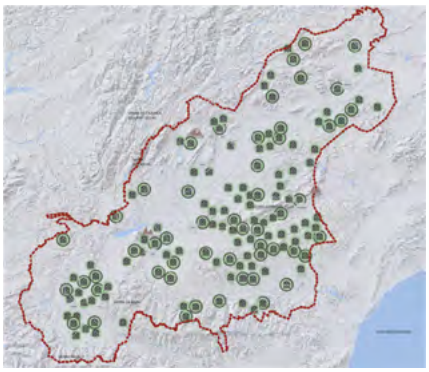
5 YEARS



10 YEARS



20+ YEARS

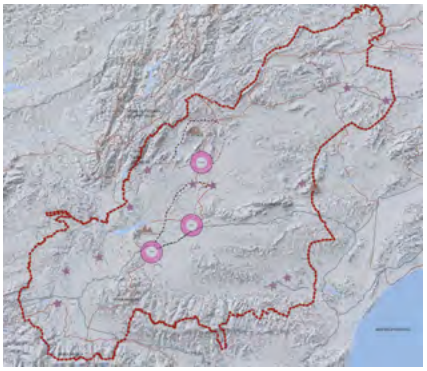


Regenerative Farm Regenerative Farm with restored natural area

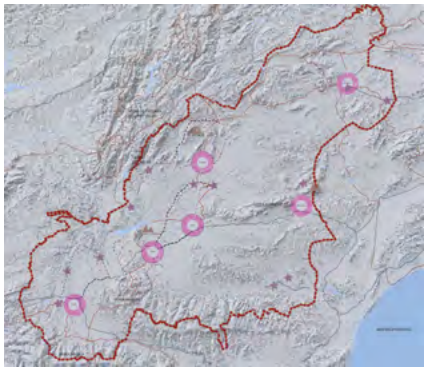
ECONOMIC ZONE

5 YEARS

10 YEARS



20+ YEARS



Economic Area New Touristic Route Baza Village Points of Interest Hiking Route Highway

The landscape zoning maps were drawn in 2018 by local members of the landscape partnership Alvelal to visualize the restoration ambitions for the entire territory. In this way it gives stakeholders guidance on the spatial components of a regional 4 returns plan (credits: Erica ten Broeke, Elvira Marín Irigaray)

TIME – A 20+YEAR PROGRAMME

Restoration on a landscape scale is long term. For transformative change, expect to be working on at least a two-decade timetable. Short term action is critical to give people confidence but only as part of long-term thinking that can help to generate finance, reduce risks, create synergies and establish coherent and stable management.

Most governments run on five-year cycles. Institutional investors including the carbon finance sector may think in decades, but often ask government guarantees before participating. Most donor projects and development finance institutions have even shorter timescales, and NGOs can jump from issue to issue so quickly that nothing gets finally resolved. Many companies also prioritise short term return on investment, although increasingly longer-term risk management is accepted thanks to the Paris Climate Agreements. Yet regenerating an ecosystem and changing unsustainable practices takes time. Not just the time for plants to grow, soils to recover, waters to run pure again, but – even more importantly – time to create trust and mobilise stakeholders. Over-promising to deliver results quickly can simply lead to disappointment and a falling off of effort or even an outright rejection of the process. Building trust is essential for large-scale area-based partnerships that are dynamic, flexible and operate on a long-term horizon. For farmers, forest and pastoralist communities, indigenous people, ecologists and investors to appreciate the full benefit of landscape restoration, at least 20 years, or a generation, is necessary. The implementation of a landscape approach results in connections between diverse people in large areas, resulting in a myriad of community networks, restoration and regenerative farming activities. In essence, people and institutions learn to work together in a structured way in large dynamic landscapes (which are ecologically and culturally a whole) and are able to make long-term decisions.

This doesn't mean waiting two decades before anything happens. Some returns will be faster; nature is resilient, many ecosystem services will return more quickly, so that stakeholders can see that their efforts are not being wasted. But other aspects will take much longer; in twenty years trees in many temperate countries will still be at the start of their lifespans and, more fundamentally, it will often take a generation to change mindsets, practices and the culture of how a landscape is managed. And it takes time to build synergies and beneficial reinforcement across sectors, actors and scales. The important thing is to avoid early disillusionment by being clear about a realistic timetable.

This has a number of implications. Long-term planning is needed; landscape programmes can inevitably have a lengthy start-up phase in which stakeholders get engaged, get to know each other, debate, argue, build trust, educate each other and hopefully become excited about the possibilities and reach consensus about ways forward. The constant feature is transparency, compromise and trade-offs between different stakeholders' priorities. But everyone needs to get ***enough*** of what they want to keep the system working. A good landscape programme should deliver more value than individual stakeholders can achieve on their own. Strong partnerships can buffer against shocks and protect against derailment, check on progress and maintain enthusiasm. A minimum twenty-year target doesn't mean sitting around for fifteen years and then starting to panic, but rather steady progress towards a stepped series of goals.

RESTORATION OF THE CHILIKA CATCHMENT LANDSCAPE 1992-PRESENT

An integrated landscape-scale approach was adopted to successfully restore the lake and its drainage basin with the community at the centre stage. By enabling a unique governance model, Chilika Development Authority could bring on board diverse stakeholders and actors across the landscapes. The most critical part has been building communities' trust by giving them a space in decision-making processes. It is heartening that the governance model built in Chilika during my tenure as Chief Executive is being emulated in different parts of India and South Asia.

Dr Pattnaik, former Chief Executive of the Chilika Development Authority

Located along the east coast of India, in the Mahanadi River delta, the Chilika catchment forms a landscape of some 356,000 hectares with the lagoon at its heart covering 116,500 hectares. The landscape encompasses a mosaic of sand dunes, forest, mudflats, seagrass, aquatic vegetation and open water, surrounded by predominantly agricultural land. Fed by the freshwaters of the Mahanadi River and connected to the Bay of Bengal through an inlet, the Chilika landscape is a hotspot of biodiversity supporting at least 569 plankton, 22 algae, 726 plants, 136 molluscs, 29 crustacea, 317 fish, 225 birds, 7 amphibian and 19 mammalian species, several of which are of high conservation value nationally, regionally and globally. The lagoon hosts over a million migratory waterbirds and is one of the largest congregation sites in the Central Asian Flyway. It is also one of the two lagoons in the world inhabited by the Globally Vulnerable Irrawaddy dolphin. The highly productive ecosystem of the lagoon, with its rich fishery resources, sustains the livelihood of more than 0.15 million fisherfolk who live in and around the lagoon and a further 0.8 million farmers living in the catchment.

In the 1990s, changing land and water management in the catchment was delivering increased sediment to the lagoon driving siltation, shrinkage of water coverage, choking of the inlet channel and shifting of its connection to the sea. A series of sand shoals had coalesced to create an extended sand barrier blocking the lagoon's connection to the sea, reducing flushing of freshwater through the system, decreasing sediment transport and leading to a decline in marine water inflow. Decreases in salinity and associated fishery resources, proliferation of freshwater invasive species, widespread loss of biodiversity and a general decline in productivity resulted, adversely affecting the livelihood of the rural communities. The near 75 per cent decline in fish catch between 1986 and 1996 created significant hardships for dependent communities. In 1993 the lagoon, designated as a Wetland of International Importance (Ramsar site) by the Government of India, was placed in the Montreux record due to the adverse changes in its ecological character.

The Chilika Development Authority (CDA), created in 1992, was charged with the restoration and the overall development of the catchment. Based on specific studies of coastal processes, the CDA engineered a new mouth to the lagoon in September 2000, to restore the salinity gradient and ensure hydrological and ecological exchange with the Bay of Bengal. Despite successful restoration of the salinity gradient and fish catch it became clear that a landscape wide approach was needed to balance local natural resource use and development goals against biodiversity conservation and restoration. Wetlands International undertook bottom-up consultation with local communities and natural resource users on their use and values associated with the landscape, which brought these into the development of a first management plan for the Chilika catchment in 2012.

The changes in salinity and recovery of submerged macrophytes have led to a near 10-fold recovery in fish catch from the low point in 1996 to 2001. During 2011-15, the annual landing averaged 12,465 million tonnes, valued at Rs. 1463 million annually. Populations of the Irawaddy dolphin, a flagship species for the lake which draws many tourists to visit, also increased with the population growing

to 144 individuals in 2015, compared to a few individuals recorded in 1999-2000. Sea grass beds, which had an insignificant presence in the lagoon prior to the ecological restoration, now span 104 km^2 with a diversity of 14 species. Furthermore, the understanding of the landscape's functioning has been used to engage with subsequent upstream water infrastructure planning and operations that threatened to divert water upstream and away from the catchment. Water flows have now been optimized, reducing the peak monsoonal flows that were regularly threatening human security in balance with productive flows essential to the lagoon ecology and local economy.

Inclusive governance has been key to success and ongoing management and adaptation. As the planning and implementation of successive management plans have come together, the partnership and its governance has become increasingly inclusive and complex. CDA leads on the management of the landscape supported and advised by a range of Indian knowledge and research institutions, community based and non-governmental organisations and Odisha State government departments and agencies including agriculture, fisheries and animal resources, revenue and disaster management and water resources. Wetlands International continues to play an informal governance role linking strategic and technical analysis, insights and community perspectives into governance dialogue alongside the formally recognized groups.

Spurred by significant government-supported restoration of the lagoon (during 1992 - 2014, Rs. 1545.55 million was committed, equivalent to US$ 22.78 million at 2016 exchange rate), there has been a massive growth in private investment in tourism around the lagoon. Investments in high-end hotels attracting national and international tourists have mushroomed and during 2011-15, Chilika was annually visited by 0.53 million tourists creating an economy worth US$ 52 million per annum. Servicing these visitors, community-managed wetland ecotourism has boomed. Manglajodi community is an example. Shifting from illegal waterbird harvest to community-managed ecotourism, there is improved and steady income from tourists interested in bird watching. Presently, they service 5,000 tourists each year and the site stands out as one of the popular destinations for watching migratory water birds within a serene environment.

Restoration of the lagoon ecology did not automatically convert into benefits for some groups. The fishing community was beset by a coercive market structure benefitting middlemen who also tied local fisherfolk to unfavourable loans, further undermining their benefits. CDA restructured the market, capitalised fishing cooperatives, provided ice boxes and provided systematic capacity development support for fisherfolk. By 2015 gross annual value realisation of fishing households was up by 21 percent. The annual interest payments on debt was reduced by 13 percent as over one–fifth of the fisherfolk were able to secure loans from financial institutions rather than middlemen. Income has also increased significantly in community ecotourism; assessments carried by Wetlands International in 2015 showed that annual community ecotourism household incomes have increased over 2.5 times in the last two decades, also bringing dignity in the profession.

A key lesson currently being learned is the need to adopt an adaptive approach to restoration and subsequent management. The restoration of the landscape has been highly successful, but these achievements are themselves creating new challenges. Increasing tourism is driving increased pollution and physical threats to species such as dolphins. The land use in the Chilika is gradually intensifying, creating pressures on upstream freshwater use as well as nutrient enrichment from agricultural runoff and untreated sewage. In addition, future climate change impacts related to sea level change and changing weather patterns are posing new questions. Management is responding by increasing the range of indicators to track changes in the natural capital, but it is becoming clear that future management goals are going to have to adapt to system changes.

PROCESS: 5 ELEMENTS

Element	indicator	Status
LANDSCAPE PARTNERSHIP	Stakeholder map	→
	Multi stakeholder agreement	→
SHARED UNDERSTANDING	Natural capital	→
	Social capital	→
	Drivers analysis	→
VISION & PLANNING	Vision	→
	Action plan	→
	Spacial plan	→
TAKING ACTION	Actions resourced	→
	Effective implementation	→
IMPACT AND LEARNING	Monitoring system	→
	Learning strategy	→

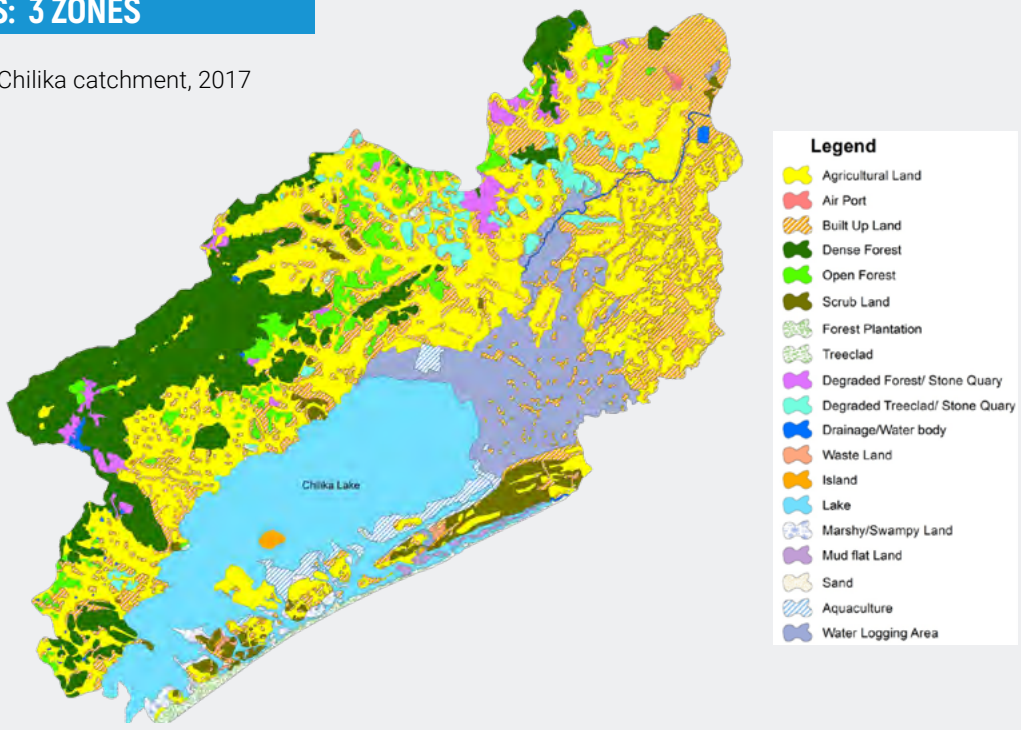
→ In place → Underway

IMPACT: 4 RETURNS

Returns	Indicator	Target	Status
INSPIRATION	Sectoral and stakeholder represented in decision making	8	7
	Illegal aquaculture, km^2	0	2
SOCIAL	Annual Fish Landing	12,500MT	12,235MT
	Fishing livelihoods sustained	0.14 million	0.14 million
NATURAL	Maintain salinity gradient	Between 1-38ppt	Between 1-38ppt
	Dissolved oxygen conducive for aquatic life	>4ppm	>6ppm
	Area under sea-grass beds	150km^2	150km^2
	Irawaddy dolphin (count)	100	113
	Waterbirds (annual count)	0.5 million	0.7 million
	Number of active inlets to sea	at least one	2
FINANCIAL	Annual budgets for wetland management	US$ 0.4 million	US$ 0.3 million
	% population deriving value added livelihoods	30%	15%

AREAS: 3 ZONES

Landuse distribution of Chilika catchment, 2017



Natural Zone
Dense Forest
Open Forest
Forest Platation
Islands
Mud Flats
Treeclad

Combined Zone
Sand
Marshy/Swampy Land
Lake
Waste Land
Drainage / Waterbody
Scrub

Economic Zone
Agriculture
Builtup
Aquaculture
Degraded Forest / Stone Quarry
Airport

INTEGRATION

Successful landscape approaches involve bringing together concerned people, inside and outside the landscape, who are interested in developing a positive movement towards regeneration.

How does this all fit together? Often rather messily: real life doesn't follow the neat lines laid down in management manuals. Keeping the basic principles in mind, **5-4-3-20+**, while focusing on multiple inspirational, environmental, social and economic priorities is vital. Equally important is to build confidence and excitement about the possibilities, recognising and learning about interdependencies of landscape components. Different types of land and water need different approaches, but it is important that they hang together in a coherent whole. And to stress again: the process takes time, we are talking about generational change.

Within that basic outline, things vary. Landscape approaches may often be retrofitted onto existing programmes. Wider stakeholders may need to be brought in and already have set opinions. Some parts of the process will probably be easier to achieve, fund and complete than others and it is important not to be seen as favouring one interest group over another.

Governments have a powerful – often the most powerful – voice and may have dramatically different views from local people. Large companies and investors are also powerful and in poorer countries their real influence may be stronger than governments. Vested interests, short-term business planning, corruption and old loyalties and tensions further confuse the situation. But while outside influences can be disruptive, they can also be positive; companies or financiers committed to be doing the right thing can help tilt the balance towards sustainability.

So, integration is not just a process of the technical aspects of landscape design. It also means integrating people of different and sometimes conflicting perspectives, both inside and outside the landscape: farmers, indigenous people and forest communities, plantation owners, hoteliers, civil servants, fisherfolk, school children and financiers. It is important to build bridges between stakeholders who may start from very different situations and worldviews. Often local people need their engagement facilitated by civil society organisations to help bridge trust gaps, capacity needs and understanding. Building trust takes time and a key part of the process may be to persuade some of the stakeholders – particularly industry bodies who may be used to working on a much shorter timescale and in a top-down approach – of the value of long-term, bottom-up ways of working.

> *The 4 Returns bring a fresh way to engage each one of us as agents for change. Inspiration is the trigger for innovation, and this is essential for understanding, managing and restoring ecosystems to generate lasting benefits for nature, the economy, and the human-kind.*
>
> Eduardo Mansur, Director of the Office of Climate Change, Biodiversity and Environment of the Food and Agriculture Organization of the United Nations, FAO

CASE STUDY

RESTORING SPAIN'S ALTIPLANO ESTEPARIO

The Altiplano Estepario in South-eastern Spain covers an area of about one million hectares, with three protected areas, three water basins of the rivers Guadalquivir and Segura as well as the Mediterranean basin, and roughly 250,000 inhabitants across two autonomous political administrations. The area is a hot spot of European rain-fed, organic almond production. Other land uses include grazing livestock (lamb) and growing cereals, aromatic herbs, honey, olives and pistachios. Like many other areas in the Mediterranean, the region suffers from severe land degradation, desertification and rural abandonment, and climate conditions are extreme. Soil degradation exceeds soil formation which is further accelerated by climate change and human activity. And because of both man-made and natural desertification, it is challenging to regenerate vegetation.[46,47]

In 2014, Commonland organised a three-day workshop to co-create a **landscape vision** bringing together local landowners, farmers, natural area managers, mayors and entrepreneurs, to co-develop and support a minimum 20-year plan for jointly restoring the landscape while realising the return of inspiration and social, natural and financial returns based on three landscape zones. Guided by **Theory U**, the change management system of the Presencing Institute,[48] the workshop led to the co-creation of a 2036 vision for the Altiplano. The Return of Inspiration and framework 'opened up' the hearts and minds of the participants and they agreed that by 2036, they will create a restored and regenerative landscape where ecology and economics are equal and nature and agriculture are in balance with the people who live and work there: connecting and combining the Northern and Southern and Eastern to Western mountain ranges, creating corridors and steppingstones for flora and fauna in the agricultural landscape. Farms with both natural and productive lands form a mosaic of biodiversity hotspots in between the natural parks. Many farmers are applying practices to regenerate the land. Economic opportunities have been created through the processing and marketing of regenerative produce. Rural abandonment is reversed as young people return and find opportunity in the Altiplano. The Altiplano becomes a regenerative landscape where agroecology and regenerative farming is a form of life, connecting economy and ecology. And just as important: confidence and well-being are improved, both socially and economically. This landscape hopes to serve as a lighthouse example for dryland restoration in the Mediterranean Basin.

Following the creation of the landscape vision, the landscape partnership association 'AlVelAl'[49] was established in April 2015 to steer community-based action across the landscape to restore and connect natural areas, facilitate the transition towards regenerative agriculture and develop 4 Returns businesses as a driver for landscape restoration.[50] AlVelAl brings together a range of people, including farmers, conservation organisations and businesses who share the dream of restoring the Altiplano. The AlVelAl network is working collectively towards thriving landscapes and communities. AlVelAl's objectives are:

- **Return of inspiration**: Reverse desertification and rural abandonment resulting in an improvement of the living conditions, beautification of the landscape and the creation of a clear perspective for the future.
- **Social returns**: Create employment opportunities, increase the skills of local stakeholders through workshops and courses, and develop a network of professional contacts, to slow migration from the region and strengthen the area's cultural and historical heritage.
- **Return of nature**: Reduce erosion, increase soil fertility and restore the water cycle, to increase biodiversity and the functionality of the ecosystem and connect natural areas.
- **Financial returns**: Increase and make the income of both the producers and businesspeople more sustainable, thus revitalising the region.[51,52]

AlVelAl works across three zones in the landscape. In the **natural zone**, AlVelAl has started to restore public lands by planting endemic and native shrubs and trees (including drone seeding) and to create infrastructures for water harvesting. AlVelAl also started the restoration of natural areas on farms, thereby creating steppingstones for flora and fauna. Several other restoration initiatives are planned with the aim of creating ecological corridors in the heart of the Altiplano. The **combined zone** (410,000 hectares) contains at least 100,000 hectares of almond groves, 120,000 hectares of cereals, 40,000 hectares of olives and 150,000 hectares of other crops, livestock and agricultural constructions. AlVelAl enables the transition to regenerative farming by introducing measures to retain soil and water and to promote biodiversity. Regenerative measures are, for example, the use of compost, as well as cover crops and perennial plants so that the bare soil is never exposed. In the **economic zone** (15,000 hectares) AlVelAl is working with local producers and entrepreneurs to create regenerative businesses conducive to landscape restoration. This is where La Almendrehesa operates: a 4 returns company created to process and sell high-quality almonds and other products such as wine, honey, aromatics, olives and Segureño lamb from regenerative agroforestry production systems. La Almendrehesa refers to almonds and the term was coined to symbolise the development and facilitation of regenerative agriculture,

by paying farmers more for their crops, thereby enabling them to re-invest in their farms. Similarly, the cooperative Habitát processes and sells high-quality regenerative organic olive oil. As a next step, AlVelAl will be launching the consumer brand AlVelAl Foods to promote direct sales of all regenerative produce, such as wine, honey, aromatics, olives and Segureño lamb, from the Altiplano.

Today, the association AlVelAl is a multi-stakeholder network of 350 members, roughly half of which are farmers, and the other half consists of other public, private, social and academic actors. To date, the initiative has led to more than 180 farmers actively rolling out regenerative measures on their farm: 140,000 trees planted and over 200,000 seeds sown by drone since 2017; 14,000 hectares under improved regenerative management and 30,000 hectares influenced positively.

Progress against 2016 baselines is regularly monitored. The entire approach is about learning and adapting by doing, identifying and testing what works best in the Altiplano.

PROCESS: 5 ELEMENTS

Element	indicator	Status
LANDSCAPE PARTNERSHIP	Stakeholder map	→
	Multi stakeholder agreement	→
SHARED UNDERSTANDING	Nat/socl capital	→
	Drivers analysis	→
VISION & PLANNING	Vision	→
	Action plan	→
	Spacial plan	→
TAKING ACTION	Actions resourced	↻
	Effective implementation	→
IMPACT AND LEARNING	Monitoring system	↻
	Learning strategy	→

→ In place → Underway ↻ Adapted

IMPACT: 4 RETURNS

Returns	Indicator	Target	Status
INSPIRATION	No of members	<2.000	350
	No partnerships	<60	10
	Inspiration project	<10	3
SOCIAL	No. farmers in transition	1,600	180
	% Next generation farmers and local entrepreneurs	95	75
	% Farmers reporting high quality of life	50	36
NATURAL	Ha combined zone under restoration	<70K	14K
	% of priority eco-corridors under restoration	60%	5%
	Ton/yr of CO2 sequestration	86K	16K
FINANCIAL	Pipeline development	100	18
	4 Returns businesses	15	3

AREAS: 3 ZONES

Natural Zone - 575.000 ha
Combined Zone - 410.000 ha
Economic Zone - 15.000 ha

USE CASE – GOVERNMENT

What's in it for them?

Practical solutions to rural development. A clear and measurable way of delivering impacts that align with many international environmental targets without undermining local or national economies.

Most governments have committed to international sustainability targets, such as the SDGs, to reduce their national carbon emissions through their Nationally Determined Contributions (NDCs) and to minimise land degradation through the UN Convention to Combat Desertification's Land Degradation Neutrality target.

However, governance challenges such as lack of integrated land use planning, poor collaboration between ministries, or policy inconsistencies often impede progress. There is an increasing recognition that problems cannot be addressed in isolation, and practical long-term systemic tools are needed. Governments should prioritize supporting long-term process management with stakeholders to increase chances of success in landscape approaches.

The 4 Returns Framework provides government the opportunity to work across sectors and with a varied range of stakeholders and to plan strategically in a more collaborative and integrative way. It provides a clear roadmap to encouraging government bodies to work together across sectors and find solutions that meet their respective priorities with the fewest trade-offs. This helps to ensure that providing positive benefits for one sector of society does not disadvantage another group of stakeholders. It also brings together ministries and businesses interested in sustainable sourcing/production, whose presence can help the government meet its sustainability targets. Integrated action requires less staff and less money to achieve more. Overall, working in a landscape partnership provides incentives for continued good practice.

What role do national governments play in a landscape approach or spatial planning?

Ultimately, they set the rules that shape landscapes; more subtly, government support for an initiative can help convince donors and businesses that it is safe to engage. Government policies help redistribute returns amongst stakeholders so that those bearing most of the restoration costs do not lose out.

Governments are crucial actors in spatial planning and holistic landscape management as they have the ultimate authority over decisions relating to land-use planning. They set the rules of the game through policies, laws and regulations (e.g. enabling sustainable investments, setting up mechanisms for effective public participation or ensuring clear land and access rights to secure long-term restoration efforts). Government buy-in can provide the necessary reassurance to a risk-averse finance sector, thus helping to secure much needed investment. Public funding is also crucial in the blended financing mix to lower the risk for private funding providers to an extent that the risk/return profile becomes acceptable for private parties.

When engaging in the 4 Returns Framework, it is the government that gives stakeholders the space to co-create in a landscape through covering long term process costs. This is less than 0.1% of the total returns of a landscape. For example, in the Netherlands, the Ministry of Agriculture, Food quality and Nature, and the Ministry of Infrastructure and Water are teaming up using the 4 Returns Framework in co-creation sessions with stakeholders.[53]

This has led to "For Tomorrow's Harvest" a landscape lab initiated by a partnership between Commonland and the Physical Environment Consultative Body of the Dutch Government (OFL). The OFL facilitates dialogue between central government and society in the field of the physical environment.

> *The Dutch government is often not at the forefront of innovation but will have to step up to make our life support systems, biodiversity and climate change more central to their work. The 4 Returns Framework on holistic landscape management creates structure and clarity within agricultural programmes, not only on ecological and economic benefits, but it also gives sufficient weight to the social added values.*
>
> Erik Pool, Director Participation at the Ministry of Infrastructure and Water Management / General Secretary National Consultation Platform for Environmental Issues

USE CASE – INDIGENOUS PEOPLES, LOCAL COMMUNITIES, FARMERS AND FISHERFOLK

What's in it for them?

Rightful stakeholders with full involvement and influence regarding decisions relating to managing their homeland, livelihoods and cultures.

Farmers, pastoralists, indigenous people, forest and other local communities often have a tenuous legal relationship with the land on which they live. For example, lack of land rights or tenure threatens many indigenous communities while low food prices drive farmers to the edge. Their voices often remain unheard. But because they have a long relationship with the land, and are the traditional custodians, they have huge influence on the way it is shaped and managed. Smallholder farmers are reliant on wild biodiversity for food, natural pest control and other ecosystem services, as recognised by increased interest in the concept of Biodiversity for Food and Agriculture.[54] People living in a landscape can often subvert or ignore laws and policies made by remote governments. But decisions made by those same governments, and by major industries and investors, can profoundly affect them, undermining livelihoods, degrading ecosystems or even dispossessing them altogether. Often civil society organisations can play a vital role in bridging these differences and enabling a fruitful dialogue to take hold.

A landscape approach brings the people who live on the land into direct conversation, negotiation and eventually into partnership with these wider economic and political forces. It also brings people together ***within*** a landscape, who despite their physical proximity often don't get to meet and exchange ideas. Often these groups may experience tension and even conflict over their shared use of natural resources. It empowers vulnerable groups (women, youth, elders) and encourages them to take control of their future. It helps stop polarisation between ethnic groups and social classes, slows rural out-migration and maintains peace. It gives communities a chance to draw up a vision for how their homeland can be made more sustainable, more pleasant to live – transforming dreams into reality. And it may also provide them with the collective power needed to reclaim their rights.

What role do indigenous peoples, local communities, farmers and fisherfolk play in a landscape approach?

Communities are fundamental to shaping, implementing and growing the vision for the landscape.

Without a critical mass of local people supporting an initiative, it will face long-term challenges. But farmers, indigenous people and forest and other local communities need to be more than just recipients of other people's ideas. Rather, a vision and plan need to be drawn up by people inside the landscape, albeit sometimes with outside support. These people also need to be centrally involved in implementing plans and actions and monitoring progress, so that they see at first-hand what is and isn't working and can adapt as needed.

In most cases, rural communities will be the driving force in implementation. This may be by maintaining traditional sustainable, regenerative agricultural and agroforestry practices, creating exclosures for natural regeneration, bringing new approaches, if the status quo is not working, operating associated businesses such as tourism or providing a labour force for outside initiatives, like a reforestation programme. Many stakeholders are supportive of restoration, even giant companies like Unilever which recently announced new principles linked with regenerating nature[55] and many companies involved in carbon finance, although here the links with long-term restoration can be complicated.

> *This paper is an important and an overdue report, it will be an important tool for Indigenous Peoples to use in our continuing clamour for solutions that are more holistic and more reflective of our world views. The call for systemic change resonates well for Indigenous Peoples who have been marginalized under the current system of looking at the environment in a very fragmented manner and separates people from nature.*
>
> Minnie Degawan, Director of Indigenous & Traditional Peoples Programme at Conservation International and Kankanaey/Igorot indigenous leader, Philippines

USE CASE – BUSINESS

What's in it for them?

A chance to secure and protect fixed assets, link their business model with benefits for nature and people and increase resilience to environmental change, be leaders in innovation, attract the smartest talent and take advantage of new business and financing opportunities. Moving towards being carbon neutral and becoming long-term partners of landscape carbon programmes. All these are key elements of risk management: affecting reputational, compliance and operational risk.

Companies are being put under the environmental spotlight now more than ever before. Being caught up in local, social or environment conflict costs reputation, money and sometimes puts the whole business in jeopardy. Involvement in successful long-term regenerative projects can conversely provide a critical advantage in fast-moving markets, enhance resilience to climate and environmental change, help with environmental and social reporting and maintain long-term economic stability. Companies seen as cutting edge in these areas will not only secure natural resources that they rely on but also reduce the cost of capital, gain a social licence to operate and improve their stakeholder management. They will attract a lot of the best people, particularly among younger groups and build an accompanying buzz in the marketplace. That in turn encourages innovation, new thinking, new products and the opportunity to benefit from evolving funding streams, including the rapidly growing carbon market. The Landscape Sourcing report published by the Landscape Finance Lab outlines the basic arguments and steps for business to engage positively in the landscape approach and landscape restoration.[56]

> *"I am really proud that we have actually started this company, Wide Open Agriculture, that I believe has really catalyzed a lot of people who have been working in regenerative agriculture for a long time in the Wheatbelt. Realizing what we can and can't do is really important, but still maintaining that commitment to a 4 Returns response."*
>
> Ben Cole, Managing Director, Wide Open Agriculture (the first listed 4 Returns Company)
>
> In Australia, Wide Open Agriculture became the first listed 4 Returns regenerative agriculture company in 2018.

What role do businesses play in the landscape approach?

They are often the driving force behind innovation, bringing new business models to the table, encouraging local entrepreneurs and cooperatives, improving value chains and supporting sustainable livelihoods. More importantly, they are the main gateway to markets, securing purchase agreements for sustainable products negotiated on fair terms.

While the level of engagement depends on the level of dependency and the business case to engage in a landscape approach, below are several options for how businesses can get involved in a landscape approach:

- **Contribute time and resources** to engage in a co-creation process and multi-stakeholder dialogue that works to develop and deliver shared action plans, programmes, etc.
- Help **develop and deliver** on agreed actions as part of the multi-stakeholder process
- **Share information** such as spatial data for land-use planning
- If one currently doesn't exist, consider **setting up a landscape approach** with relevant stakeholders including government, NGOs and local communities, allowing them to co-lead the way and financially support an approach during a long time frame
- As, or with a financial institution, **invest in projects and companies** that support sustainable development in the landscape
- As a buyer: offer long-term purchase agreements for products that are certified sustainable at a landscape-level or are sustainably produced; Support suppliers and partners seeking investments to improve sites, factories and farm sustainability.

USE CASE – FINANCE

What's in it for them?

The key barriers against scaling landscape restoration finance include relatively low financial returns, the lack of large-scale restoration projects that can attract private finance, the need for a long investment horizon and the perception that restoration remains a risky investment due to complexity (large stakeholder groups) and difficulty in accessing a landownership guarantee. The incentives to degrade land still usually outweigh the incentives for restoration.[57,58] However, a proportion of investors are looking for more than a simple maximisation of profit, including the growing number of ethical banks, investment companies and pension funds.

New funding models with better long-term security and fewer risks.There are a surprisingly large number of financiers looking to invest in environmentally sound enterprises, that nonetheless offer secure returns and are relatively risk-free. New models, such as carbon funding, impact bonds and similar, offer a range of new opportunities. Common risk factors, particularly in many developing countries, include political instability, local opposition and other factors that reduce long-term security. Operating within an established framework, with broad agreement between all the actors, provides an unusual set of advantages, to be weighed against the potential costs of a slightly lower rate of return or longer payback period. With support from KPMG, the monetization of the 4 Returns Framework toolkit has been further elaborated.[59]

What role does finance play in the landscape approach?

Initiatives of the sort described here take time to set up, time to negotiate, build trust and often also to introduce new techniques, new business models and sometimes to restore ecosystems to a point where they can be productive again. Blended finance will be needed through this period, probably both direct finance in terms of grants and soft loans, and loans with long payback periods or that convert to grants based on good performance. Finance, from lending agencies, donor programmes, private investment vehicles and from individuals looking to make a positive difference, can play a critical role in kickstarting such initiatives.

> *"As the world hardwires the global goals into finance, the next challenge is to integrate investments at landscape scale, so they really contribute to large-scale ecosystem restoration and climate results"*
>
> Sean Kidney,
> CEO Climate Bonds Initiative

OPPORTUNITIES

The political, social and business environment is now unusually favourable towards large-scale ecosystem restoration, e.g. through corporate commitments, consumer awareness, carbon, and growing political momentum to reach long-term sustainability targets.

Despite all the challenges the world is facing – wars, climate change, food and health crisis, the COVID-19 pandemic, global turndown, polarisation and misinformation campaigns – there are reasons for hope.

The 4 Returns Framework is not a utopian dream; it is a practical approach that works in the real world, with real people, within conventional social, corporate and government frameworks. It represents a distillation of wisdom that has been brought together over many years and has been tested in practice.

Long-term, bottom-up programmes are needed, stretching over decades and based on holistic landscape management. And these bottom-up programmes need to match top-down decisions. This requires investment in people, as they are co-creating the future through local stakeholder commitments, combined with ecosystem science and entrepreneurship. To help such community developments, a more decentralised governance is required, to encourage fairer and more resilient societies, and long-term stability. Actions must also be prioritised. Most urgent is the protection of remaining natural ecosystems and biodiversity, with a slowing and halting of extinction as these types of losses cannot be reversed. Restoration of degraded ecosystems is already needed in many parts of the world through rebuilding ecosystems and establishing ecological corridors. And a switch to more resilient forms of management is also required in the rest of the landscape, such as regenerative agriculture, agroforestry, low-impact forest management and similar.

> *Ecosystem Restoration is the greatest task of our time*
>
> John D. Liu, Filmmaker, ecosystem restoration ambassador

While systemic change and collaborative action is needed from all stakeholders in a landscape, the same is needed from business, investors, development finance institutions, philanthropists and governments. With large new philanthropic funds coming up, like the Bezos Earth Fund and many others, an agreed common language and approach is needed. Working together to get this job done is what the 4 Returns Framework facilitates.

Several things help. A realisation by people in government, finance and industry, as well as faith leaders of all religions, that biodiversity and the environment must be factored centrally into everyday life and cannot be left to a few consultants and well-meaning volunteers and NGOs. Recognition that shortcuts don't work, and individual site-based projects are not enough. These lessons are coupled with the arrival of a set of international targets, including the Sustainable Development Goals, Climate and Biodiversity Framework, the Land Degradation Neutrality targets of the UN Convention to Combat Desertification and the UN Decade on Ecosystem Restoration, that provide both an incentive and a measurable framework for action. The 4 Returns Framework offers a path that any group in a landscape can take to reach sustainability, resilience and, more importantly, hope. It gives guidance and structure to build trust, healing relationships while restoring landscapes.

> *A holistic landscape framework with a universal language and practical guidelines that unites people from different sectors, that's what is needed to create an economy that is based on Nature-based solutions*
>
> Angela Andrade, Chair IUCN Commission on Ecosystem Management

We need people involved to bring these ideas to scale. We call on everyone in all sections of business, on politicians and on communities everywhere, to make landscape restoration the global phenomenon over the coming decades. The aim of this report is to ask you to join us in using this common language to scale up healing billions of degraded hectares together, simultaneously healing the relationship between people and within ourselves.

ACKNOWLEDGEMENTS

This report was written by Chris Baker, Paul Chatterton, Nigel Dudley, Willem Ferwerda, Victoria Gutierrez, and Jane Madgwick. The authors would like to thank the following individuals for their input and advice while putting together this report:

Angela Andrade, Chair IUCN Commission on Ecosystem Management

Jasper Bertels, Landscape Finance Expert, Commonland

Mariken van den Boogaard, Head Marcom, Commonland

Erica ten Broeke, Landscape Manager, Commonland

Tim Christophersen, Coordinator of UN Decade on Ecosystem Restoration, UNEP

Deesha Chandra, Community Lead, Landscape Finance Lab

Ben Cole, CEO Wide Open Agriculture

Raphaele Deau, Market Advisor, Landscape Finance Lab

Sarah Forrester-Wilson, Landscape Advisor, Landscape Finance Lab

Ryan Gellert, CEO Patagonia

Anton Gigov, Partner, Matanataki

Sean Kidney, CEO Climate Bonds Initiative

Ritesh Kumar, Director Wetlands International South Asia

John D. Liu, ecosystem ambassador Commonland

John Loudon, CEO COmON Foundation

Elvira Marín, director landscape partnership association Alvelal, Spain

Oral McGuire, Director Noongar Land Enterprise Group

Eduardo Mansur, Director of the Office of Climate Change, Biodiversity and Environment of the Food and Agriculture Organization of the United Nations, FAO

Elizabeth Maruma Mrema, Executive Secretary of the UN Convention on Biological Diversity

Simon Moolenaar, Director Knowledge, Education and Innovation, Commonland

Wijnand Pon, Chair COmON Foundation

Jodi Smith, Partner, Matanataki

Anne Thidemann, Director of Development and Communications, Commonland;

Femke Tonneijck, Programme Head Wetland Carbon, Wetlands International

Design Miller Design

ENDNOTES

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PHOTOS:

Front cover: **Emmanuel Rondeau / WWF-US**, Sirjana Tharu in her chamomile field in Nepal.

Inside cover: **Nigel Dudley**, Dyfi Valley. **Commonland**, Regenerative farming on degraded soils Wheatbelt Australia.

Page 9: **Aaron Gekoski / WWF-US**. Nicholas Fong, World Wildlife Fund staff member, planting seedling at Sabah Softwoods in Sabah, Borneo, Malaysia.

Page 13: **Aaron Gekoski / WWF-US**. Female workers walking through the Sabah Softwoods plantation in Sabah, Borneo, Malaysia.

Page 16: **Tom Vierus / WWF-US**. Portrait of Matelita Ratu, a community member of the Navotua village on Nacula Island, Fiji.

Page 21: **Wetlands International South Asia**, Lake Chilika.

Page 25: **Wetlands International South Asia**, Lake Chilika, portrait of fisherman.

Page 27: **Commonland**, Moving towards regenerative almond agriculture, Altiplano, Spain.

Page 32: **Mazidi Abd Ghani / WWF-Malaysia**. These two families at Bukit Garam, Kinabatangan, Sabah practicing BMP (Best Management Practice) for oil palm on their own land.

The 4 Returns Framework for landscape restoration described in this report is a practical and tested system-change framework that can be used by stakeholders to undertake a landscape approach. The "landscape approach" seeks to balance competing stakeholder demands in a mosaic of different management approaches to supply a full range of natural, social and economic returns.

"The 4 Returns Framework for landscape restoration described in this report by experts from Wetlands International, Commonland, Landscape Finance Lab and the IUCN Commission on Ecosystem Management is a practical and tested system-change framework that can be used by stakeholders to undertake a landscape approach. The "landscape approach" seeks to balance competing stakeholder demands in a mosaic of different management approaches, to supply a full range of inspirational, natural, social and economic returns. After years of testing, the 4 Returns Framework for restoring landscapes is building a sound concept that can go to scale. It will be a valuable tool to achieve the goals of the UN Decade on Ecosystem Restoration."

Ms. Elizabeth Maruma Mrema,
Executive Secretary of the UN Convention on Biological Diversity

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