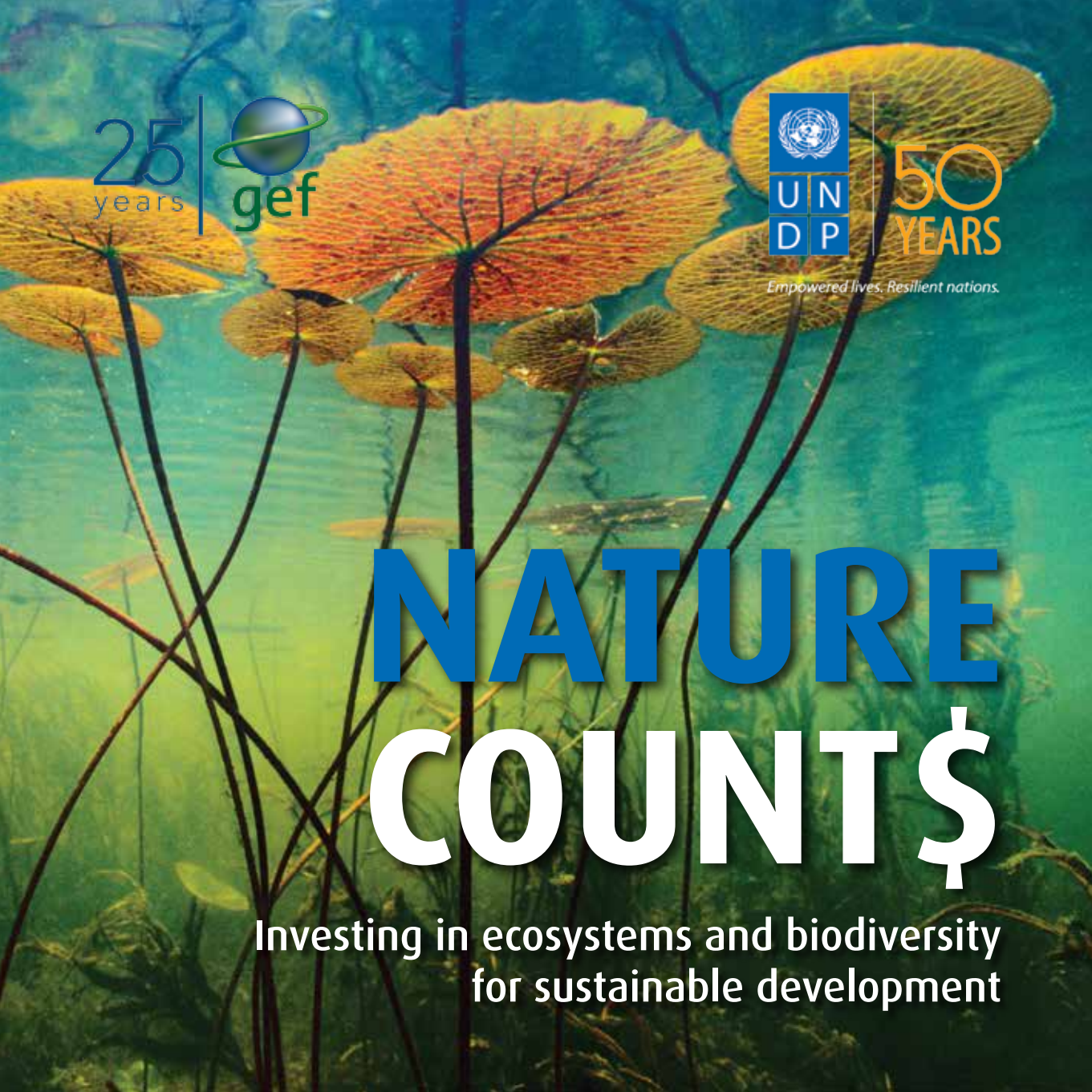
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50 YEARS
Empowered lives. Resilient nations.
NATURE
COUNT$
Investing in ecosystems and biodiversity
for sustainable development

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# NATURE COUNT$

Investing in ecosystems and biodiversity for sustainable development

# Foreword

## ‘Not everything that counts can be counted...’

**‘And not everything that can be counted counts.’** So goes the often-quoted adage by Albert Einstein.

Through UNDP ecosystem and biodiversity (EBD) work, we are learning that “not counting what counts” is much more serious than a mere oversight. Not counting the value of nature and what it provides to us and not including it in the cost-benefit calculus of businesses and development work has been the driver behind many calamities—massive biodiversity loss and ecosystem compensation payouts in the form of increased intensity of natural disasters, water scarcity, food insecurity, and fisheries collapse, among others.

For the world to achieve the Sustainable Development Goals (SDGs), we cannot keep ‘not counting.’

*Nature Count$* showcases evidence of the development and economic impact of our large EBD portfolio in Asia and the Pacific with over 100 projects and US$378 million in grants from the Global Environment Facility (GEF) and other donors. While we have selected only one example to illustrate how EBD contributes to each SDG, online key sheets corresponding to each goal further articulate the links between conservation actions and development impact. Where possible we used economics to “visualize” the development impact with powerful numbers, showing what nature conservation action in small communities or in protected areas actually means for local and national economies, and to women and men on the ground.

**We urge readers to ensure that ecosystem and biodiversity management becomes an integral part of national and local strategies to accelerate actions to achieve the 2030 Agenda for Sustainable Development.**

Ecosystem and biodiversity management is the foundation of sustainable development. Increased investment in EBD actions and accelerated implementation of National Biodiversity Strategies and Action Plans will yield benefits beyond conservation, moving us ever closer to a just, equitable and prosperous future for all. As you explore the figures on these pages, we invite you to follow the link to the online Key Sheet to discover more evidence to support the fact that nature counts when investing in sustainable development.


**Haoliang Xu**
Assistant Administrator and Director
Regional Bureau for Asia and the Pacific

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Sustainable land management practices, home gardening and milk production **increased income by up to 350%** for the poorest farming households in Serupitiya village, Sri Lanka.

SGP The GEF Small Grants Programme

Read more about the *GEF Small Grants Programme - Minimizing Land Degradation in Sri Lanka's Serupitiya Village to Adapt to Climate Change* project.

A Sri Lankan farmer waters her crops. Photo: FAO/Ishara Kodikara

GOAL 1 No Poverty

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COUNT$

GOAL
2
Zero Hunger

Scaling up integrated rice-fish practices demonstrated in Lao PDR to 25% of seasonally flooded rice fields in Asia could sustainably produce **10.36 million tons of fish,** providing better income and nutrition for more than **100 million farmers.**

Read more about the *Mainstreaming Biodiversity in Lao PDR's Agricultural and Land Management Policies, Plans, and Programmes* project.

A Laotian woman tending her rice field. Photo: UNDP Lao PDR

NATURE
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The protection and cultivation of medicinal plants in three Indian States guarantees their sustainable use for traditional plant-based medicine, relied upon by **830 million Indians** for primary health care.

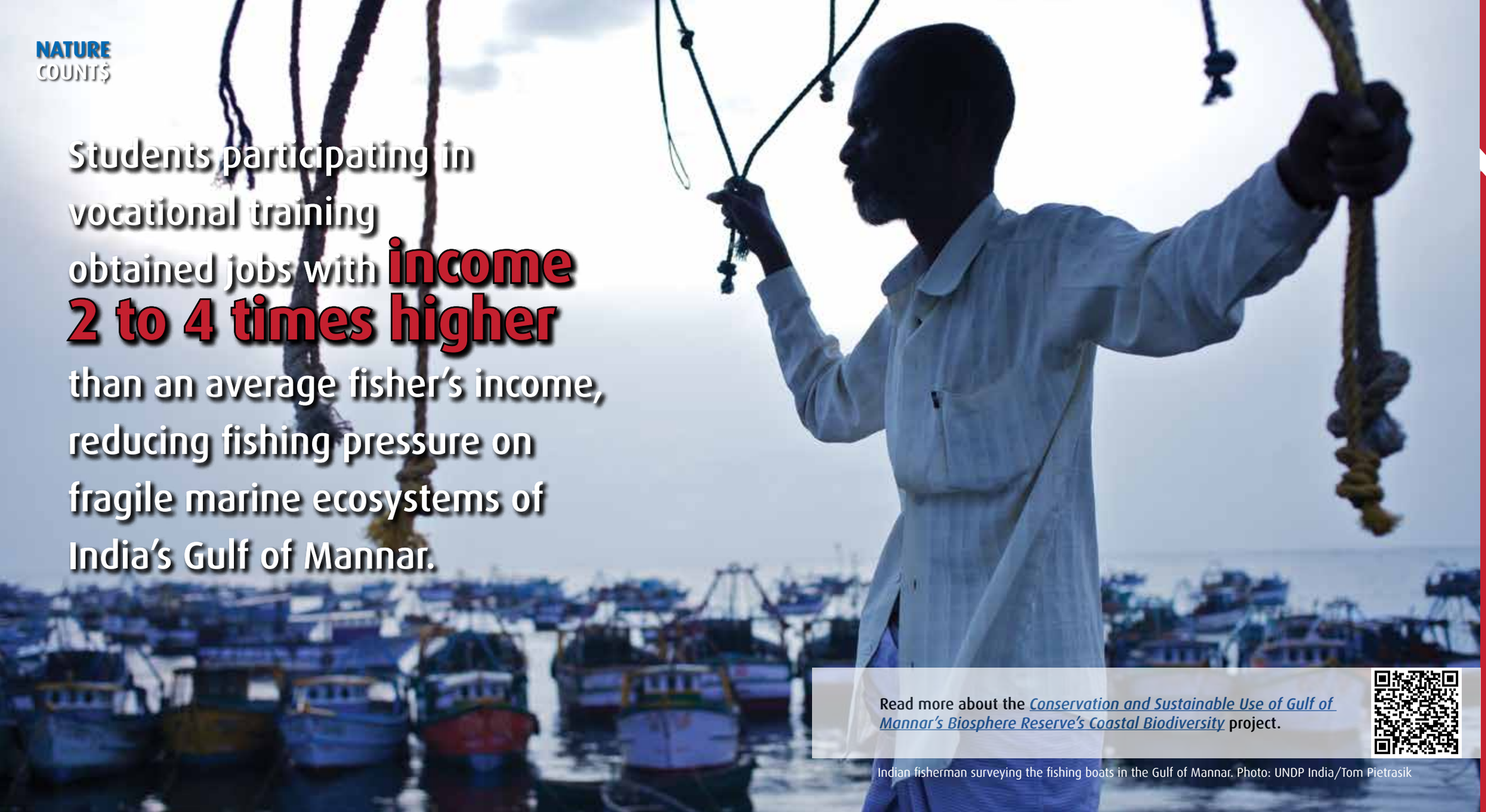
Read more about the *Mainstreaming Conservation and Sustainable Use of Medicinal Plants in Three Indian States* project.

A medicinal plant native to India. Photo: Wildlife Institute of India

GOAL 3

Good Health and Well-being

Students participating in vocational training obtained jobs with **income 2 to 4 times higher** than an average fisher's income, reducing fishing pressure on fragile marine ecosystems of India's Gulf of Mannar.



Read more about the *Conservation and Sustainable Use of Gulf of Mannar's Biosphere Reserve's Coastal Biodiversity* project.

Indian fisherman surveying the fishing boats in the Gulf of Mannar. Photo: UNDP India/Tom Pietrasik

Women now represent 20% of management boards for two official regional natural resource management entities, **more than twice the national rate of female participation in decision-making positions** in Afghanistan's government and NGOs.

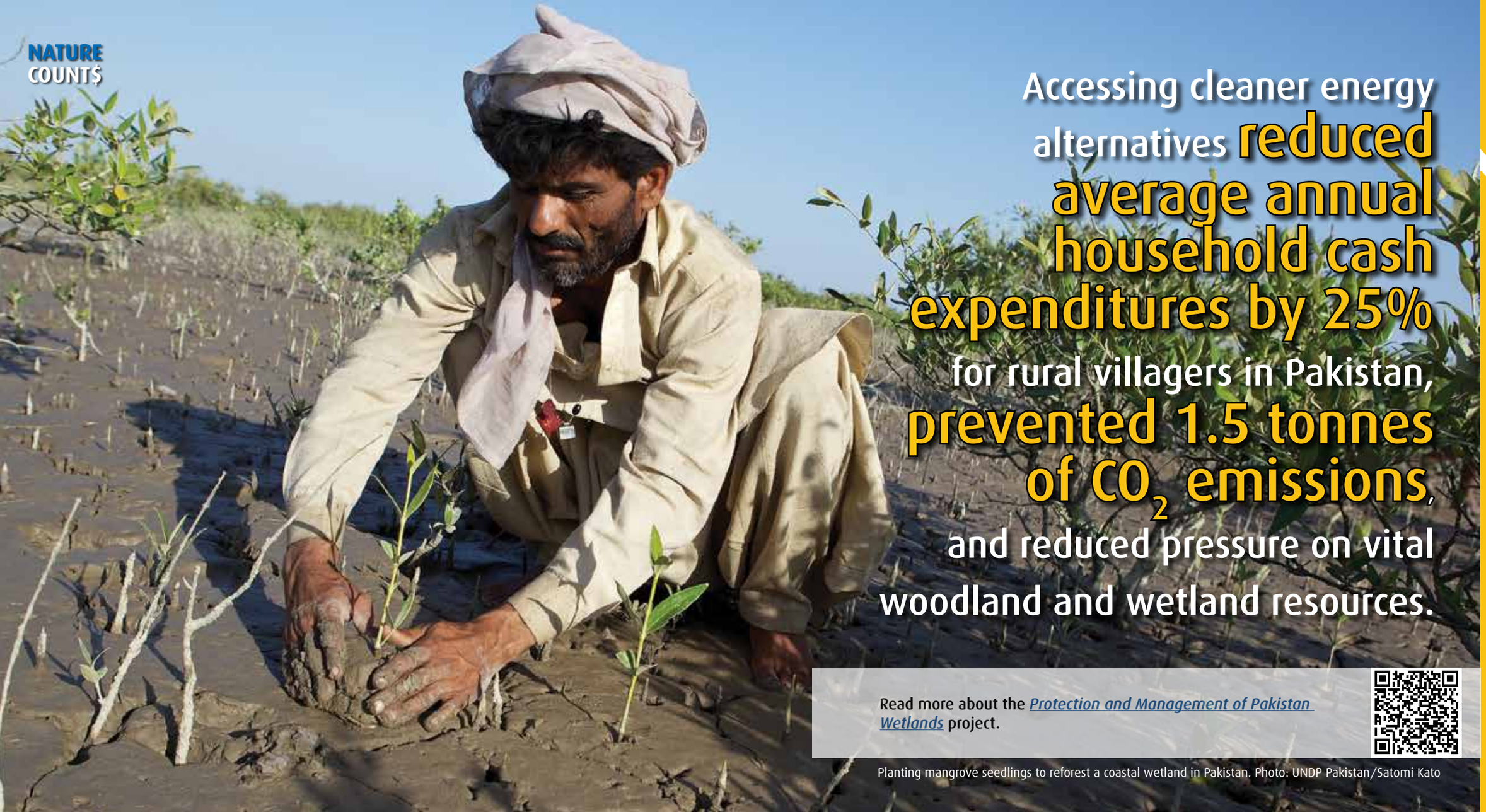
Read more about the *Establishing Integrated Models for Protected Areas and their Co-management in Afghanistan* project.

Afghanistan's first four female park rangers at Band-e-Amir National Park. Photo: UNDP Afghanistan/Robert Few

Sustainable Land Management practices in one of China's Chishui River sub-catchments secures 27 million $m^3$ of clean water annually, **safeguarding 90% of regional GDP** obtained through the beverage industry. Scaling up these practices across the entire river basin will **avoid costs of US$437 million each year.**

Read more about the *Payment for Watershed Services in the Chishui River Basin for the Conservation of Globally Significant Biodiversity* project.

Chishui Falls, Guizhou Province, China. Photo: Shutterstock/Jing Aiping



Accessing cleaner energy alternatives **reduced average annual household cash expenditures by 25%** for rural villagers in Pakistan, **prevented 1.5 tonnes of $CO_2$ emissions**, and reduced pressure on vital woodland and wetland resources.

Read more about the *Protection and Management of Pakistan Wetlands* project.

Planting mangrove seedlings to reforest a coastal wetland in Pakistan. Photo: UNDP Pakistan/Satomi Kato

Average monthly **incomes increased by 40%** following the production and sale of biodiversity-based products developed by a community-based social enterprise in Baan Sam Nak village, Thailand.

Read more about the *Sustainable Management of Biodiversity in Thailand's Production Landscape* project.

Sustainable management of this bamboo forest in Thailand is carried out by community-based enterprises relying on bamboo scraps and charcoal to manufacture furnishings and skin care products. Photo: UNDP Thailand

NATURE COUNT$

GOAL 9

Industry, Innovation and Infrastructure

Over their lifetime, 'green roads' constructed according to environment-friendly, local governance approaches in Nepal generate **net economic benefits up to six times higher** than those generated by roads constructed using conventional methods.

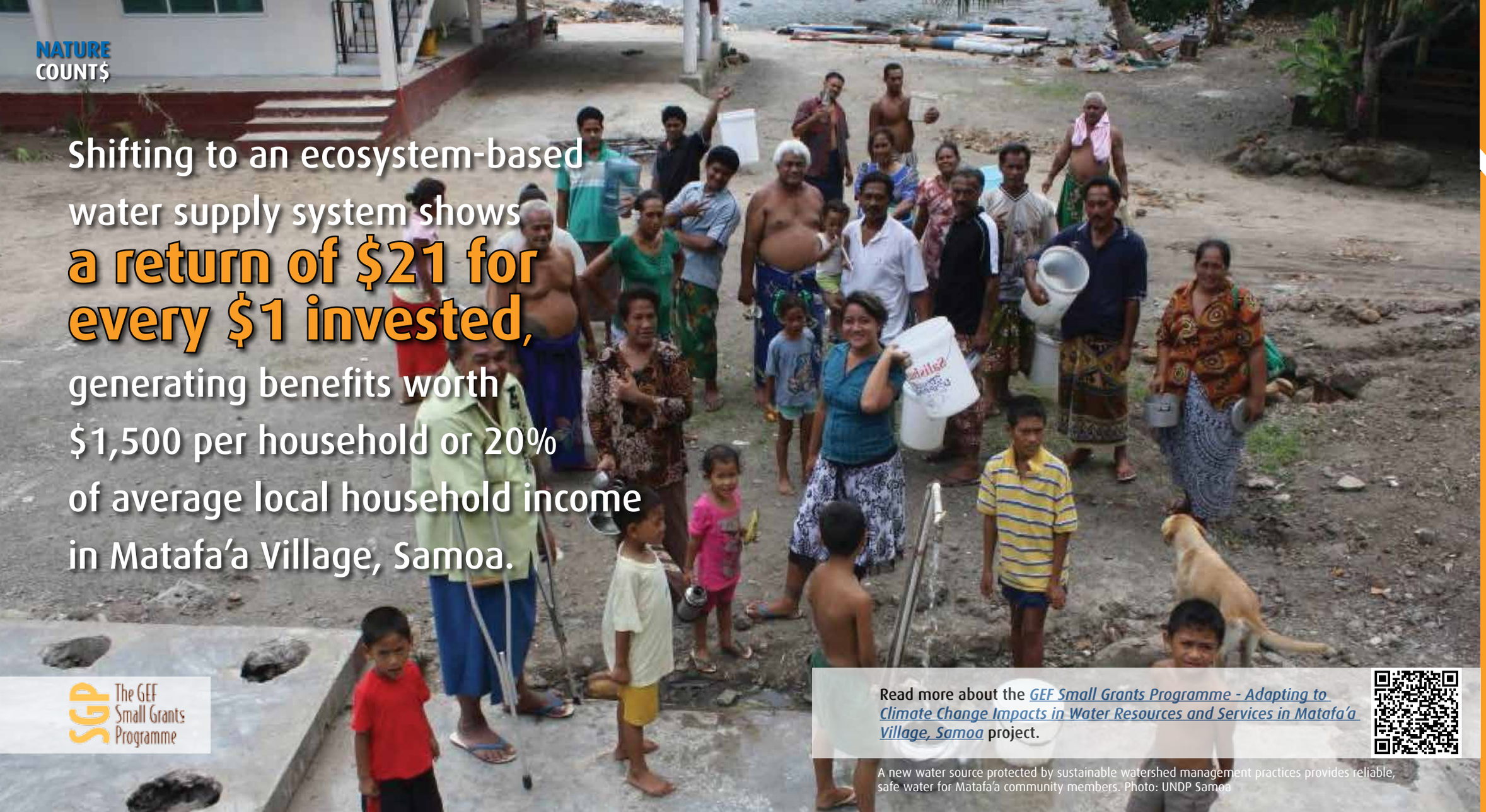
Read more about the *Poverty-Environment Initiative (PEI) support to Strengthening Planning and Monitoring Capacity of NPC (SPMC-NPC) and the Local Governance and Community Development Programme (LGCDP)* project.

Rural village in Nepal. Photo: Jesse Montes

Access and Benefit Sharing (ABS) agreements in Bhutan ensure that guardians of genetic resources and traditional knowledge holders—often marginalized and indigenous communities—receive their rightful share of benefits derived from the species they protect, potentially **worth $906 million.**

Read more about the *Implementing the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing in Bhutan* project.

Commercial product development follows laboratory analysis of compounds derived from plants used traditionally by local communities. Photo: National Biodiversity Centre of Bhutan



Shifting to an ecosystem-based water supply system shows **a return of $21 for every $1 invested,** generating benefits worth $1,500 per household or 20% of average local household income in Matafa'a Village, Samoa.

SGP The GEF Small Grants Programme

Read more about the *GEF Small Grants Programme - Adapting to Climate Change Impacts in Water Resources and Services in Matafa'a Village, Samoa* project.

A new water source protected by sustainable watershed management practices provides reliable, safe water for Matafa'a community members. Photo: UNDP Samoa

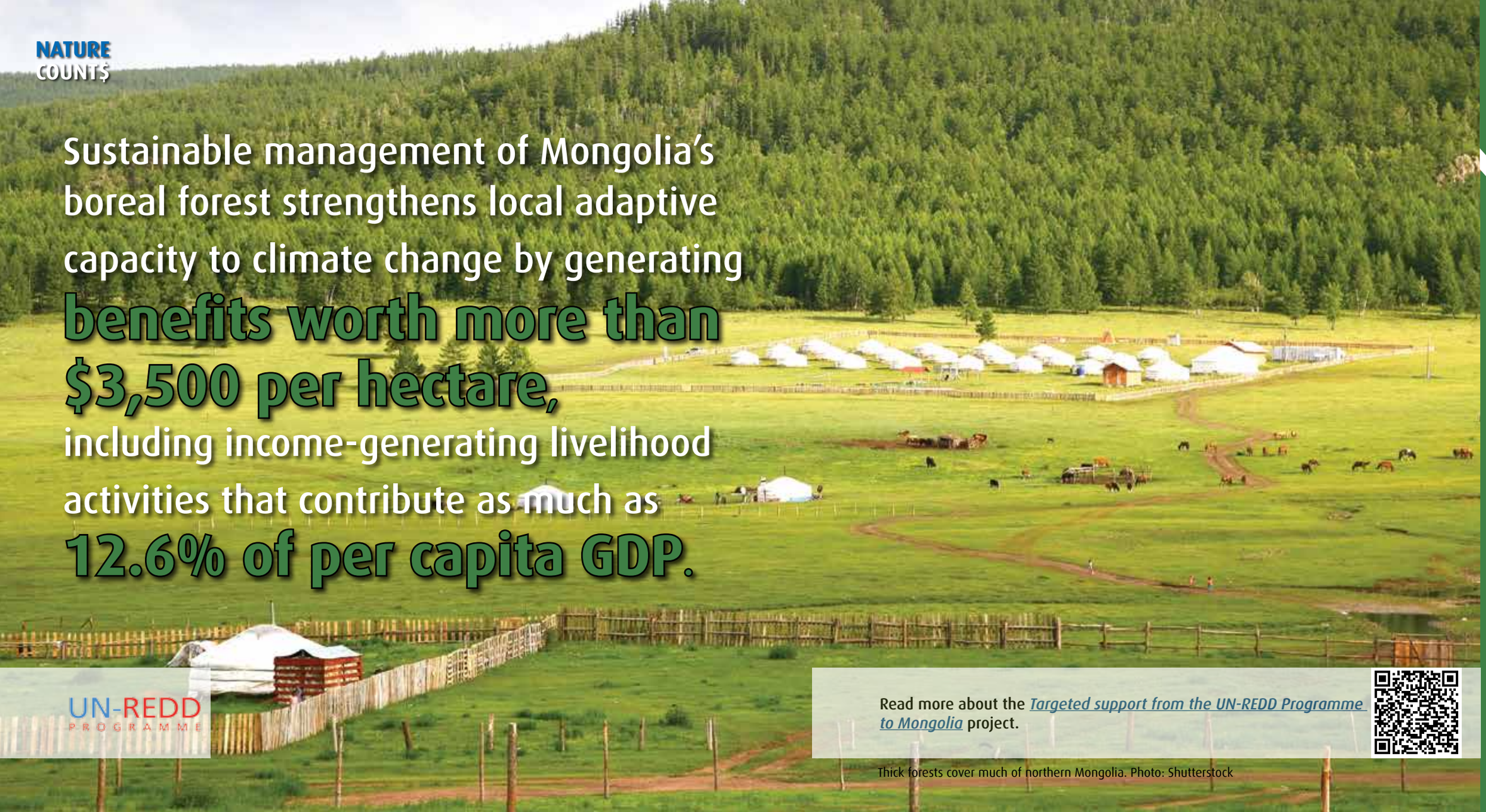
GOAL 11

Sustainable Cities and Communities

Improving the sustainability of oil palm cultivation in Kalimantan through improved land use planning can generate **$CO_2$ emission reductions equivalent to 98% of current Indonesian emissions** and 26% of current global emissions.

Read more about the *Strengthening Forest Area Planning and Management in Kalimantan* project.

Tropical forest cleared and terraced for a new palm oil plantation. Photo: Frans Lanting/lanting.com



Sustainable management of Mongolia's boreal forest strengthens local adaptive capacity to climate change by generating **benefits worth more than $3,500 per hectare,** including income-generating livelihood activities that contribute as much as **12.6% of per capita GDP.**



UN-REDD PROGRAMME

Read more about the *Targeted support from the UN-REDD Programme to Mongolia* project.

Thick forests cover much of northern Mongolia. Photo: Shutterstock

Establishing an integrated management system for ecosystem conservation in Baa Atoll, Maldives, enhanced locals' capacity to safeguard marine and coastal ecosystem services **worth US$195 million per year** in direct uses by local communities and the private sector.

Read more about the *Atoll Ecosystem-based Conservation of Globally Significant Biological Diversity in the Maldives' Baa Atoll* project.

Diving with manta rays draws many tourists to Baa Atoll. Photo: Shutterstock/divedog

Enhancing Myanmar's terrestrial protected area network secures forest goods and services **worth over US$7.3 billion a year** for local communities and the national economy, generating **a return of $40 from every $1 invested** in biodiversity and ecosystem conservation.

Read more about the *Strengthening Sustainability of Protected Area Management in Myanmar* project.

Patrol team in Htamanthi Wildlife Sanctuary in northern Myanmar. Photo: WCS Myanmar

**NATURE COUNT$**

Combatting illegal wildlife trade can significantly **reduce the US$8-10 billion flow of profits to criminal, militia and terrorist groups,** while halting the loss of wildlife resources that would otherwise yield benefits to developing nations worth US$48-153 billion a year.

Read more about the *Global Partnership on Wildlife Conservation and Crime Prevention for Sustainable Development* project.

Fewer than 4,000 tigers remain in the wild. Poaching and illegal wildlife trade pose a major threat to species survival. Photo: Shutterstock/FX

Currently 100 projects in 25 Asia-Pacific countries are implemented through partnership among government agencies, NGOs, communities and the private sector, facilitating south-south cooperation and regional knowledge exchange.

The 16 projects presented in this book alone involve **more than 150 distinct partners** working towards the SDGs.

Read more about the *Partnership and Co-financing in the Asia-Pacific Region*.

Photo: Jagriti/GEF Small Grants Programme

# Beyond this booklet...

**Learn more** about how investing in biodiversity and ecosystems can bring **multiple dividends** across the SDGs through full access to the **Nature Count$ Key Sheets** at:

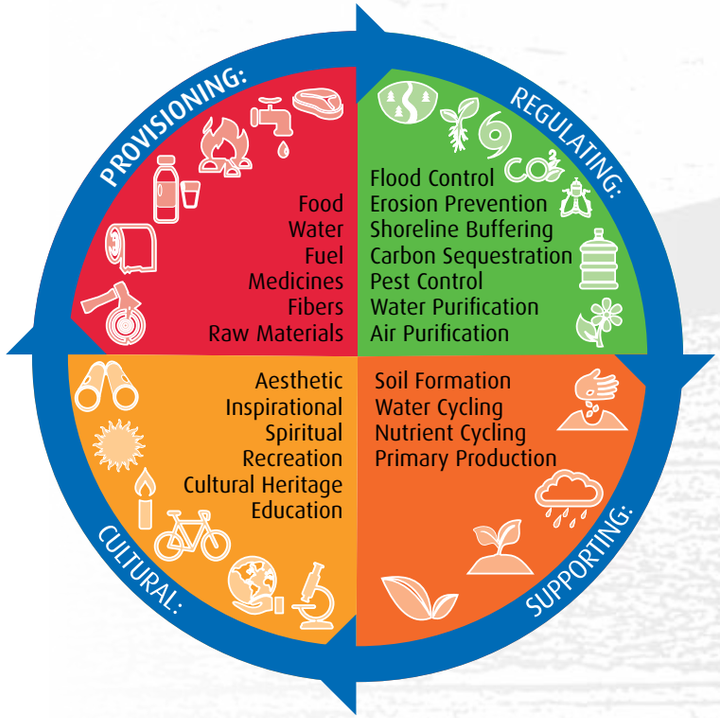
www.asia-pacific.undp.org/content/rbap/en/home/library/sustainable-development/nature-counts/booklet.html

The threatened Pallas' cat range includes Mongolia, India, Pakistan and western China. Photo credit: Vadim Kirilyuk

# Frequently Asked Questions

## What are ecosystem services?

The Millennium Ecosystem Assessment conducted by the United Nations from 2001-2005 defines ecosystem services as the benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fibre; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling. The human species is fundamentally dependent on the flow of ecosystem services for its survival, well-being and prosperity.




## What is natural infrastructure?

Infrastructure can be defined as the stock of facilities, services and equipment that is needed for the economy and society to function properly. Conventional infrastructure includes roads and bridges, power lines, communications systems, and wastewater treatment facilities, to name a few. Provision of adequate and accessible infrastructure lies at the heart of economic growth, human development and poverty reduction. Like conventional infrastructure, ecosystems—such as wetlands, forests, grasslands, coral reefs, mangroves and other natural habitats—provide a suite of services that are essential for economic production and consumption, and are required for society to prosper. These naturally occurring systems can be termed 'natural infrastructure.'

## Why protect natural infrastructure?

From an economic perspective, natural infrastructure should be considered, accounted for and invested in alongside conventional infrastructure. In order to ensure ecosystems' productivity and continued support to human development, they need to be maintained and improved to meet both today's needs and the intensifying demands and pressures in the future—just like any other component of infrastructure. In contrast, a failure to value ecosystems when choices are made about allocating land, resources and investment funds can incur far-reaching economic costs, and may ultimately undermine many of today's efforts at sustained, equitable and inclusive growth and development.

## What is an 'economic valuation of ecosystem services' study?

Independent economic valuation of ecosystem services studies are now regularly incorporated into EBD projects as a way to make visible the economic value of essential natural functions that have previously been unaccounted for in commercial and policy arenas. This data equips planners and other decision makers to more accurately weigh the costs and benefits of land use changes or other decisions affecting natural resource use, avoiding future costs by facilitating the preservation of natural infrastructure and its vital services today.

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