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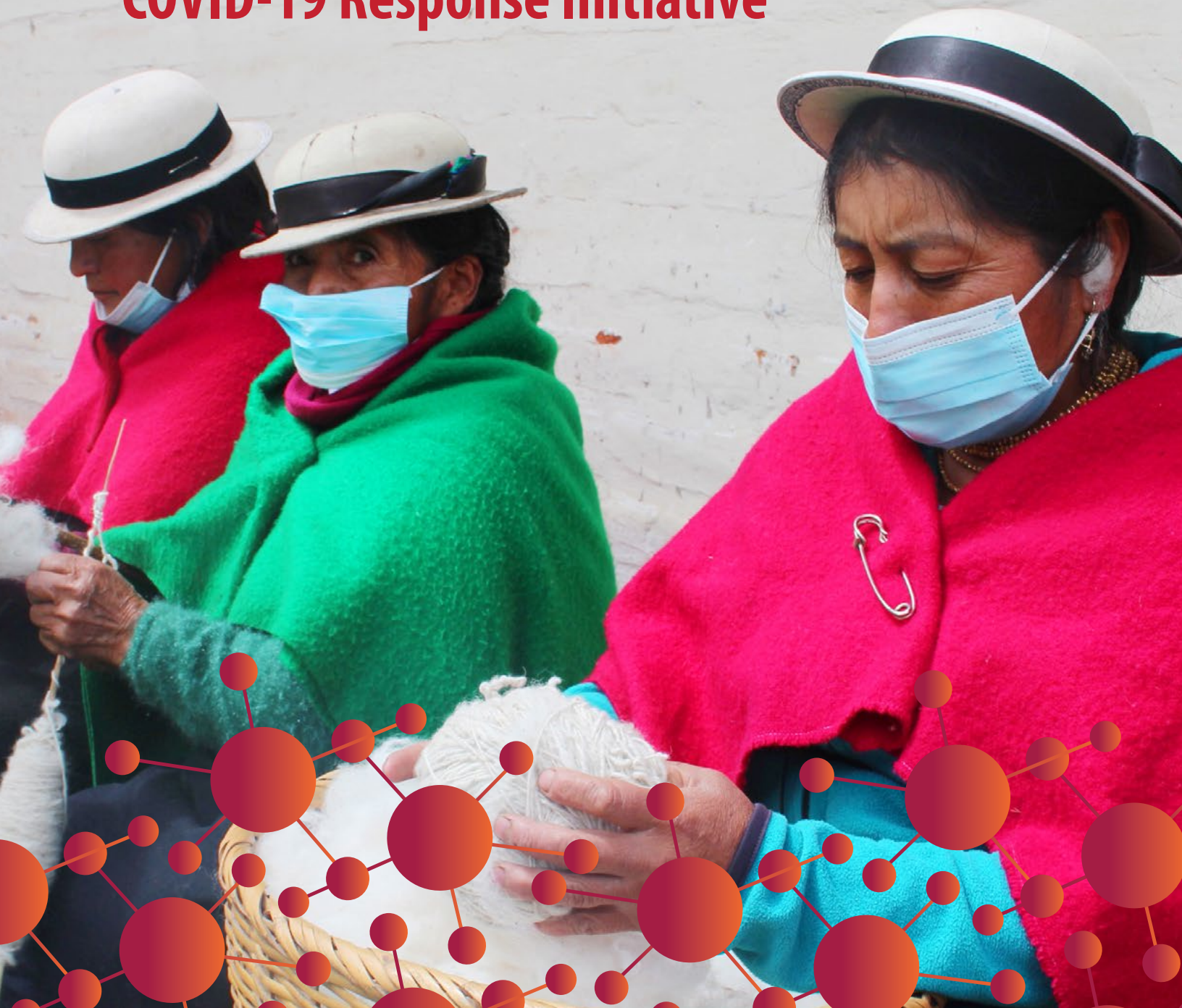
UNDP

Global Support Initiative to territories and areas conserved by Indigenous Peoples and local communities: **COVID-19 Response Initiative**



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SGP Panama

Foreword

The COVID-19 pandemic presented an unprecedented global crisis, challenging entire nations, societies and communities worldwide to adapt and survive in the face of overwhelming health, economic, and social hardships. For the stewards of territories and areas conserved by Indigenous Peoples and local communities (ICCAs), the pandemic compounded existing vulnerabilities, including limited access to healthcare, essential services, increased threats from violence and encroachment, and food insecurity.

This publication documents the remarkable efforts undertaken by Indigenous and local communities across 45 countries to cope with and recover from the pandemic. Through a portfolio of local initiatives financed by the Government of Germany's International Climate Initiative (IKI) and delivered by the UNDP-implemented GEF Small Grants Programme (SGP), these communities have shown how traditional knowledge, rooted in ecological stewardship, can be leveraged to build socio-ecological resilience in times of crisis.

The COVID-19 Response Initiative, rapidly launched by the SGP at the end of 2020, provided both immediate and long-term solutions, directly supporting Indigenous Peoples and local communities in addressing the pandemic's impacts on health, food security, and livelihoods. From the deployment of traditional medical knowledge to new agro-ecological practices and the transmission of life-saving health information, these communities have exemplified adaptability and solidarity. These locally-led actions not only aided in pandemic recovery, but also strengthened the foundations of ecosystem management and governance, human well-being, and sustainable development.

This publication is more than a record of project results, it is a testament to the strength, ingenuity, and determination of Indigenous Peoples and local communities. Their experiences provide valuable lessons for global efforts to recover from the COVID pandemic and prepare for future zoonoses and socio-economic shocks. As we look forward, these local communities' actions remain at the forefront of biodiversity conservation, offering wisdom and leadership that the world cannot afford to overlook.

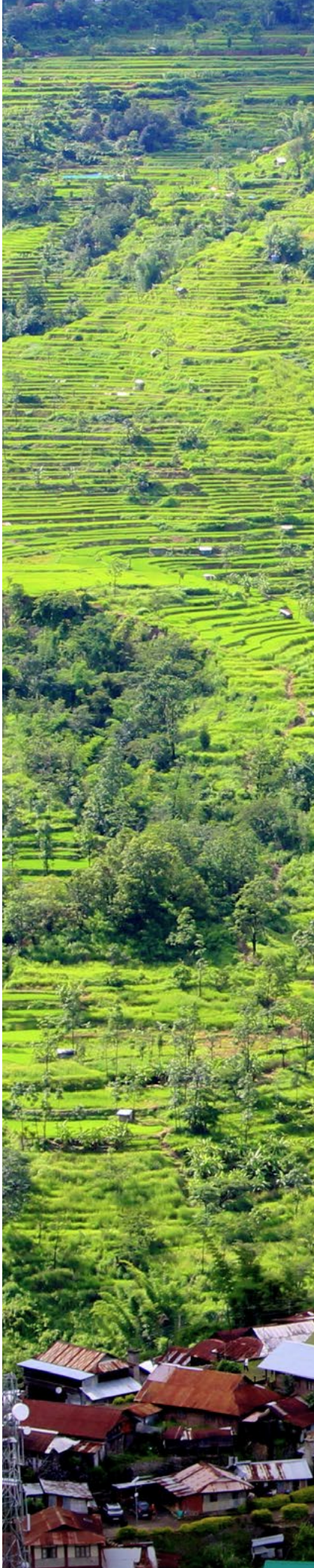
Let this collection of stories inspire continued support for territories of life and reaffirm our collective commitment to a more resilient, inclusive, and sustainable future.

Midori Paxton,
Director, UNDP Nature Hub

SGP Ecuador

Abbreviations

ANMI	Área Natural de Manejo Integrado San Matías
BMUV	Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (*Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz*)
CBD	Convention of Biological Diversity
CBO	community-based organization
CCA	community-conserved area
CSO	civil society organization
DOC	Department of Culture
DOE	Department of Environment
FSC	Forest Stewardship Council
GBF	Global Biodiversity Framework
GEF	Global Environment Facility
ICCA-GSI	Global Support Initiative to territories and areas conserved by Indigenous Peoples and local communities
IKI	International Climate Initiative
IUCN	International Union for the Conservation of Nature
KBA	Key Biodiversity Area
MCCA	Marine Community Conserved Areas
NGO	non-governmental organization
PPE	personal protection equipment
QFAO	Qeshm Free Area Organization
RFFP	Returning Farmland to Forest Project
SGP	Small Grants Programme
TMP	traditional medical practitioners
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHS	World Heritage Site



SGP India

The Global Support Initiative to territories and areas conserved by Indigenous Peoples and local communities

Indigenous Peoples and local communities embodying traditional lifestyles around the world protect and care for their collective territories, lands, and waters as a matter of survival, health, and wellbeing. The territories and areas conserved by them, known as ICCAs (from the earlier terminology "Indigenous and community conserved areas"), are cradles of biological and cultural diversity and crucial for all life on Earth. ICCAs have been in international discourse formally since the International Union for Conservation of Nature (IUCN) World Conservation Congress 2008 in Barcelona, gaining formal recognition by the IUCN and Convention of Biological Diversity (CBD) as key actors in governance and nature conservation. Despite their recognition in international fora, more support is needed at national and local levels to ensure recognition of the crucial role of Indigenous Peoples and local communities in implementing biodiversity targets.

To this end, Phase 1 of the Global Support Initiative to ICCAs (ICCA-GSI) was formed in 2014 to broaden the range and quality of diverse governance types in protected areas. The ICCA-GSI is a multi-partnership initiative that is implemented by the United Nations Development Programme (UNDP) through the Global Environment Facility's (GEF) Small Grants Programme (SGP) delivery mechanism, with funding from the Government of Germany, through its Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (*Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz*, or BMUV). Key partners include the CBD, ICCA Consortium, IUCN, and United Nations Environment Programme World Conservation Monitoring Centre.

The ICCA-GSI's objective is to increase support to and recognition of Indigenous Peoples and local communities and their vital role in biodiversity conservation outside of the framework of formal government-recognized protected areas. Direct financial and technical support were provided to promote the overall effectiveness of ICCAs and contribute to global biodiversity targets such as the Aichi Targets (2011-2020) and the Kunming-Montreal Global Biodiversity Framework (GBF), initially to 26 countries from 2014 to 2022. The initiatives were guided by the self-identified priorities of Indigenous Peoples and local communities for ecosystem protection, resilience to climate change impacts, legal support for ICCA recognition and conservation, sustainable livelihoods, poverty reduction and protection of traditional knowledge.

SGP Burkina Faso.

COVID-19 Response Initiative of the ICCA-GSI

Confronted with the unprecedented COVID-19 pandemic in early 2020,[1] the world faced the greatest health, economic and social challenge in recent times. For Indigenous Peoples and local communities embodying traditional lifestyles living in ICCAs, COVID-19 posed grave health threats since they already experience lack of access to healthcare, essential services, sanitation, and other key preventive measures, and have significantly higher baseline rates of communicable and non-communicable diseases.

The traditional lifestyles of Indigenous Peoples are a source of their resilience, yet they also entail large gatherings that make it harder to prevent the spread of the virus. As such, many Indigenous Peoples closed their borders and enforced restrictions on mobility and group gatherings within their territories to help prevent the spread of the virus. However, these measures negatively impacted food supply and their livelihoods as well as creating awareness gaps on the pandemic, thereby exacerbating the food insecurity and chronic poverty already faced by many.

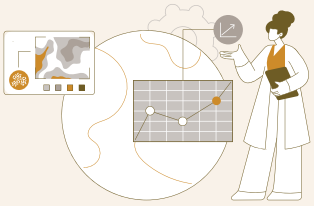
In October 2020, Phase 1 of the ICCA-GSI was expanded to a total of 45 countries for the implementation of its COVID-19 response initiative, aimed at supporting Indigenous Peoples and local communities facing this new challenge. BMUV's International Climate Initiative (IKI) provided an additional funding of USD 17.2 million as part of its IKI Corona Response Package.

OBJECTIVE AND THEMATIC CATEGORIES

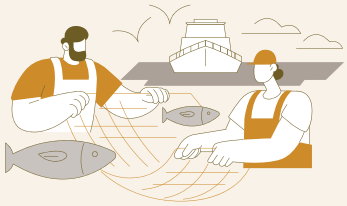
The objective of the ICCA-GSI COVID-19 Response Initiative was to support Indigenous Peoples and local communities embodying traditional lifestyles to cope with and recover from the impacts of the pandemic. Projects were implemented under eight thematic categories:

Food production systems focused on agro-ecology and agroforestry

Local circular bioeconomy



Prevention of zoonoses[2] and future pandemics



Sustainable and well-governed wildlife consumption

Territorial mapping and demarcation

Transmission of traditional medical knowledge

Communication and lesson-sharing through culturally appropriate means

Deployment of traditional knowledge of fire management

PARTICIPATING COUNTRIES

Community-based projects were implemented from 2020-2024 by UNDP, through the SGP delivery mechanism, in the following countries:


AFGHANISTAN


ARGENTINA


BELIZE


BENIN


BOLIVIA


BRAZIL


BURKINA FASO


CAMBODIA


CAMEROON


CENTRAL AFRICAN REPUBLIC


CHINA


COLOMBIA


DR CONGO


ECUADOR


GUATEMALA


GUINEA


INDIA


INDONESIA


IRAN


JORDAN


KENYA


KYRGYZSTAN


MADAGASCAR


MALAYSIA


MALDIVES


MEXICO


MICRONESIA (Federal States)


MONGOLIA


MOROCCO


NAMIBIA


NIGER


NIGERIA


PANAMA


PAPUA NEW GUINEA


PARAGUAY


PERU


PHILIPPINES


REPUBLIC OF THE CONGO (Brazzaville)


SENEGAL


TAJIKISTAN

TANZANIA

TUNISIA

VANUATU

VIET NAM

ZAMBIA

PROJECT RESULTS IN NUMBERS

368 projects implemented

6,507,754
HECTARES POSITIVELY INFLUENCED

1,596,595
PEOPLE BENEFITTED, OF WHOM **56%** WERE WOMEN

74,134
YOUTH ENGAGED TO SOLIDIFY INTER-GENERATIONAL TRANSFER OF TRADITIONAL KNOWLEDGE

20%
INCREASE IN INCOME ON AVERAGE ACROSS BENEFICIARIES FROM THE START DATE OF THEIR RESPECTIVE PROJECTS

SGP Bolivia

OVERVIEW OF PROJECTS AND ACTIVITIES

Measures for coping with and recovering from the COVID-19 pandemic

The foundation of the initiative was listening to Indigenous Peoples and local communities embodying traditional lifestyles and understanding their needs during the COVID-19 pandemic. SGP country programmes performed impact assessments through virtual meetings and phone surveys to understand the varied situations and needs of Indigenous Peoples and local communities. These assessments provided a platform to:

i. listen to each other as they shared perceptions, emotions of fear and anxiety, and needs;

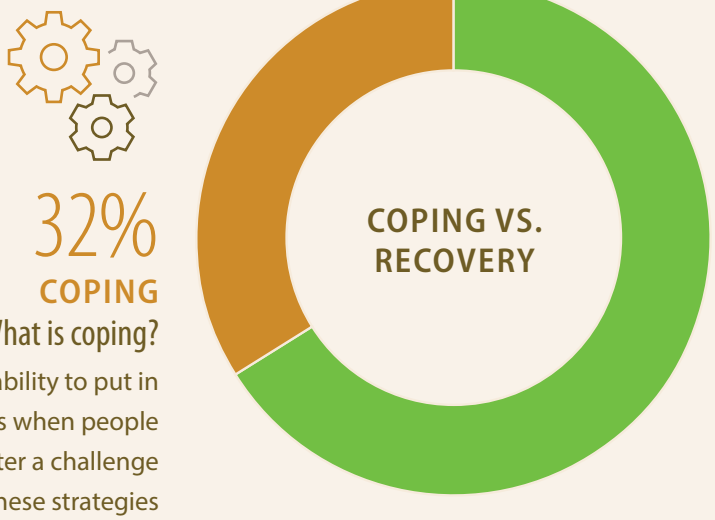
ii. define new ways to promote solidarity and moral support within their own communities and other indigenous and local communities in their respective countries;

iii. revitalize indigenous wisdom; and

iv. develop new partnerships and/or strengthen existing ones to promote knowledge exchange on solutions to COVID-19-related challenges.

To address the diversity of needs, 32 percent of project activities were geared towards coping mechanisms to the COVID-19 pandemic, while 68 percent of the activities were aimed at recovery measures from the pandemic. This is presented in Diagram 1.

Diagram 1: Distribution of activities in COVID-19 projects Coping vs. Recovery



32%

COPING

What is coping?

Coping is the ability to put in place strategies when people encounter a challenge (e.g. COVID-19). These strategies were put in place so that the impact of the challenge was curtailed or lessened.

68%

RECOVERING

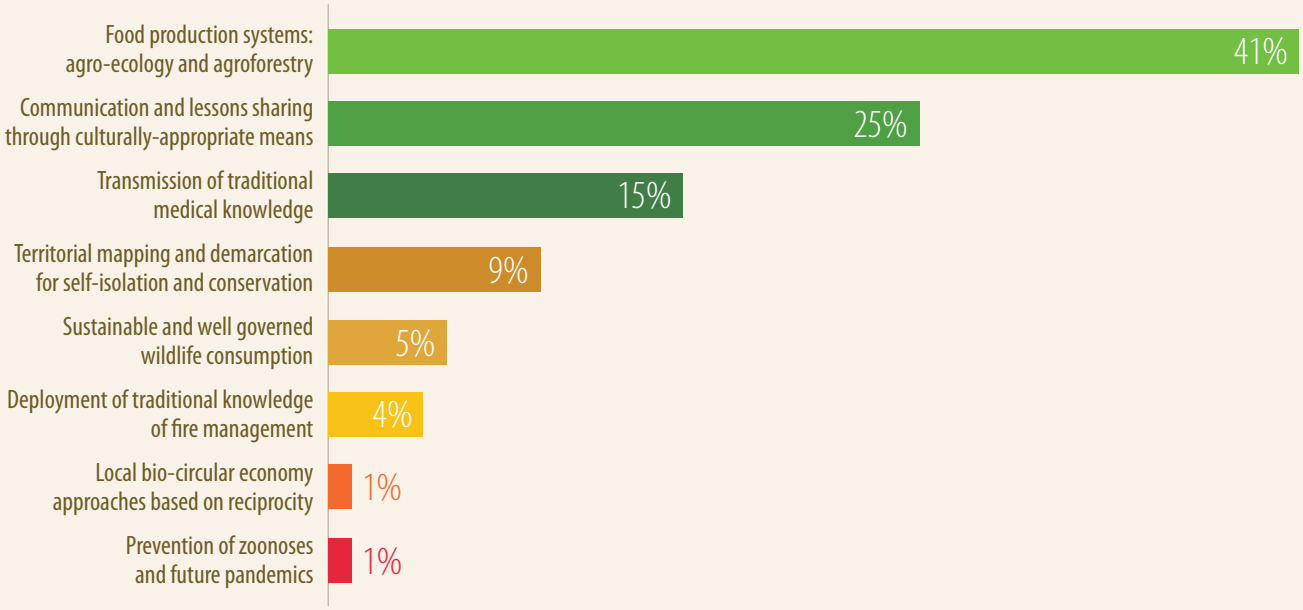
What is recovering?

Recovering is the ability to return to normal state (or close to it) by recuperating from the shock and moving forward in a positive and adaptive way. Recovery can also build someone's resilience to a challenge.

DISTRIBUTION OF COVID-19 PROJECTS BY THEMATIC AREA

Of the 368 projects implemented, the most common activities were under food production (41%) and communication and lesson-sharing (25%), while the least common was circular bioeconomy (1%) (see Diagram 2).

Diagram 2: Project activities by thematic category



SGP Burkina Faso

Coping mechanisms for COVID-19

Coping mechanisms for COVID-19

After listening to Indigenous Peoples and local communities embodying traditional lifestyles, the project activities were aligned accordingly to help them cope to the impacts of the pandemic. Five main categories of activities were swiftly implemented in a culturally appropriate manner. The thematic categories of project activities for coping mechanisms are presented in Diagram 3, arranged by frequency.

Hygiene products as first protection measures

As the first measure in protecting the ICCA populations, personal protection equipment (PPE) such as masks, hand sanitizers, and cleaning kits were distributed. Access to clean water was also provided for human consumption and irrigation by installing hand-washing basins (sinks) and solar water pumps.

Narrowing awareness gaps on COVID-19: Communication and lesson-sharing through culturally appropriate means

Due to Indigenous Peoples' isolation, the guidelines and preventive measures established at national and/or regional levels did not reach many of them. Therefore, national COVID-19 protocols were translated into local dialects including information about the origin of the virus, cases in the country, symptoms of infection, threats and effects including on those who are immunocompromised, the elderly and children, as well as information about prevention (social distancing and quarantining), and other important and up-to-date news.

Awareness-raising campaigns were held through culturally relevant channels such as local and community radio stations. Training sessions, virtual at the onset of the pandemic and in-person when deemed safe at a later stage, were provided to the community representatives, non-governmental organizations (NGOs), and local government authorities, who in turn were able to distribute leaflets, and produce informational videos and posters in ICCAs. Iterative educational training sessions and news updates were provided throughout the project cycle. Some projects also provided or improved access to technological communication channels by constructing data-transmission towers and installing other technological equipment (antennas, solar panels, modems, etc.) in community centres.

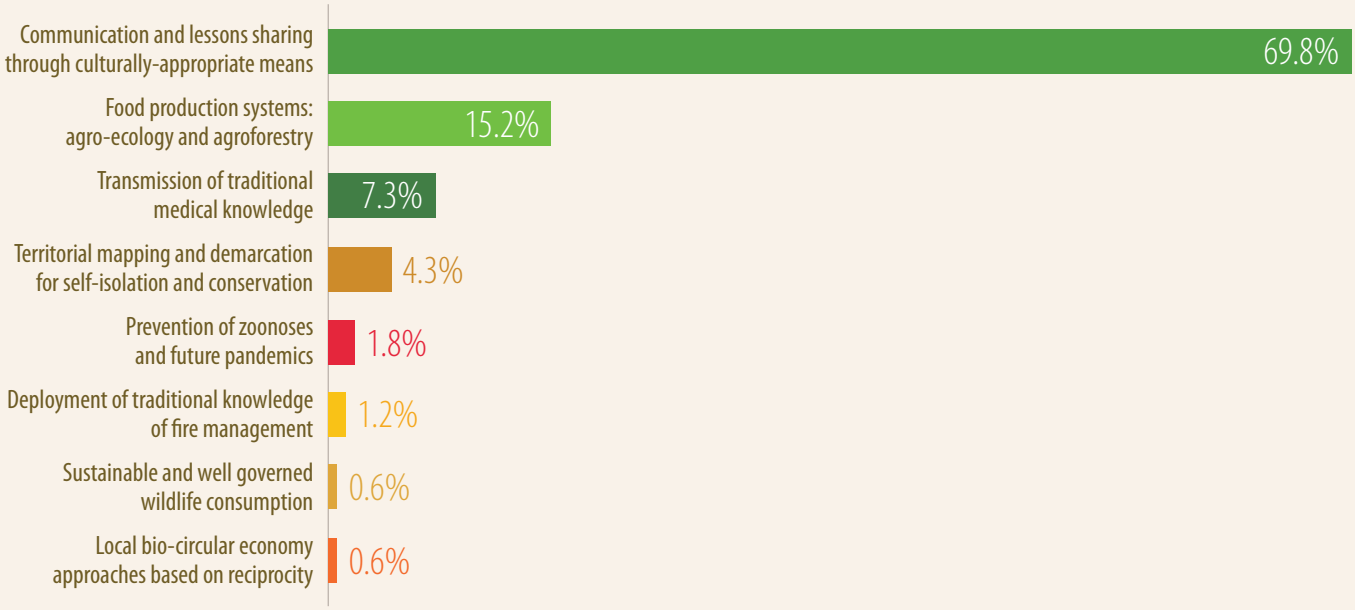
Moreover, in projects located in endemic areas for many outbreak-prone communicable diseases (e.g. malaria, anthrax, bubonic plague, etc.) and neglected tropical disease (e.g. leishmaniasis), information on these diseases was also updated in the communication tools.

Food production systems: agro-ecology and agroforestry

Food packages were distributed to provide immediate access to food. Furthermore, to generate livelihood options, indigenous seed banks and agricultural gardens were established, or strengthened where they existed, through sustainable agroforestry and agro-ecological activities.

SGP Viet Nam

Diagram 3: Coping activities by thematic category



Transmission of traditional medical knowledge

Another focus of the 'coping' activities was on the production of hand sanitizers and medicines based on traditional knowledge of the use of medicinal plants. With specific capacity-building to traditional doctors, they were able to incorporate the use of medicinal plants into the COVID-19 protocols in the ICCAs to boost people's respiratory and immune systems. Medicinal plant-based hydroalcoholic gels for hand sanitation were made using the basic formula provided by the World Health Organization (WHO). The production of face masks using local fabrics was also promoted for the use of the communities as well as for income generation by women and youth.

Closing borders: Territorial mapping and demarcation

The ICCAs were mapped and demarcated to limit entry to and mobility within the territories, aimed at preventing the spread of the virus into remote and often vulnerable communities living within ICCAs. The ICCA-GSI projects facilitated the coordination of efforts between indigenous leaders and local government officials, civil society organizations, the private sector, and national/regional indigenous organizations in securing controlled entry/exit points and logistics of food transport. Together, these actors identified vulnerable entry/exit points, organized management committees to supervise strategic locations and ensured sufficient food availability to deter community members from leaving their territories. Governing councils also requested food suppliers to bring deliveries closer to the territories, from where relevant governing council members or village leaders could receive and distribute them to each family.

Thereafter, Indigenous leaders undertook the monitoring and reinforcement of mitigation measures themselves and allocated specific roles and responsibilities to community members to ensure social cohesion and accountability.

Country examples for coping mechanisms for COVID-19

Belize: "One Health" campaigns

Theme: Communication and lesson-sharing through culturally appropriate means

COVID-19 information materials in local dialects were disseminated to target Indigenous Peoples and local communities who were not fully aware of the COVID-19 symptoms, treatment, vaccination areas, and testing locations. More than 9,700 people from the Garifuna, Mestizo, Mopan Maya, Creole, and Ketchi Maya ethnic groups were reached through their online social media platforms. These indigenous groups were then able to develop and share their "One Health" campaigns.[3] They also created billboards on their "One Health" strategies to inform people visiting their territories that the health of the planet, humans, and animals are interdependent. For collective implementation of their campaigns, the ICCA-GSI facilitated partnerships with the Toledo Alcaldes Association, Belize police department, Belize Defense Force (Belize military), University of Belize, Progressive Sugar Cane Producers Association, Ya'axche Conservation Trust, and the Maya Leaders Alliance.

SGP Mexico

Ecuador: Strengthening food sovereignty

Theme: Food production systems; communication and lesson-sharing through culturally appropriate means; transmission of traditional medical knowledge

A food autonomy plan entitled Strengthening Food Sovereignty was developed in the indigenous Waorani territories, based on the community's own capacities and food traditions such as bio-cultural groves and diversified orchards. Similarly, in the native Kichwa village of Sarayaku, the ICCA-GSI supported communities to rediscover and revitalize locally available natural medicines to strengthen the human respiratory and immune system.

Across the Waorani territories, a prevention guide was developed in the Waorani language and disseminated to 54 communities. These included a series of protocols, community trainings, videos, and radio programs on the impacts of COVID-19, including a focus on the *Pikenane* (elderly) who were more vulnerable, and on the importance of enforcing quarantines. In numerous villages and settlements of the Shuar Arutam ethnic group, guidelines were shared through the local radio station The Voice of the Live Waterfalls in the Shuar Chicham local dialect; and in the Kichwa Native Village of Sarayaku, health protocols and evacuation logistics for health emergencies were shared in the Kichwa language and Spanish via online meetings and distribution of prevention cards.

Mexico: Family gardens for social distancing

Theme: Food production and territorial mapping

In support of social distancing that pandemics bring, each of the 80 Tzeltales indigenous families who live in Guaquitepec city located in the Chiapas highlands were trained to demarcate and establish its own family garden. These gardens, established for the first time in the area, consisted of medicinal plants and diversified orchards, as well as vegetables such as lettuce, radish, coriander, tomato, cabbage, zucchini, and carrots. The capacities of the Tzeltales were strengthened in the associated agro-ecological bio-intensive farming methods and sustainable water use. For the first time, women were included in agricultural initiatives and received training in the construction and management of vermicompost modules to produce organic fertilizers and biofertilizers as well as in the preparation and application of natural insecticides for pest control and management.

Mongolia: Traditional use of medicinal herbs and prevention of zoonoses

Theme: Transmission of traditional medical knowledge; Prevention of zoonoses and future pandemics; Communication and lesson-sharing through culturally appropriate means

A "Clean Hands for Health" campaign was launched in four provinces on social media and other networks, a hand-washing video for children was produced in cooperation with local television stations, and low-cost handwashing accessories and portable latrines for nomadic herders were designed and tested to prevent the spread of viruses. Personal protective equipment (PPE) was also distributed, and information on COVID-19 translated into local dialects.

Additionally, in the Tsagaan Uul ICCA located in the country's northernmost province of Khövsgöl, skill development and awareness raising were provided to communities on the traditional use of medicinal herbs aimed at strengthening peoples' immune systems against communicable diseases. Specifically, local medicinal herb collectors were trained to promote the proper collection and packaging of common medicinal plants in the province, as well as regarding their suitable use against communicable and other diseases such as COVID 19.

Finally, to prevent zoonoses and future pandemics in the Zavkhan province in western Mongolia, awareness-raising sessions were provided in 25 districts that are prone to zoonotic infections such as anthrax, and plague notably from the local marmot population. Local herders and hunters, local government authorities and private sector organizations received iterative training on how to prevent anthrax and marmot plague in humans and livestock. As a result, a platform now exists where multi-level stakeholders work collectively to prevent disease and promote health, especially within the most vulnerable communities.

Niger: Hygiene products and livelihoods options for women

Theme: Communication and lesson-sharing through culturally appropriate means; Local circular bioeconomy

More than 42,400 Indigenous People and local communities received training on the COVID-19 threats, prevention, symptoms, treatment, and other important and updated news through information translated into local dialects (e.g. Hausa and Tamashek). In addition to the distribution of PPE, handwashing devices were installed in schools, health centres, public spaces, and homes. Sewing

SGP Niger

machines and supplies were also provided to various women's groups as an adaptive strategy to generate income opportunities for women in sewing masks and other, traditional products. As a result, the women's average income increased from USD9 to USD30 per month, and traditional craft making has been revitalized and continues to be an income source for the women even after the pandemic.

Panama: Holistic coping approaches based on traditional knowledge

Theme: Transmission of traditional medical knowledge; Food production; Prevention of zoonoses and future pandemics; Communication and lesson-sharing through culturally appropriate means

Food production and awareness-raising campaigns and information-sharing on COVID-19 protocols were promoted through culturally appropriate means in 10 project sites located in the indigenous provinces or *indígena comarca*, from Embera-Wounan in the east to the Ngäbe-Buglé in the west, and to the indigenous subdivisions of Guna Yala and Madungandi in the north-east.

In Ngäbe-Buglé, Panama's biggest and most populous *indígena comarca*, the communities of Cerro Flores, Cerro Congo, and Llano Sebles confronted the pandemic risks using their ancestral knowledge and the link of the ethnic Ngäbe group with the forests and the land. The ICCA-GSI team worked with traditional-medicine doctors in translating COVID-19 protocols from the Ministry of Health into local Ngäbe dialects and sharing them via Facebook and WhatsApp, as well as distributing pamphlets. These documents were incorporated into the training process of ancestral medicine for new healers, such as spiritual healers (or sukia in local dialect for women) and medicine givers (or *kraga biaga*). A women's group with sewing experience were also organized to make cloth masks for the community members.

"The translation we did is not only of the language, but also a cultural translation that is guided by healers," said Blas Quintero, Director of Accion Cultural Ngäbe. "There are cultural actions that the Ngäbe carry out that were enhanced with official guidelines for COVID prevention."

Moreover, food production was strengthened by enhancing ancestral techniques for the cultivation of native beans without burning or tilling and conducting laboratory analysis on the wild Ngöga plant to provide alternative protein sources while protecting traditional Ngäbe foods. Five gravity-fed irrigation and hydraulic-ram management systems were also built to sustain traditional agroforestry production systems and provide innovation using simple technology.

In the indigenous territories in Guna Yala and Guna de Madungandi, training was provided to 50 traditional-medicine doctors from 22 communities on COVID-19 and community biosecurity protocols with an intercultural approach. Here, existing national protocols, including those for malaria and leishmaniasis, were updated and culturally adapted for the Guna Yala communities. A total of 22 audio capsules were created in seven indigenous languages and shared through the community radio station *Radio Voces Originarias* as well as on its new website. These two communication channels also served as platforms for Indigenous Peoples to share their experience of defending their territories, and as such, the project's impacts also had a national dimension.

SGP Panama

Recovery measures from impacts of the COVID-19 pandemic

The project activities were aimed at addressing medium- and long-term impacts of the COVID-19 pandemic and how to adapt to this new reality. With the negative economic impacts due to market, trade and ICCA border closures, alternative livelihood options were vital to the ICCA populations. Thus, the projects had holistic strategies with cross-cutting activities among the different thematic categories.

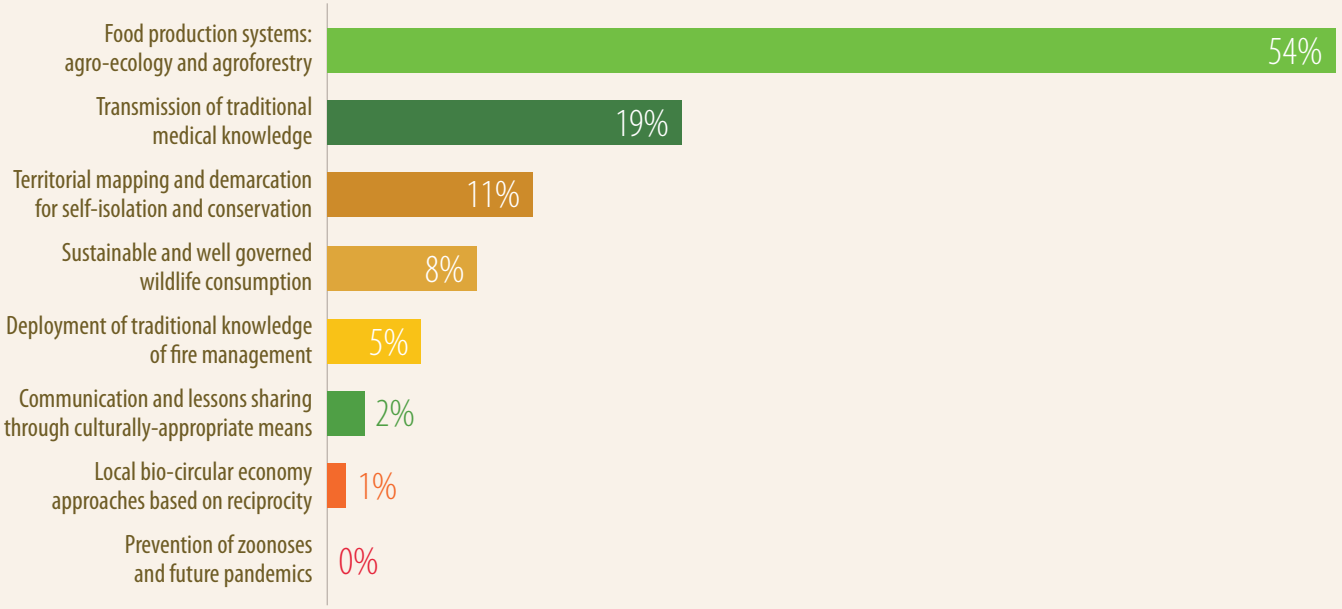
Around 71 percent of the activities focused on two categories:

i. increasing food production through agro-ecology and agroforestry (51%); and

ii.transmission of traditional medical knowledge (20%).

Refer to Diagram 4 for the distribution of recovery activities across these and other thematic categories.

Diagram 4: Recovery activities by thematic category



Food production systems: Agro-ecology and agroforestry

Activities for medium- to long-term food sovereignty and sustainable livelihoods were promoted while ensuring that ecosystem equilibrium remained. The technical capacities of the communities were strengthened in sustainable agroforestry and agro-ecology approaches such as rehabilitating degraded areas and repopulating species in low-density areas (agricultural land, forests, wetlands, mangroves, fishponds), in order to increase ecosystem services for food sovereignty and traditional medicine production. Diversified income-generating options were introduced (e.g. non-timber products, apiculture, fish and/or oyster farming, medicinal plant-based products, face mask manufacturing) to improve livelihoods while alleviating pressure on forests and reduce the temptation, out of desperation, to conduct prohibited exploitation activities in sacred sites.

Transmission of traditional medical knowledge

The projects integrated the use of medicinal plants in recovery strategies from the COVID-19 pandemic. Programmes were created to revitalize indigenous knowledge, language, and practices in relation to medicinal plants, including inter-generational learning and indigenous-led educational initiatives. Ethnobotanical inventories were established, and guidebooks were produced to capture and share traditional knowledge on the cultivation and use of medicinal plants for different illnesses and diseases.

Sustainable and well governed wildlife consumption and prevention of zoonoses and future pandemics

Activities on preventing the transmission of zoonotic diseases were linked to initiatives on sustainable and regulated wildlife use; such as the promotion of small animal husbandry on sustainable farms with mitigation measures and the preservation of grazing lands for sustainable livelihoods. Technical assistance was

also provided by technicians from regional governmental ministries (e.g. ministries of agriculture, or of development).

Territorial mapping and demarcation for self-isolation and conservation

The mapping and demarcation of territories are undertaken for three purposes:

i. delineation according to land use to ensure ecosystem equilibrium, after which agro-ecological and agroforestry measures are applied;

ii. conflict resolution on land management and use amongst communities within the ICCAs as well as with neighbouring communities outside the ICCAs; and

iii. control entry to and mobility within the ICCAs to prevent the spread of the COVID-19 virus.

Deployment of traditional knowledge of fire management

Activities in deploying traditional knowledge on fire regimes were undertaken to conserve biodiversity. These include piloting indigenous plants as "green belts" for the mitigation of forest fires, maintaining forest firebreaks, and executing prescribed or controlled burns. Research sites have also been established to develop local community-based rules, regulations, and guidance on forest development and management. Indigenous knowledge about forest protection and forest fire prevention have also been integrated into traditional songs and poetry.

SGP Malaysia

UNDP India

Country examples for recovery measures from COVID-19[4]

Bolivia: Increasing food and water security in the Aguas Negras community during the COVID-19 pandemic

Theme: Food production systems; Transmission of traditional medical knowledge

The Aguas Negras community live in buffer zone of the San Matías Integrated Management Natural Area, (*Área Natural de Manejo Integrado San Matías, or* ANMI San Matías). The community is comprised of 451 Chiquitano Indigenous People, making up 53 families, and inhabiting 10,158 hectares of land. Governance of the community forests follows the Chiquitanos' values, customs, and traditional way of life, where harmony with nature is preserved. Such an indigenous governance system also contributes to the ecological integrity of the Chiquitano Dry Forest and the ANMI San Matías.

SGP Bolivia

Threats

The Aguas Negras community relies on subsistence agriculture and small-scale cattle ranching for their livelihoods. However, even before the COVID-19 pandemic, increasing incidences of droughts and other climate change impacts threatened the ecosystem functions of the forests and hamper food security.

Project activities and impacts

This ICCA-GSI project was implemented in partnership with local NGO Proyecto de Desarrollo Comunitario (PRODECO, meaning "Community Development Project") in 2021 to support the Aguas Negras community cope and recover from the COVID-19 pandemic impacts and continuous threats driven by climate change. The main objectives of the project were to increase access to water, diversify livelihood options and improve food security.

Increasing access to water with clean energy

Firstly, a series of participatory training sessions was provided to strengthen the community governance in water management. A water system was introduced based on the use of renewable energies. Solar photovoltaic water pumping systems were installed to pump groundwater, two elevated plastic tanks were put in place to store 10 m3 of water and water taps were provided. As a result, 75 percent of families gained permanent access to water in their homes, enabling them to meet their basic needs. Additionally, 47 percent of the families were able to install sinks used to wash dishes and clothes and now have improved sanitation in their homes.

The water system has also freed up the time of women and children, who traditionally gathered water for their families from distant sources. Now, children spend more time in educational activities, and women have been empowered to actively engage in the project's agro-ecological activities. This has shifted the recognition of women and children towards being important social actors, and away from past perceptions of being the most vulnerable groups of the local population.

Secondly, workshops were also held to fortify the communal norms on the use and conservation of the forest in water-recharge areas and riverbanks. Thereafter, more than 290 community members, 49 percent of whom

were women, established ecological cordons to safeguard 1,105 hectares of communal forests, thereby improving forest ecosystem functions and conserving local biodiversity species.

Thirdly, the community members were mobilized and trained on how to calculate the user fees to recover the costs of maintaining the system. Together, they agreed that the costs would cover the maintenance civil works, spare parts and accessories, and fees associated with plumbing as well as disaster risk management. As a result, a social water tariff of approximately 15 Bolivianos per month (2USD) has been established to assure the sustainability of the water system.

Lastly, a community water committee now exists in the Aguas Negras community to ensure the sustainable management of the water system. Isaiah Guerra, 42, was elected by the community to be the president of its water committee since he has always been concerned with the water insecurity issues in the area. "The project has been the best thing that has happened to us, since we had always asked for support, and no one ever listened to us," Guerra said. "Having access to safe and permanent water helps us live better, eat well, and be better prepared to fight respiratory diseases and COVID-19."


SGP Bolivia

The water committee in the community has now become responsible for: (i) monitoring the proper use of water sources (e.g. springs, rivers, and underground water sources); (ii) evaluating the status of water sources and conservation of forests to safeguard ecosystems and their functions; (iii) administering community rates; and (iv) complying with water system operation and maintenance plans, as well as the contingency plan. With the iterative meetings and training workshops held, Guerra adds: "I have been able to train other community members who are part of the water committee in specific activities such as preparing statutes and regulations [and] defining the social water tariff."

Strengthening food autonomy and medicinal food heritage

The Aguas Negras community also fortified their own traditional system of horticultural and medicinal family gardens to improve subsistence agriculture. In the horticultural family gardens, the communities planted a variety of vegetables (e.g. cucumber, onion, lettuce, zucchini, beetroot, bell pepper, chard, and parsley) to diversify crops and provide a steady supply of fresh and nutritious food for their families. In the medicinal family gardens, they cultivated native species (e.g. aloe vera, sinini, paquío) to make traditional medicinal ointments and syrups.

These trainings, along with the increased water availability, have resulted in 22 medicinal and horticultural gardens being strengthened, re-established and efficiently maintained by the Aguas Negras community members. This, in turn, has improved food autonomy while providing a diversified diet. Additionally, traditional medical knowledge on the use of native medicinal species was disseminated to boost their immune systems against the COVID-19 virus. Inter-generational transfer of these traditional methods and the importance of sustainable environmental management was also promoted by integrating them in school curricula.

Furthermore, the active participation of both men and women in the decision-making processes and various project activities has enhanced social cohesion,

empowerment, and self-reliance in a spirit of respect for others. "The project has also helped us improve and strengthen the organization in the community," Guerra said. "Now every decision that has to do with water, the forest and production is made by the entire community in our assembly."

Burkina Faso: Improved livelihoods through mainstreamed traditional agro-ecological techniques in 9 ICCAs

Theme: Food production systems; Local circular bioeconomy

The municipality of Soaw hosts many ICCAs characterized by sacred rivers, wells, hills, groves, and forests, with significant plant, wildlife, and water resources. These include the nine ICCAs that were the focus of the project: Wend Bouli (God's Well or Sacred River); Tansob Tanga (Healer's Hill); Kalwaka Kaongo (Kalwaka Forest); Wend N Goud Tanga (Hill of Divine Protection); Zamtini Kaongo (Zamtini Forest); Wagd Kalse; Kikirs Tindili; Tang zug kaongo (Forest on the Hill); and Bourassoum Tanga (Bourassoum's Hill). These ICCAs cover a total of 110 hectares and are home to more than 5,100 Indigenous People, including members of the Mossi, Peulh, and Gourounsi peoples. Agriculture is the dominant economic activity in the area, and thus local populations heavily rely on the water points in the Soaw commune, as well as Soaw and Soum dams that surround it.

Economic hardships, climate change and severe droughts result in strong demographic pressure on agricultural land and low yields. The majority of the population, especially women, engage in market gardening activities to generate additional income but not all the basic needs of the family are met. As such, the communities have resorted to the use of fertilizers, herbicides, and chemical pesticides to increase production yields. This, in turn, has resulted in cases of severe toxicity in the environment causing water and air pollution, soil degradation, increased animal deaths, and even loss of human lives. The explosion of gold panning and large construction sites in the area adds to the degeneration. These issues were compounded by the COVID-19 pandemic.


SGP Burkina Faso

Project activities and impacts

The ICCA GSI project was implemented in 2021-2023 to address these threats by promoting the sustainable agro-ecology practices in the nine targeted ICCAs. As first measures to cope with COVID-19 impacts, masks and cleaning products were distributed. This was followed by training sessions provided to municipal council members in each ICCA to produce hydro-alcoholic gel as hand sanitizers, which then created a training-of-trainers system.

Applying sustainable agro-ecology practices for food security and income diversification

Organic agricultural production techniques were promoted to reduce the use of chemicals in fields and gardens. Firstly, the communities were trained on installing stone bunds to form a barrier that slows down rainwater runoff, allowing rainwater to seep into the soil and spread more evenly over the land. This helps build up a layer of fine soil and manure particles, rich in nutrients. Here, a ground triangle or a topographic survey operator was used to determine contour curves before digging the furrows, where the large stones were then arranged.


SGP Burkina Faso

After the terrain was assessed, the traditional technique of *zaï* was revived during the dry seasons to restore degraded lands and increase soil fertility. The farming technique consists of digging crescent-shaped holes in less permeable soil to catch water runoff and concentrate compost. About 300 grams of organic matter, such as manure and compost, was placed into holes to provide plant nutrients. The manure attracts termites, whose tunnels help further break up the soil. The zaï holes were also covered with mulch to maximize water retention and the biological activity of termites in the soil.

Stone-bunding resulted in up to 200 litres of additional water penetrating the ground per square meter per year. "In my village, the combination of stone barriers, *zaï* and the use of organic manure has made it possible to improve field yields by 260 percent for certain farmers," said Ousmane Kaboré, 75, one of the leaders of the Songui Manegre Association. "In my field [of 4 hectares], for example, I used to harvest 150 kilogrammes of millet per hectare but since I practiced stone cordons and zaï combined with the use of organic manure, I gain on average 300 to 400 kilogrammes."

The increased agricultural production yields have led to food security in the ICCA. According to Kaboré, who has four wives and 16 children, there is now more food, and he is able to meet his families' needs. "In the past, we struggled to have just one meal a day," he said. Now his "children can eat in the morning before going to school."

Apiculture was also introduced as an alternative livelihood option. For Kaboré, selling 150 litres of honey per year generated an additional USD 450, not including the income from wax. He adds that "there is an additional income of USD27,000 per year in the village because of beekeeping."

Improving social cohesion for ICCA stewardship

The capacity development has significantly improved social cohesion, community stewardship and women empowerment. Emmanuel Kaboré, a 58-year-old native of the Kalwaka village, said he "acquired a lot of knowledge in agriculture, beekeeping, and natural resource management."

"I used to call on agricultural agents," he said. "Now, I know it myself. I no longer need to call them for help. I can even teach other people."

For Minata Bassinga, who like many women in the area have their own fields, social cohesion and learning new skills were of utmost importance. Bassinga, 42, has five children with her husband, who is polygamous and has three other wives. She helps her husband cultivate in family's field before working on her own 2ha field. "I joined the group for cohesion in the village," she said. "I learned to make the stone barriers and the *zaï*. I also learned how to make soap, shea butter, ointment, and *soumbala* [a fermented seed condiment]. Before [the project] I earned USD10 per month, now I can have USD30 per month. Before, my children barely ate twice a day. Thanks to the project, they now eat three times a day."

CHINA: Improving community livelihoods and governance in community-conserved areas in the Three Parallel Rivers UNESCO World Heritage Site

Theme: Food production systems; Local circular bioeconomy

Located in the south-western part of China, Yunnan province is the country's most biologically and culturally diverse area, and home to 25 ethnic minority groups. Here, the Three Parallel Rivers World Heritage Site (WHS), is a 1.7-million-hectare protected area recognized by UNESCO, encompassing sections of the upper reaches of three of Asia's great rivers: the Yangtze, Mekong, and Salween rivers. Its location in the convergent regions of the three world's major biogeographic realms makes it an epicenter of Chinese biodiversity.

The Three Parallel Rivers WHS also harbours many community-conserved areas (CCAs), where ethnic minority communities live and protect the ecological functions of forests and rivers within their territories. In the northwest section, there are 26 CCAs covering 11,349 hectares in Lijiang city. Of these, the 12 CCAs in Liguang Village located in Yulong Naxi Autonomous County cover about 7,700 hectares.


SGP China

The ethnic minority communities in the Liguang Village CCA are heavily dependent on production and sales of agricultural goods (e.g. walnut, honey, maize, white kidney beans, Sichuan pepper) for their livelihoods. In particular, walnut production has been part of the government's Returning Farmland to Forest Project (RFFP) in the area for many years, aimed at converting croplands to forested areas by promoting afforestation activities to reduce flood and soil erosion. Walnut trees have well-developed root systems that can solidify soil, retain water, and improve soil quality. Because of its strong adaptability and high economic value, walnut trees have become one of the main tree species in the area to achieve environmental and economic sustainability.

Threats

During the pandemic, market closures resulted in a lack of sales, and a drastic decline in prices due to oversupply. The communities faced dramatic cash-flow decreases which affected their purchases of grain and rice rations for the following year. As a result of the crisis, the ethnic minority communities were planning on cutting down the walnut trees to plant other cash crops and sell timber to compensate for their diminishing cash flow.

Project activities and impacts

The ICCA-GSI partnered with the Xi'an Lianhu Yingzaishengcun Public Service Center and Lijiang Institute of Health and Environment in 2021 on a project to support ethnic minority communities in the Liguang Village CCAs to recover from the impacts of COVID-19. This was done by improving the food production systems and diversifying the livelihood options of over 6,860 ethnic minority community members, including the Lisu, Naxi, Yi and Tibetan populations.

Promoting alternative livelihood options

The Liguang villagers worked with the programme in developing a long-term agro-ecological strategy spanning the next 15-20 years, including on the identification of high-potential fruits and herbs to diversify their incomes. A series of self-strengthening sessions were jointly organized with the villagers, 44 percent of whom were women, on the sustainable production of *Huangjing*, a traditional Chinese food and medicinal herb. Together, they learned about seedling cultivation and selection, plot selection, growth cycle management, disease prevention, harvest control and market prospects for health-promoting products.

Additionally, the use of Chinese quinces (*Cydonia oblonga*) was re-introduced and revitalized. Workshops were held for 50 households on its cultivation, resulting in 95 percent survival rates and more than 2,000 Chinese quince trees being planted. In turn, this generated a supplemental yearly income of USD5,580 per hectare for the villagers. The harvesting of Chinese quinces in future years will provide incremental income increases, and is estimated to be more than USD16,500 per hectare in 15-20 years.

"Environmental protection efforts have fostered a strong sense of environmental consciousness within our community," said Zhanhua He, 39, a women's group leader from the Liguang Village. "Everyone adheres to the agreed-upon protection regulations. This project has reinforced these efforts, ensuring the continued protection of the community conservation area.
For mountain residents, forest and land resources can provide ample economic benefits. Although agricultural product prices fluctuate, a diverse range of crops can mitigate this volatility. Protecting the environment and maintaining diverse livelihoods are highly beneficial for our community".


SGP China

Broadening product outlets and markets

Market linkages were expanded to Xi'an city, a popular international tourist destination and the capital of Shannxi Province in north-west China. Product exhibitions and educational tours were organized, thereby fostering urban-rural links and raising awareness on agricultural products from community-conserved areas. The product exhibitions attracted more than 100 participants from local government, media, enterprises, and residents - resulting in three memorandums between villagers and external enterprises. These agreements led to improved standards in packaging, logistical/transportation support, and sales systems for the village agricultural products. In turn, the prices of lima beans and Sichuan pepper increased by 30 percent.

Iran: Empowering local communities of Qeshm Island on Sharks Marine Community Conserved Areas

Theme: Sustainable and well-governed wildlife consumption

Globally, more than one-third of all species of shark, ray, and chimaera are now at risk of extinction because of overfishing. The largest shark catch in the Persian Gulf occurs in Iran, with an estimated quarter of shark and ray species in the world threatened with extinction.

Located in Iran's southern province of Hormozgan, Qeshm Island is the biggest island in the country as well as in the Middle East. Qeshm Island is almost twice the size of Bahrain with a surface area of 1,500 square kilometres. It is home to more than 150,000 people, and fishing is the main livelihood activity.

Threats

As in most of the Hormozgan Province, there is no law prohibiting the use of cartilaginous fish, and thus shark and ray fish meat play a major role in local communities' diets. The shark fin trade is also common among local fishermen due to easy access to shark fin markets in Arab countries across the Strait of Hormuz. These activities have resulted in the decrease of shark populations, which in turn, disrupts the ecosystem

balance due to increase of carnivorous fishes, decrease of herbivorous fishes and overgrowth of algae in the region, threatening food security and income generation.

Project activities and impacts

This ICCA-GSI project was implemented in partnership with Institute of Persian Gulf Kouli Kar to establish marine community conserved areas around the villages of Derakoo, Goori, Baasaeidoo, Doostakoo, and Kaani in the western part of Qeshm Island. These villages are home to approximately 4,721 people comprising 1,144 households.

Establishing marine community conserved areas

More than 50 training workshops were held in villages across Qeshm Island with the active participation of more than 750 fishermen. These training sessions consisted of: (i) sharing indigenous knowledge on sustainable fishing; (ii) identifying where marine community conserved areas could be established; and (ii) taking inventory of shark species in the waters of Qeshm Island, as well as determining the shark breeding areas.

Elder fisherman shared their knowledge with younger fishermen to promote the intergenerational transfer of sustainable indigenous fishing practices. This included the suitable seasons for fishing as well as seasons when fishing is prohibited. During the shark fishing season


SGP Iran

for example, procedures for *kooli novee* (newly born sharks) were followed wherein by-catch of baby sharks (sharks measuring less than 20 centimetres) was to be released and fishermen needed to leave area. Similarly, fishing was prohibited during the sharks' breeding season in July for 2-3 weeks. Alternative fish species for food consumption were also introduced to ensure food security. These include *qotr* (barracuda), telaal (Indian mackerel), *dahir* (whitefin wolf-herring), *moghavvaa* (Indian threadfish), and *saarm* (talang queenfish).

"Our experience has proven that wherever there are sharks, there are more fish for us to catch" said Taha Soroodi, a local fisherman from Qeshm City. "Since the sharks have decreased, our catch has also decreased. Therefore, if we catch sharks as bycatch, we release them into the sea."

In collaboration with Elasmo Project,[5] field studies and sampling were carried out by the Persian Gulf Koulikar Institute team on the waters of Qeshm Island. A total of 29 species, including 22 sharks and seven species of rays and were recorded, along with their status according to IUCN Red List. This list is presented in Table 1 in the Annex.

The biggest fishing port in the island was identified to be in the Baasaeidoo Village, which is managed by the 405 members of the Baasaeidoo Fishing Cooperative. Effective collaboration with the head of the cooperative, Haji Mohammad Moosa Ghavidel, and its members, turned the port into a conservation base area for sharks after three months of training on: (i) the importance of effectively conserving 29 species; (ii) regulations that prohibit catching and selling sharks, as well as serving them in dining venues; and (iii) the associated fines for violating the regulations.

"After participating in the workshops, we understood the importance of sharks to our livelihood and the sea life," said Ghavidel. "So, we decided not to catch sharks." As a result, approximately, 8,199 hectares of marine was safeguarded.

Building partnerships to expand awareness raising in shark and ray conservation

Building durable partnerships with various fishing cooperatives, village and city councils across Qeshm Island, academia, the Education Department of Qeshm County, and Department of Environment of Qeshm Free Area Organization (DOE of QFAO), ensured that

information on the sustainable conservation of sharks and rays was widely disseminated. The information was also included in school curriculums to ensure inter-generational transfer to youth and children. An article titled Determining Sharks Marine Community Conserved Areas (MCCAs) in Qeshm Island and Investigating Management Approaches of MCCAs was presented at the International Conference of Marine Science of Tehran University.

As a result, information on the sustainable conservation of sharks and rays and the value of marine community-conserved areas reached more than 150,000 people in Qeshm Island, and many people in Hormozgan Province including tourists.

Influencing policy

Several meetings were also held with various government officials from the DOE of QFAO, Qeshm County Fisheries Organization, Department of Commerce and Guilds, Department of Cultural Heritage, Handicrafts and Tourism, and Department of Geopark to share the project's impacts on the sustainable conservation of sharks and rays. This resulted in influencing policies related to: (i) setting and enforcing bans on catching, selling, and offering sharks in the environmental permits granted by DOE of QFAO; (ii) the relevant enforcement procedures and fines in prohibiting catching sharks by fishermen, selling sharks in fishing markets, supplying sharks in restaurants, hotels, and stores; and (iii) quotas on exporting shark fins.

"The shark conservation project has been carried out for the first time in Iran in the region of Qeshm Island," said Seyed Mohammad Hashem Dakhteh, general manager of DOE of QFAO. "The DOE of QFAO has actively cooperated and participated with this project from the beginning stage until now due to the importance of these animals in the marine ecosystem. The shark protection programme is one of the fundamental programmes of the marine section of this department and will be followed seriously in the future by Qeshm Free Area Organization."

Indonesia: Creating green jobs built on traditional knowledge to recover from impacts of COVID-19 pandemic in Sedau Village, Lombok Regency

Theme: Local circular bioeconomy

Indonesia is rich in tourism potential, in terms of natural beauty, ancestral culture and culture, ethnicity and language, culinary and craft potential in every region. In West Nusa Tenggara Province on Lombok, tourism is the major economic activity as the island is between the tourism hotspots of Bali and Komodo. The Sedau Village Tourism Awareness Group in West Lombok Regency is part of the Protected Forest Area of Mount Rinjani Forest Group and manages the Mount Jae Campground. The campground, located 25 kilometres from Mataram City, the capital of West Nusa Tenggara Province, is a natural tourist attraction surrounded by hills and rice fields that surround the river and also offers lake boating and several scenic points for photography.

Threats

Like many communities on Lombok Island, the Sedau Village Tourism Awareness Group and the rest of Sedau villagers were still recovering from the economic impact of the 2018 earthquake when the pandemic hit in 2020. With tourism being the economic mainstay in the island, people once again risked losing their jobs.

Thoha Firdaus/Shutterstock

More importantly, community members who were employed outside their villages returned home and sought alternative livelihood options.

Project activities and impacts

With support from this ICCA-GSI project, the Sedau villagers developed the Mount Jae Tourism initiative as part of its recovery plan from the COVID-19 pandemic economic impacts. The initiative expands the existing services of the Mount Jae Campground with tour packages that focus on traditional medicine and traditional coffee cultivation. The new tour packages actively engaged 653 villagers in the decision-making processes and project activities, and were implemented on 560 hectares of land, 70 percent of which are forests.

Promoting eco-tourism based on traditional medicine

For tours on traditional medicine, residents explain the medicinal plants that are found in their yards and the forests. The explanation covers the types of plants, how they live, and their function and benefits. Some examples include *kayu putih* (eucalyptus), *kelor* (Moringa oleifera), *kapulaga* (cardamom), *akar wangi* (Chrysopogon zizanioides), and *sereh wangi* (citronella). *Kayu putih* and *kapulaga plants* function as a substitute for medicines and first aid when residents experience the first symptoms of flu and fever. During the COVID-19 pandemic, the community used these plants to maintain the body's resistance to viral attacks. Those infected by the corona virus reported that their fast recovery was due to the nutritious food sources and medicinal plants from their forests.

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Reinvigorating traditional coffee cultivation

The traditional coffee cultivation in Sedau Village was almost abandoned because it did not provide enough income. As such, a women's group experimented with new methods that were built on the traditional process including not pruning coffee plants, harvesting, and sorting coffee beans. As a result, they developed the skill of *seong kopi* or roasting coffee before consumption. A coffee tour package was then developed where tourists visit coffee plantations and are invited to pick ripe coffee beans off the plant. The residents' houses took part in the tour package, showing how they process the coffee beans, including both drying and roasting. Lastly, coffee shops were built to allow tourists to enjoy brewed coffee and buy souvenirs including packaged medicinal plants and other agroforestry products.

Mount Jae Tourism has succeeded in renewing and revitalizing jobs for people affected by the COVID-19 pandemic by relying on their local knowledge. The communities reported that tour packages increased their monthly average incomes by 400 to 733 percent, from 600,000 rupees (USD38) before the pandemic to 3-5 million rupees in 2023.

Kenya: Increasing appropriate recognition of traditional medicine

Theme: Transmission of traditional medical knowledge

Traditional medicine is an integral aspect of the health care system of Indigenous Peoples and local communities in many parts of Kenya, where its use is more widespread than that of modern medicine. For centuries, the ancestral knowledge on traditional medicine has been orally passed down from generation

to generation to address their health and well-being needs. During the COVID-19 pandemic, Indigenous Peoples' and local communities treated the corona virus symptoms with locally available medicinal plants which proved to be highly effective. For example, *chepindorwet* (Toddalia asiatica) among the Ogiek people is used to address flu or cold symptoms including COVID-19.

Threats to traditional medicine

The loss of ancestral knowledge on traditional medicine is a continuing threat. On the one hand, traditional medical knowledge lacks official recognition and is often ignored and even looked down upon. On the other hand, when recognized, it is done so for commercialization purposes of indigenous medicinal plants, seeds, genetic resources, and traditional medicine. Many existing studies on traditional medicine are conducted by outsiders and are not consistently linked with indigenous knowledge, and the threats of biopiracy is a growing concern. The lack of appropriate recognition and respect for traditional medicine has led to plummeting plant resources and associated ecological degradation associated with overexploitation.

Project activities and impacts

Four ICCA-GSI projects in Kenya focused on the protection of traditional medicine knowledge through documentation and supporting the appropriate recognition of traditional medical practitioners. Simultaneously, the projects also supported the conservation of medicinal plants by restoring degraded lands and promoting inter-generational transfer.

These four projects are distributed across the country. In the west, a project with the Ogiek Peoples Development Program is located in the 400,000-hectare Mau Forest Complex. The Mau Forest Complex is the largest water tower in Kenya, home to over 52,000 Ogiek people, and a critical biodiversity hotspot in the Eastern Africa Region. The ICCA-GSI project was conducted in Nakuru and Narok Counties targeting herbalists and traditional health practitioners, as well as representatives of the County Government of Narok, the Kenya Forest Service and the Kenya Wildlife Service.

In the north, another project was located in Mount Kulal (UNESCO biosphere reserve), Nyiro and Ndoto Ranges, which is the lifeblood of 100,000 indigenous peoples including the Rendille and Samburu. In the south-east, the project is located in the Chawia Forest in Taita Hills: a biodiversity hotspot that provides local livelihood options including medicinal plants for use by humans and animals. It is home to 1,440 members of the Chawia community. Lastly, in north central Kenya, the project was located in the Mukogondo forest in Laikipia county and the Kirisia and Mathew Range forests in Samburu county. These forests are the main forest ecosystems in the Middle Ewaso Ngiro Basin and are home to 350,000 Indigenous Peoples including Maasai, Turkana, Samburu and Sieku (or Yiaku).

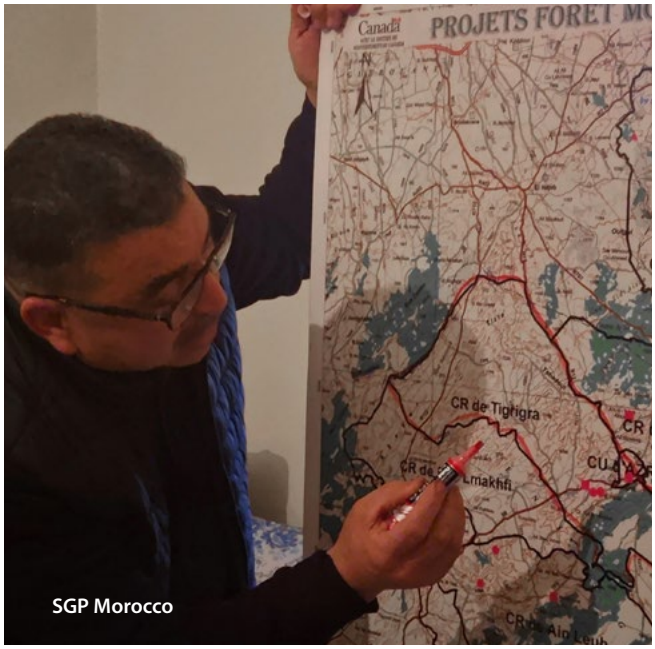
Protecting traditional medicinal knowledge through documentation

A total of 24 workshops were held to identify traditional and indigenous medicine knowledge held by the relevant communities. These saw the active participation of 40 herbalists, who learned to distinguish an array of medicinal plants and their benefits, as well as discussing different ways to improve their conservation such as efficient harvesting techniques and creating nurseries.


Jen Watson

As a result, a total of 39 medicinal plants have been catalogued by the four indigenous communities. While these efforts are on-going with another 130 species being validated, the preliminary draft are presented in Tables 2,3,4 and 5 in the Annex. These have been disseminated within and outside the ICCAs, reaching approximately 5,100 people who now have a greater appreciation of their value and are encouraged in conserving them.

Moreover, the trainings and interactive dialogues have contributed to the conservation of medicinal plants and the rehabilitation of degraded areas. For example, the Rendille and Samburu Indigenous Peoples in Mount Kulal Biosphere Reserve, Nyiro and Ndoto Ranges were capacitated to create a tree nursery with 15,000 seedlings of Acacia tortilis, Olea africana, Salvadora persica, and Balanites aegyptica among others. This in turn, contributed to the conservation of the water towers and sustainable use of plant resources in area. Similarly, the Ogiek contributed to the conservation of the 400,000-hectare Mau Forest by planting thousands of indigenous tree seedlings to rehabilitate 40 hectares of degraded forest sections. The Ogiek were also able to establish a herbal garden with more than 2,000 herbal seedlings, with the purpose to restore and conserve endangered species of herbal plants. The herbal garden is found in the Ogiek cultural centre where youths are mentored by herbalists on practical knowledge on herbal medicines.



SGP Morocco

Building partnerships for increased recognition of traditional medical practitioners

Approximately 140 traditional medical practitioners (TMPs) in the project sites were actively involved in the documentation of medicinal plants. These include traditional healers, herbalists, bone specialist, infant care givers and traditional birth attendants or midwives who have shared their knowledge and years-long experiences on the efficient use of traditional medicine. However, due to the low appreciation of traditional medicine at the national level, TMPs and their intellectual property are often not officially recognized by authorities.

To this end, the ICCA-GSI projects facilitated partnerships with different government authorities to enable TMPs to receive appropriate recognition of their traditional knowledge. For example, through the ICCA-GSI Ogiek Peoples Development Program, Ogiek Peoples in the Mau Forest engaged and formed a partnership with the Department of Culture (DoC) of Narok County. The Director of the DoC has since participated in the project activities. As a result, the DoC has integrated some of the project's activities into its programmes and has incorporated Ogiek people's knowledge of medicinal herbs and honey into the National Museums of Kenya's Documentation and Digitization of Indigenous Traditional Knowledge Program, which documents natural assets in 13 counties. Moreover, TMPs in the Ogiek Peoples Development Program were commissioned to collect data in Narok County.

Morocco: Ancestral Ingenuity for ecosystem restoration and human well-being: The ICCA of Sehb Laghnem

Theme: Food production systems; Local circular bioeconomy

The ICCA of Sehb Laghnem covers 2,750 hectares of land and is home to 2,500 Indigenous People including members of the Ait Yahya o Alla, Ait Kassou o Haddou, Ait Hammou o Boubou, and Ait Aamr o ali. The site


SGP Morocco

is located in the Central Middle Atlas, at the heart of the Ifrane National Park and the Cedar of the Atlas Biosphere Reserve. This mountainous region features a variety of landscapes, with an open topography to the west and a rugged terrain to the east. The territory is divided into three distinct zones along an altitudinal gradient: the *Azaghar* (plain), the *Jbel* (mountain), and the *Dir* (middle part between the two), providing diverse habitats for a multitude of plant and animal species.

Some parts of the Sehb Laghnem ICCA are also included within the Ifrane National Park, a protected area created to sustainably manage and preserve the region's natural resources. As such, the Sehb Laghnem ICCA is closely linked to these conservation efforts, and it benefits from the protective measures implemented within the framework of the national park and Biosphere Reserve.

Threats

While the communities try to manage their territory according to their history, social and cultural identity, many traditional practices have been abandoned as they struggled to adapt to the impacts of climate change, desertification, and recently, the COVID-19 pandemic.

The abandonment of traditional practices has led to land conversion, pollution, and the overuse of water resources. Moreover, unsustainable practices in livestock farming, the main activity in the area, has resulted in the overexploitation of pastoral resources, especially during periods of winter food scarcity. Such disturbances have resulted in ecosystem degradation, elimination of perennial forage species, proliferation of annual and toxic species, low biomass productivity and a marked decline or loss of habitats and species.

Project activities and impacts

This ICCA GSI project was implemented from 2021-2023 to counteract the disruptions in the Sehb Laghnem ICCA by reviving ancestral practices in natural resource management for biodiversity conservation and sustainable livelihoods.

Employing a holistic and interactive approach, communities were actively engaged in setting the management vision and strategies of the Sehb Laghnem ICCA. Accordingly, management plans were developed based on ancestral rehabilitation practices, and integrating them with new knowledge from scientific research and field pilot experiences.


Sergei25

Reviving pastoral rotation – the agdal

Pastoral rotation, or *agdal*, is a traditional practice involving temporary closures of grazing lands to allow vegetation cover to regenerate, promoting the preservation of natural resources and ecological recovery. This form of inherited community ingenuity has been enriched and improved through generations. The practice was revived in the *agdal* of Ifri o Griss, which is used by approximately 500 households from four different areas of the ICCA to graze about 55,000 sheep and goats. The *agdal* is commonly closed each year in March and reopened in early June after the vegetation has completed its biological cycle and produced seeds for the next season. The opening and closing dates vary each year and are decided upon by the representatives of the rights holders including community leaders (*chioukh*) and community representatives (*nouabs)* and communicated by a local crier (*berrah*) in the local market (*souk*). Additionally, a reinforced concrete watering trough, measuring 14 by 2.8 metres, was installed to provide a reliable water source for livestock in designated grazing areas. This helps facilitate pasture rotation by encouraging animals to remain within specific zones, thereby, reducing inappropriate livestock movements.

Capacity development in species conservation

The communities were trained in developing an inventory of species found in the ICCA. This has raised their awareness regarding the status of species according to the IUCN Red List. Some examples of plant species include the Atlas cedar (endangered), Mirbeck's oak, Romulea bulbocodium (least concern), and evergreen oak (least concern).

Thereafter, the communities' capacities were strengthened in the sustainable use of non-timber and agro-pastoral resources. In particular, five community cooperatives including the Issoufar Zaouiat Ifrane women's cooperative and youth were trained in seed germination processes. As a result, approximately 500 seeds of six species of high-value local pastoral plant seeds were collected and sown on 60 hectares of land, after being manually sorted and prepared.

As a result of reviving the *agdal* and introducing sustainable agro-pastoral and agroforestry practices, "pastoral rotation and seeding of high-potential grass species have restored these pastures," said Hachimi Moulay Driss, 65, treasurer and co-project manager of the Sylvopastoral Management Association. "The project has expanded, from 20 hectares seeded in 2021-2022 to more than 100 hectares this year (2023-2024)," he said. In addition to restoring degraded pastures, the recorded number of herbaceous species present has increased by 34 percent, and of perennial herbs by 32 percent. Moreover, the production yields of edible pastoral species also increased by 60 percent, providing food security and increasing the number of people employed by 74 percent from 800 to 1,500 people.

Invigorating community stewardship and governance

Community governance in the ICCA has improved by updating former customary governance systems such as the *Jemaâ*, an informal governance body composed of influential community representatives. This has now been replaced by the Sylvopastoral Management

Association (*Association de Gestion Sylvopastorale* in French), consisting of elected community members and employing a formal structure, serves as the governing body.

This new governance institution has been widely accepted and appreciated by the community due to its efficiency. The project has enhanced the recognition of this governance institution among other territorial actors, both institutional and non-institutional, by facilitating communication and partnership opportunities. According to Driss, "the project has successfully overcome initial reservations within the community, resulting in strong participation evidenced by participation in the three editions of the *agdal* festival organized by our Sylvopastoral Management Association." He added that "the increase in fodder production in pastures and reduction of livestock costs encouraged another community [Ait Hcine Ô Hand in the municipality of Timahdite] to organize *agdal* in its pastoral parks this year, with the first edition of its own *agdal* festival."

Improved social cohesion in adopting the sustainable natural resource practices has also led to the improvement of land and water quality, erosion control, and carbon sequestration through increased vegetation cover. Lastly, the active participation of 135 youth living in the ICCA has fortified intergenerational knowledge transmission and preservation of cultural heritage.

Senegal: Documenting effective heath solutions of traditional medicine

Theme: Transmission of traditional medical knowledge

The ICCA Lowé is adjacent to the community reserve of Diallocounda village, a 385-hectare green corridor located in the Sédhiou region of Southern Senegal, which stretches up to The Gambia. The ICCA Lowe covers 6 hectares of forests characterized by deciduous trees including kapok trees (a majestic tree that commands attention with its straight trunk and expansive canopy), and dimb trees, which have disappeared in many parts of Senegal.

SGP Senegal

The ICCA Lowé is referred to as "a place where secrets are kept" by the 160 Peulh pastoral Indigenous People who live there across three villages. The Peulh people's harmonious relationship with their sacred forest is depicted in their cultural activities such as use of medicinal plants by traditional healers, praying for rain, and cutting of leaves to assist a woman in childbirth. They also peacefully co-exist with many animal species such as monkeys, warthogs, francolins, guinea fowl, and reptiles.

Threats

During the COVID-19 pandemic, the main threat that the Peulh people encountered was the lack of access to hospitals due to the remote location of their ICCA. As such, they had to resort to using traditional medicine based on the ICCA's natural resources. However, due to the lockdowns and social distancing protocols to prevent the virus spread, people were confined to their homes and traditional healers were not able to share information in the proper use of traditional medicine. Furthermore, the existing information on traditional medicine could not indicate treatment for the unprecedented COVID-19 virus.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Project activities and impacts

This ICCA-GSI project was implemented in partnership with Gie Jokko NGO in 2020 to help the Peulh people cope with and recover from the COVID-19 pandemic by identifying products based on traditional medicine knowledge, testing new ideas on the use of medicinal plants, and widely disseminating information about traditional medicine.

Developing the Directory of Medicinal Plants

In consultation with a federation of 50 traditional healers, the plants used by the population were identified. A Directory of Medicinal Plants was then drafted to present precise information on the diseases treated by each medicinal plant, method of use and the required dosage for each ailment. This information was quickly shared with the 160 inhabitants and further disseminated through 20 community radio broadcasts, so people could address COVID-19 symptoms.

The Directory of Medicinal Plants was further developed through a series of interviews with an array of stakeholders including Imam Mamadou Seydou Diallo (president of the ICCA Lowé), members of the Indigenous Peoples and local communities living in villages surrounding the Lowé ICCA forest (Boudouck Dialacounda, Kanicounda Medina France, and Sare Yaaya villages), women's groups, healers, religious leaders, customary authorities, and representatives of Senegal's Water and Forestry services. Among the traditional healers heavily engaged is Thaiba Sow from the Sare Yaaya village. Sow, 85, said: "Since my birth, I have benefited from the ICCA for my medical treatment, and I use 80 percent of the ICCA resources to treat the population."

The publication was finalized in March 2022 in French as *Répertoire des plantes medicinales* and provides an ethnobotanical analysis of a full range of plants identified for various diseases and ailments, including those associated with the COVID-19 pandemic. It is primarily intended for the populations of the Lowé area and its surrounding villages, and for practitioners and experts in traditional medicine. The English version was made available to share traditional medicine knowledge to a wider audience including health professionals, NGOs, community-based organizations, academia, and other local and national authorities active in the promotion of traditional medicine.

Furthermore, since traditional knowledge is orally passed down from one generation to another, this documentation serves as a protection of ancestral

knowledge that otherwise could be lost and in turn, can be easily referred to and enjoyed by future generations. It also promotes self-sufficiency in the local production of traditional medicine. "ICCA Lowé helps cure diseases through traditional medicine," said Bara Touré, a youth leader who is a member of the Dialacounda health management committee and a broadcaster at a local community radio station. This discipline uses local resources "to treat headaches, foot pain, dizziness, discomfort, and other ailments," he said. "Our ancestors passed down this knowledge to protect our health. As a young person, I am committed to protecting Lowé to prevent the disappearance of certain trees and to fight against bushfires."

Viet Nam: Piloting indigenous plants as firebreaks for forest fires control in Phuc Loc village

Theme: Deployment of native species for fire management

In Viet Nam's central province of Thua Thien Hue, the Xuan Loc commune in Phu Loc district is a mountainous area. Its total area is nearly 4,000 hectares, 83 percent of which are forests including special-use forests managed by Bach Ma National Park and production forests. Thus, the local population are heavily dependent on forest services for their livelihoods, as well as on forest resources such as food, fibre, and firewood.

The Phuc Loc village is nestled within the Xuan Loc commune, covering 700 hectares of land. It is home to over 700 people spread across 167 households, who are predominantly from the ethnic groups of Van Kieu, Ta Oi, and Co Tu. Families collect specific types of forest foods, materials, and water resources for their own consumption. For income generation, they rely heavily on acacia plantation, and to lesser degrees on small-scale agriculture (e.g. rice cultivation and livestock), and sales from non-timber forest products (e.g. medicinal plants and rattan).

Threats

Poverty is a significant challenge in the village. In recent years, Phuc Loc villagers have increasingly focused on intensive afforestation for economic purposes. Acacia plantations, for example, have been a significant source of income for many communities. These fast-growing trees have been reported to provide a hundred times more profit than any other agricultural tree varieties. However, this economic benefit comes at the cost of environmental degradation, which in turn leads to reduction of ecosystem services and impedes poverty reduction efforts.

The lack of knowledge about sustainable forest management is another key challenge. Villagers often prioritize short-term gains such as monoculture planting of acacia species, which are less resilient to diseases, and harvesting large areas at once, which lead to soil erosion and landslides. Native tree species are threatened due to the lack of knowledge about collecting, preserving, and using native seeds for afforestation. Furthermore, these plantations lack fire-resistant green belts or firebreaks, making them highly vulnerable to fires that spread quickly. Lastly, unclear forest boundaries have led to disputes and encroachments.

Project activities and impacts

This ICCA GSI project was implemented in partnership with Forestry Club of Thua Thien Hue province to improve long-term environmental and socio-economic sustainability in Phuc Loc village by developing


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the communities' capacities in sustainable forest management. The strategies were also aligned with Viet Nam's national sustainable forest management programmes, allowing consistency with international commitments and obligations.

Raising awareness in forest management certification

Workshops were held for 250 community members to raise their awareness and knowledge of sustainable forest management models, and the interrelated functions of forest protection and biodiversity conservation in relation to economic and social benefits. Moreover, they learned about the requirements and standards for the international Forest Stewardship Council (FSC) certification. FSC certification is promoted as part of the Viet Nam government's efforts to improve forest management and reduce poverty towards the implementation of the Sustainable Development Goals (SDGs). FSC forest management certification confirms that the forest is being managed in a way that preserves biological diversity and benefits the lives of local people and workers, while ensuring it sustains economic viability.

Ho Thi Dien, a 39-year-old member of Van Kieu ethnic group living in Phuc Loc village, acknowledged that prior to the project, "people lacked knowledge about nursery operations, tree care, planting techniques, and proper seed selection for optimal plant growth. However, thanks to the project's initiatives, I and others in the community have gained valuable knowledge and awareness in these crucial areas."

Establishing green belts for resilient forests

Capacity development training sessions were initiated to develop sustainable forest management and implementation plans for establishing firebreaks, which are critical land-use tools to bolster wildfire resistance. Here, the communities were trained in creating a community-managed nursery of 500m^2 for native seedlings (e.g. Scaphium macropodum, Tarrietia javanica, Erythrophleum fordi) as well as on the technical skills for harvesting, sowing, and caring for native plants. As such, they were able to nurture 22,000 seedlings, from which 8,000 high-value timber trees were planted along standing acacia forests to create firebreaks.

Today, the Phuc Loc village boasts 110 hectares of FSC-certified forest. It is planned that an additional 60 hectares would receive certification in 2024, bringing the total to 170 hectares. This high-value timber production has improved the forest's resilience to fire and strengthened the ecosystem services by preserving native genetic species.

This project also serves as a valuable learning resource for households in Xuan Loc commune who are also implementing FSC-compliant forest management practices. "The project's success and lessons learned can be applied in other areas, such as buffer zones in the Sao La nature reserve, Phong Dien nature reserve, Bach Ma National Park, and beyond," said Nguyen Dai Anh Tuan, 60, deputy director of the Department of Agriculture and Rural Development of Thua Thien Hue province. "By mobilizing and encouraging community participation in similar integrated activities, we can achieve significant results in local forestry development, particularly by raising awareness of the importance of forest resources and biodiversity conservation."

SGP SViet Nam

Conclusion

The successful implementation of the ICCA-GSI COVID-19 response initiative for Indigenous Peoples and local communities embodying traditional lifestyles was due to the open communication with them, and understanding their needs, perceptions, and emotions of fear and anxiety. Based on the iterative dialogues with them, 32 percent of the initiatives' activities focused on curtailing or lessening the impacts of the pandemic, while 68 percent of the initiatives' activities concentrated on supporting them to recover from the impacts of the pandemic and move forward in a positive and adaptive way.

The diverse examples from around the world featured in this publication highlights the ICCA-GSI's approach, and the importance of the inclusion and active participation of Indigenous Peoples and local communities to effectively address the socio-economic

and health impacts of the COVID-19 pandemic, as well as the ever-increasing threats from climate change and lack of recognition of traditional medicine, amongst others. Varied site-specific challenges were addressed by employing solutions guided by the self-determined priorities Indigenous Peoples and local communities and facilitating partnerships at the local and national levels for upscaling and the sustainability of local community-led project results.

These successes show that channelling funding directly to Indigenous Peoples and local communities embodying traditional lifestyles and implementing local-level projects that are led by them are key to enabling innovative and efficient solutions to multiple crises and achieving Targets 3, 21, 22 and 23 of the Kunming-Montreal Global Biodiversity Framework, while ensuring that the rights of those who care for the land are respected and recognized.

Annex

Table 1. Species Inventory in waters of Qeshm Island, IRAN

Name	Scientific Name	Status based on IUCN Red List
Scalloped Hammerhead	Sphyrna lewini	Critically Endangered
Great Hammerhead	Sphyrna mokarran	Critically Endangered
Whitecheek Shark	Carcharhinus dussumieri	Endangered
Smoothtooth Blacktip Shark	Carcharhinus leiodon	Endangered
Whale Shark	Rhincodon typus	Endangered
Zebra Shark	Stegostoma tigrinum	Endangered
Shortfin Mako	Isurus oxyrinchus	Endangered
Sharptooth Lemon Shark	Negaprion acutidens	Endangered
Milk Shark	Rhizoprionodon acutus	Vulnerable
Spinner Shark	Carcharhinus brevipinna	Vulnerable
Blacktip Reef Shark	Carcharhinus melanopterus	Vulnerable
Bull Shark	Carcharhinus leucas	Vulnerable
Graceful Shark	Carcharhinus amblyrhynchoides	Vulnerable
Blacktip Shark	Carcharhinus limbatus	Vulnerable
Smooth Hammerhead	Sphyrna zygaena	Vulnerable
Bigeye Thresher	Alopias superciliosus	Vulnerable
Snaggletooth Shark	Hemipristis elongata	Endangered
Hooktooth Shark	Chaenogaleus macrostoma	Vulnerable
Grey Sharpnose Shark	Rhizoprionodon oligolinx	Near Threatened
Spottail Shark	Carcharhinus sorrah	Near Threatened
Arabian Carpetshark	Chiloscyllium arabicum	Near Threatened
Arabian smooth hound shark	Mustelus mosis	Near Threatened
Bowmouth Guitarfish	Rhina ancylostoma	Critically Endangered
Spotted Guitarfish	Rhinobatos punctifer	Near Threatened
Scaly Whipray	Brevitrygon walga	Near Threatened
Longtail Butterfly Ray	Gymnura poecilura	Vulnerable
Arabian Banded Whipray	Maculabatis randalli	Least Concern
Broad Cowtail Ray	Pastinachus ater	Vulnerable
Leopard Whipray	Himantura leoparda	Endangered

Table 2. Medicinal Plants in Mount Kulal, Nyiro and Ndoto Ranges, KENYA

Name of Indigenous Peoples	Rendille and Samburu		
Plant	**Plant Section/Part**	**Preparation**	**Use for**
Labaai	Leaves	Fumigation, smoke/steam bath	Ectoparasites
Lamuriai	Roots, Leaves,	Chewing, hot/cold decoction	Malaria; Tuberculosis; Venereal diseases
	Leaves, Seeds	Hot decoction	Upper Respiratory Tract Infections; Gastrointestinal tract complications
Lkweite	Flowers	Grinding, hot decoction	Malaria; Fever; Eye infection
Lmisigiyoi	Roots, leaves	Hot decoction	Malaria; Fever; Tuberculosis
Lmorijoi	Leaves	Hot decoction	Ectoparasites (e.g., ticks, fleas, mite)
Lodwaporo	Leaves, Roots	Powdering, hot decoction	Ticks bites and prevention of ticks; Giardiasis (intestinal infection)
Lperantai	Stem bark	Powdering, Cold decoction	Ectoparasites
Sorai, ebei	Leaves	Hot decoction	Eye infection
Sukuroi	Stem	Burning and squeezing to drip hot exudate	Ectoparasites
Bull Shark	Carcharhinus leucas	Vulnerable	Vulnerable
Graceful Shark	Carcharhinus amblyrhynchoides	Vulnerable	Vulnerable

Table 3. Medicinal Plants in Mau Forest, KENYA

Name of Indigenous Peoples	Ogiek		
Plant	**Plant Section/Part**	**Preparation**	**Use for**
Chelumbut			Respiratory problems; blood cleansing; skin diseases
Chepindorwet/singorwet			Common colds; allergies; COVID-19
Kopukeriet	Leaves	Soaking in water to drink; or chewing directly	The leaves from this plant are chewed or soaked in water and drunk to heal common colds; tonsils infections
Nerubat/ketega			Joints problems
Olkonyilit/choposisiot	Roots	Boiling	The roots of this herbal plants are boiled to induce appetite
Ororowet	Roots	Boiling	Roots are boiled and taken to address blood cleansing; skin diseases infections
Pisingnta	Flowers	Rubbing and sniffing	The flowers from this herb are rub and sniffed to relieve headache; nose blockages
sisitwet/Ngoloshoit		Drinking as a beverage	Stomach cleansing for young children
Suseita	Roots	Boiling	Stomachache; dressing on fresh wounds
Tinetwet			Deworming; allergy; given to vegetarians or those allergic to meat; kidney cleanse; liver problems

Table 4. Medicinal Plants in Mukogondo forest, and Kirisia and Mathew Range forests, KENYA

Name of Indigenous Peoples	Maasai
Plant	Use
Acokanthera schimperi Benth. and Hook.	Ectoparasites (ticks, fleas, mite)
Adenium obesum (Forssk.)	Ectoparasites
Aloe secundiflora Engl.	Ectoparasites
Balanites rotundifolia (Tiegh.)	Gastrointestinal tract complications (Emetic), Eye infection
Carissa edulis (Forssk.) Vahl	Theileriosis; Helminthiasis; Rheumatism; Malaria; Tuberculosis; Venereal diseases; Salmonellosis
Gutenbergia cordifolia Benth.	Ticks; Giardiasis
Pentarrhinum inspidum E. Mey.	Anaplasmosis
Psiadia punctulata (DC.) Oliv. and Hiern	Ectoparasites
Nerium oleander L	Upper Respiratory Tract Infections; Gastrointestinal tract complications
Rhus natalensis Bernh. ex-Kraus	Malaria; Fever; Tuberculosis

Table 5. Medicinal Plants in Chawia Forest, KENYA

Name of Indigenous Peoples	Taita and Taveta
Plant	Use
Genjeka	Stomach ulcers
Iria	Hiccups
Iti	The back of this plant treats throat wounds.
Kiroghe cha ngombe	Asthma
Mbangwano	Insomnia in children
Mghondu	Menstrual complications
Moghololo	Leaves to detoxify the body
Mpera	Ulcers; Typhoid
Mghondu	Menstrual complications
Njanjambiri	Active against poison from roots, tubers and berries injected into the stomach
Wawulu	Infected wounds

Endnotes

[1] The World Health Organization (WHO) declared the outbreak a public health emergency of international concern (PHEIC) on 30 January 2020, and assessed the outbreak had become a pandemic on 11 March 2020.

[2] A zoonosis is a disease that can spread between animals and humans.

[3] "One Health" is defined by the WHO as "an integrated, unifying approach to balance and optimize the health of people, animals and the environment." It is characterized by the collaborative mobilization of multiple sectors, disciplines and communities at varying levels of society. (https://www.who.int/news-room/questions-and-answers/item/one-health).

[4] The terms "ICCAs" and "CCAs" are used interchangeably to align with each country's legal context. While a given country may have voted in favour of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007, for example, that country may not yet legally recognize Indigenous Peoples or use the term "Indigenous". As such, the lands and territories of the ethnic minorities or other population groups may be referred to as "CCAs".

[5] The Elasmo Project was established in 2010 by researcher Rima W. Jabado to better understand the populations of shark and ray species in the Arabian Sea and adjacent waters. It works with fisheries stakeholders and governments across eight countries (United Arab Emirates, Iran, India, Sri Lanka, Angola, Senegal, Mauritania, and Cape Verde) to inform policy at regional, national, and international levels. The project is named after the subclass of cartilaginous fish Elasmobranchii, which includes sharks and rays. Jabado became chair of the IUCN SSC Shark Specialist Group in 2021.

The Small Grants Programme (SGP) is a corporate programme of the Global Environment Facility (GEF) implemented by the United Nations Development Programme (UNDP). Established in 1992, SGP is currently active in 127 countries and promotes community-based innovation, capacity development, and empowerment through sustainable development projects of local civil society organizations with special consideration for Indigenous Peoples, women, and youth. SGP has supported over 28,000 community-based projects on biodiversity conservation and sustainable use, climate change mitigation and adaptation, sustainable land management, conservation of international waters, and chemicals and waste management, while generating sustainable livelihoods.

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The International Climate Initiative (IKI) is an important part of the German government's international climate finance commitment. Since 2022, the IKI is implemented by the Federal Ministry for Economic Affairs and Climate Action in close cooperation with the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) and the Federal Foreign Office. Through the IKI, the ministries jointly support approaches in developing and emerging countries to implement and ambitiously develop the Nationally Determined Contributions (NDCs) anchored in the Paris Agreement. This includes measures to adapt to the impacts of climate change and to conserve and rebuild natural carbon sinks, taking into account environmental, economic and social concerns. With regards to biodiversity, the IKI also supports its partner countries in achieving the goals of the Convention on Biological Diversity. To date, IKI has approved more than 800 climate and biodiversity projects in over 150 countries worldwide with a total funding volume of 5 billion euros (2008-2021).

The GEF is a family of funds dedicated to confronting biodiversity loss, climate change, pollution, and strains on land and ocean health. Its grants, blended financing, and policy support helps developing countries address their biggest environmental priorities and adhere to international environmental conventions. Over the past three decades, the GEF has provided more than $22 billion and mobilized $120 billion in co-financing for more than 5,000 national and regional projects.
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