

COOPERATION FOR THE TRANSITION TO A GREEN ECONOMY

GLOBAL THEMATIC RESEARCH REPORT

ICA-EU Partnership



#coops4dev 



International
Co-operative
Alliance



Co-funded
by the
European Union

COOPERATION FOR THE TRANSITION TO A GREEN ECONOMY

GLOBAL THEMATIC RESEARCH REPORT

ICA-EU Partnership



International
Co-operative
Alliance



Co-funded
by the
European Union



International Co-operative Alliance – Africa
A Region of the International Co-operative Alliance



International Co-operative Alliance
Asia and Pacific



Co-operatives of the Americas
A Region of the International Co-operative Alliance



International Co-operative Alliance



Co-funded by the European Union

Editorial Team

Jeffrey Moxom (International Cooperative Alliance)

John Emerson (Cooperatives Europe)

Simren Singh (ICA Asia and Pacific),

Melvin Khabenje (ICA-Africa)

Carlos Enrique González Blanco (Cooperatives of the Americas)

Graphic Design — Nacho Sanz

2021

INTERNATIONAL COOPERATIVE ALLIANCE

Avenue Milcamps 105
1030 Brussels, Belgium

www.ica.coop

www.coops4dev.coop

Reproduction is permitted, provided that appropriate reference is made to the source

This report has been produced with the financial assistance of the European Union. The contents of this report are the sole responsibility of the International Cooperative Alliance and can in no way be taken to reflect the views of the European Union

Table of Contents

- Foreword7
- Introduction 8**
 - ICA-EU Partnership 9
 - Objectives of the research 9
 - Methodology10
 - Why cooperatives and the environment?11
 - A planetary emergency.....11
 - A cooperative contribution to environmental and sustainability objectives11
 - Cooperative typologies active on environmental objectives13
 - Cooperatives in the literature 14
 - Cooperatives in the policy space 14
- Case studies 16**
- Energy..... 17**
 - Australia: Hepburn Community Wind Park Cooperative17
 - Brazil: Certel 19
 - Costa Rica: Cooperativa de Electrificación Rural de San Carlos – Coopelesca R.L.21
- Forestry..... 24**
 - Finland: Metsäliitto Cooperative 24
- Housing..... 26**
 - Tanzania: Buchosa Housing Cooperative 26
- Sustainable transport 28**
 - France: Toutenvélo 28
- Finance 30**
 - Kenya: Africa Nazarene University Cooperative Savings and Credit Society (ANUSACCO)..... 30
 - Thailand: Association of Asian Confederation of Credit Unions (ACCU) 32
- Conclusion..... 36**

FOREWORD

"As the cooperative movement is based on meeting needs and has among its key principles that 'cooperatives work for the sustainable development of their communities', it is bound to focus increasingly on the existential environmental challenges the world is facing today. This study will substantially help promote this ongoing evolution."

BRUNO ROELANTS | Director General, International Cooperative Alliance

"Environmental sustainability is in the DNA of cooperatives, without which cooperatives would be extinct. Cooperatives in Africa understand this and are adapting to the new facets posed by current environmental challenges."

DR. CHIYOGÉ B. SIFA | Regional Director, ICA-Africa

"For Cooperatives of the Americas, climate change is a main topic of concern, visible at the XXI Regional Conference, where the focus was 'Cooperatives, energy sources for sustainability: Concern for community and defense of the planet' and a topic we still continue to address at every possible event, including the next XXII Regional Conference. Released in the year of the 25th anniversary of the Statement on the Cooperative Identity – This study should make us think on how cooperatives should further promote the green economy through its actions as well as to contribute to the global agenda of environmental justice through the values and principles of the cooperative movement."

DANILO SALERNO | Regional Director, Cooperatives of the Americas

"The global impact of COVID-19 has enhanced the importance of climate action as both don't respect borders, affect everyone, can cause irreparable damage, and threaten existence. The Asia-Pacific has the largest number of vulnerable population and the most disaster-prone region in the world. Cooperatives in agriculture, fisheries, forestry have a large membership base in the region who feel the effects of climate change in a direct way. Be it health, economic or any type of shock, the people most affected are the poorest and the most vulnerable. This research will contribute to understanding of how cooperative are working on the Sustainable Development Goals and contributing to addressing the effects of climate change. It will add to the knowledge base and help other cooperatives in preparing themselves to meet environmental challenges."

MR. BALASUBRAMANIAN IYER | Regional Director, ICA Asia and Pacific

"The European Commission recently presented its plan on delivering the EU Green Deal. This publication demonstrates that cooperatives have included the values of environmental care and sustainable production in their work for a long time. We know we only have one planet, and the cooperative is an excellent eco-tool to preserve it."

AGNÈS MATHIS | Director, Cooperatives Europe

"Illustrating how the cooperative movement as a model of ecological equilibrium incorporates the values of cooperation, solidarity, self-management and democracy in planet-centred development approaches, this research contributes to developing holistic policies and institutions to achieve economic, social, and environmental objectives. I recommend it as a must-read for those searching for a realistic means of sustainable development in 2021 and beyond."

MR. ILCHEONG YI | Senior Research Coordinator, Alternative Economies for Transformation Programme, United Nations Research Institute for Social Development (UNRISD)

"The next couple of years will be crucial if we are to address the climate crisis. We need to see radical changes in the way energy is generated and used. Citizen support will be critical in achieving that transition. The publication clearly shows that cooperatives are the best and most democratic way of mobilising them."

DAAN CREUPELANDT | Coordinator, RESCOOP

01

INTRODUCTION



CREATED IN 1895, THE INTERNATIONAL COOPERATIVE ALLIANCE (ICA) IS THE GLOBAL REPRESENTATIVE ORGANISATION OF COOPERATIVE ENTERPRISES ACROSS ALL SECTORS, COUNTING 317 MEMBERS FROM 110 COUNTRIES (AUGUST 2021). THE ICA UNITES A SIGNIFICANT PART OF TODAY'S COOPERATIVE DEVELOPMENT ACTIVITIES THROUGH THE WORK OF ITS NATIONAL MEMBER FEDERATIONS ACTIVE IN DEVELOPMENT IMPLEMENTATION AND THROUGH THE COORDINATION WORK BY ITS REGIONAL OFFICES. THE ICA HAS GROWN INTO AN IMPORTANT GLOBAL ORGANISATION PROMOTING THE COOPERATIVE MODEL AROUND THE WORLD, SAFEGUARDING THE COOPERATIVE IDENTITY AND PROTECTING AND PROMOTING THE COOPERATIVE VALUES AND PRINCIPLES.

ICA-EU Partnership

This publication sits within the scope of the knowledge-building activities undertaken within the partnership for international development signed between the ICA and the European Commission in 2016, to strengthen the cooperative movement and its capacity to promote international development worldwide, with a number of activities based on advocacy, visibility, capacity building, and research. The development of knowledge on a number of thematic trends on cooperatives, including on the topic of environment, is a strategic priority of the ICA.

Objectives of the research

The research aims to provide an innovative overview on how cooperatives are acting to protect the environment, as well as mitigate and adapt to the impacts of climate change and environmental degradation. It elaborates on the links between cooperatives and Principle 7 of the ICA Statement on the Cooperative Identity, concern for community, including the access and management of natural habitats and resources through cooperative approaches (such as water, energy, or forests).

The publication draws upon existing literature and resources and covers 8 different case studies that showcase a range of innovative practices from cooperative enterprises in the field of environment and climate. Two case studies from each ICA region are presented, which have been developed by researchers in the ICA-EU Partnership team. The publication aims to show the potential that cooperatives can have in tackling climate change and environmental degradation, arguably the most challenging issues of our time.

ICA REGIONAL OFFICE	ICA AFRICA	ICA ASIA AND PACIFIC	COOPERATIVES OF THE AMERICAS	COOPERATIVES EUROPE
COUNTRIES COVERED	Kenya and Tanzania	Australia and Thailand	Brazil and Costa Rica	Finland and France

Methodology

This global overview is a collaboration, designed and conducted jointly by all ICA offices, including ICA Global, Cooperatives Europe, ICA-Africa, Cooperatives of the Americas, and ICA Asia and Pacific, with the research conducted at a decentralised level by each regional office.

The research is mainly focused on secondary research methods, as well as the selection and inclusion of innovative case studies involving cooperatives. Where necessary, the case studies were elaborated upon by other means, including semi-structured interviews with stakeholders.

Its scope is limited, and acts as a targeted intervention covering new and exploratory areas in the field of environment. The work can therefore lay the ground for future research and can potentially link to future cooperative development activities.

The work was conducted in two main stages; first through secondary research on the existing literature and secondly, through a selection and elaboration of innovative case studies showcased in this report. Each regional office proposed two case studies from amongst their network and/or membership, linked to relevant SDGs including SDG 4, SDG 6, SDG 7, SDG 11, SDG 13 and SDG 15.

SDG	GOAL
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
	Achieve universal and equitable access to safe and affordable drinking water for all
	Ensure access to affordable, reliable, sustainable and modern energy for all
	Make cities and human settlements inclusive, safe, resilient and sustainable
	Take urgent action to combat climate change and its impacts
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Why cooperatives and the environment?

Cooperatives are people-centred enterprises that are owned, controlled and run by their members, for their members, to realise their common economic, social and cultural needs and aspirations.

As businesses **driven by values**, not profit, cooperatives share internationally agreed principles and act together to build a better world through cooperation. Putting fairness, equality and social justice at the heart of the enterprise, cooperatives around the world are allowing people to work together to create **sustainable enterprises** that generate jobs and prosperity.

Cooperatives allow people to take control of their common future and, because they are not owned by shareholders, the economic and social benefits of their activity stay in the communities where they are established. Profits generated are either reinvested in the enterprise or returned to the members.

The cooperative movement is far from being a marginal phenomenon, at least **12% of humanity** is a cooperator of any of the 3 million cooperatives on earth. The vast scope of the cooperative movement means that it is particularly well placed to contribute to global challenges affecting our planet, the most urgent of which include climate change and environmental degradation.

A planetary emergency

In 2021, the United Nations has once again sounded the alarm on the state of the planet. Citing a 'red alert', UN Secretary-General António Guterres stressed that 2021 is a make or break year for climate action in the context of the COVID-19 recovery (UNEP, 2021).

Our exploitation of nature has reached unsustainable levels and humans are directly undermining the Earth's capacity to sustain and support life as we know it, now and in the future. Beyond the immediate risks, we are far from achieving the cuts required to global emissions to meet our commitments under the Paris Agreement and limit global warming to well below 2°C above pre-industrial levels. As we lock ourselves into trajectories of global heating, we are also far from meeting or even regressing in the various indicators and targets of the Sustainable Development Goals and Agenda 2030 (United Nations, 2020).

The consequences of climate change are unequal; environmental decline impacts most heavily upon the poor and disadvantaged, as well as on young people and those not yet born. Paradoxically, the richest in society and those who are most responsible for environmental decline are the ones who are the least affected or best prepared to mitigate its impacts.

A cooperative contribution to environmental and sustainability objectives

It is clear that we need a different way of doing business if we are to alter the current trajectory of fatal planetary warming. For cooperatives, an alternative answer to sustainability challenges is already embedded in the enterprise model, through the cooperative values and principles.

In particular, the seventh cooperative principle of 'Concern for Community', the most recent addition to the cooperative principles, was adopted at the Manchester Congress in September 1995. At that time, there was vociferous debate over the links between the cooperative movement and its potential for environmental protection (Hoyt, 1996). The principle reads:

"While focusing on member needs, cooperatives work for the sustainable development of their communities."

Not only do cooperatives arise from a more genuine need, when compared with the overproduction and consumption of manufactured needs, but profits stay within and are reinvested by the community. When a community comes together to meet their needs through the formation of a democratically accountable, member-owned organisation, the cooperative becomes deeply embedded within the local community, as well as a global movement.

Through their ownership structures and dedication to members, cooperatives have an enormous advantage in their resistance to short-termism, their preservation of assets and (indivisible) reserves, and hence consideration of future generations. The structural ownership features of cooperatives and their adherence to the principle of 'one member one vote' ensures that they remain committed to their missions and purpose, encouraging value creation over value extraction.

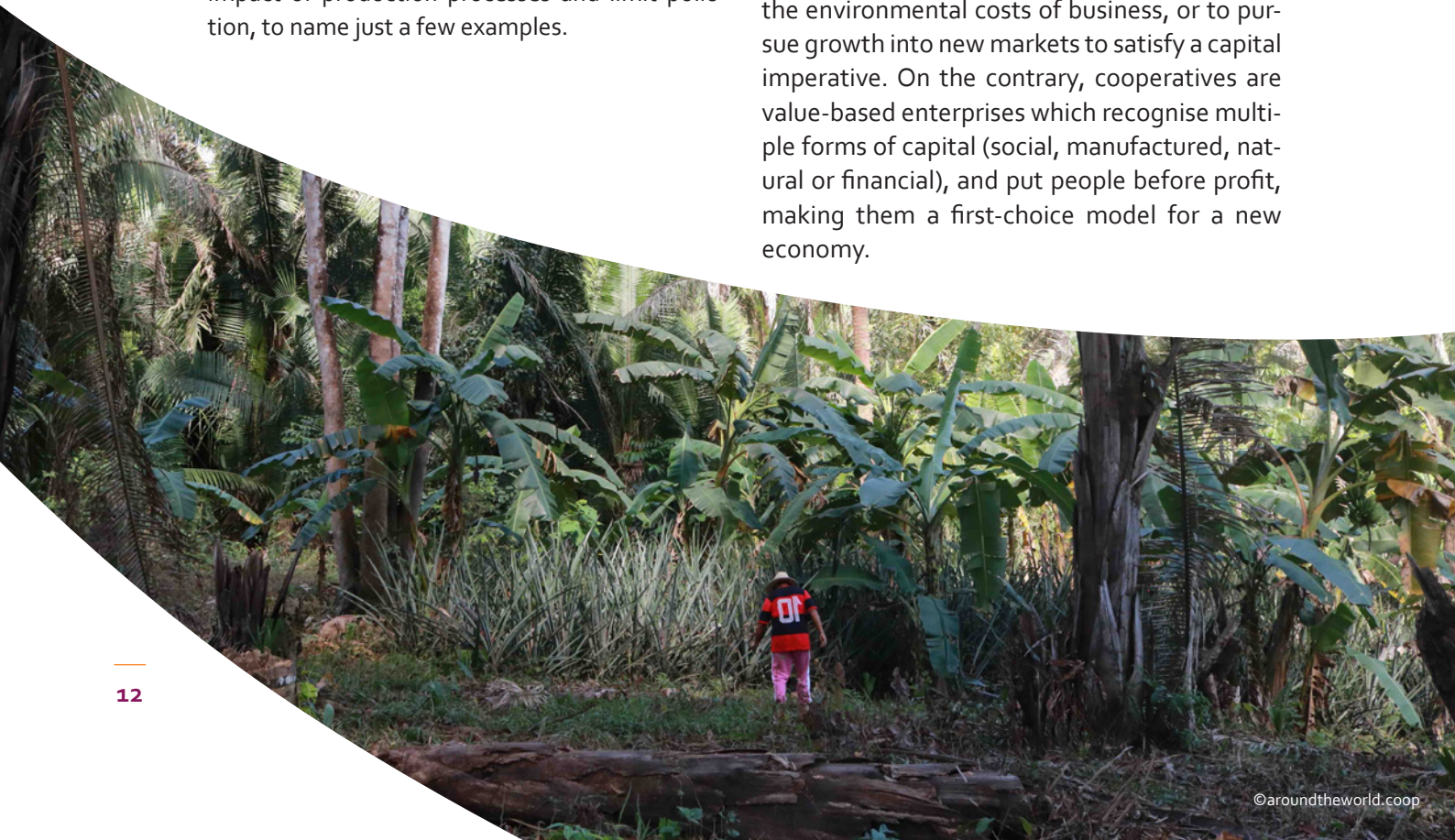
Another key strength of the cooperative model is its flexibility. Operating in any and all sectors, it can be employed to meet a diverse set of needs. For example, cooperatives can work to protect biodiversity through common management of natural resources, such as fisheries, water sources and ecosystems. Our forests, wildlife and land can be successfully protected and managed in a democratic way through the cooperative model. Service and industry cooperatives can reduce the impact of production processes and limit pollution, to name just a few examples.

Cooperatives also organise the provision of ecologically sound services, including renewable energy or efficient production of environmentally sustainable products, often harnessing new and appropriate technologies. Where market or state solutions may not be sufficient, collective investments in infrastructure through cooperatives can help to provide ecological services to disadvantaged or rural communities, putting their local experience and knowledge to use and becoming bedrocks of community support.

Cooperatives also deliver education on ecological matters, in line with Principle 5 on Education, Training and Information. They raise awareness of ecological problems and offer innovative and democratically managed solutions.


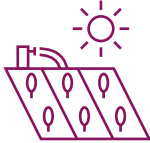




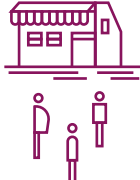


Beyond these immediate advantages, the cooperative approach can be an important tool for building and realising a new theory of value for nature. Our conventional metrics of value, such as gross domestic product (GDP) hide externalities and fail to capture the real costs of environmental degradation or declines in natural capital. Still today, in an economic system dominated by the market, our nature and the majority of benefits derived from it have no market value, despite its crucial role in supporting all current and future life on earth (UNEP, 2021 p.14).

In comparison to shareholder companies, cooperatives have little incentive to externalise the environmental costs of business, or to pursue growth into new markets to satisfy a capital imperative. On the contrary, cooperatives are value-based enterprises which recognise multiple forms of capital (social, manufactured, natural or financial), and put people before profit, making them a first-choice model for a new economy.



Cooperative typologies active on environmental objectives

The table below highlights a number of common cooperative types and demonstrates, with a non-exhaustive list, a few main ways that they can contribute to environmental and sustainability objectives.

FINANCIAL COOPERATIVES	<ul style="list-style-type: none"> · Provision of capital or low interest finances for SDG implementation · Divestment from fossil fuels and unsustainable business · Investment in green technologies and responsible finance · Payment for ecosystems services and green banking · Economic and financial localisation · Community currencies 	
AGRICULTURAL COOPERATIVES	<ul style="list-style-type: none"> · Sustainable food production and agroecology · Tackling hunger and malnutrition · Reducing food waste · Climate resilience and adaption · Supporting small scale farmers · Self-assessment of environmental practices 	
HOUSING COOPERATIVES	<ul style="list-style-type: none"> · Tackling energy poverty · Energy efficiency and procurement of clean energy sources · Climate adaption and mitigation · Solar panel installations · Use of sustainable building materials · Housing renovation 	
ENERGY COOPERATIVES	<ul style="list-style-type: none"> · Reducing pollution and emissions · Clean energy production · Increasing the renewable energy mix · Increasing energy efficiency and innovation · Providing access to affordable renewable and community owned energy · Providing critical services such as communications, lighting and water pumping · Democratisation of energy · Disaster response and reduction 	
INDUSTRY AND SERVICE COOPERATIVES	<ul style="list-style-type: none"> · Reducing pollution · Environmentally friendly production processes · Waste minimisation and prevention · Environmental research and innovation · Provision of water utilities 	
FORESTRY COOPERATIVES	<ul style="list-style-type: none"> · Preservation and sustainable management of natural resources · Biodiversity protection and conservation · Tree planting and rewilding · Carbon capture, storage and sequestration · Sustainable production methods 	
CONSUMER AND RETAIL COOPERATIVES	<ul style="list-style-type: none"> · Improving access to safe, nutritious and affordable food · Reducing food waste and changing dietary choices and consumer behaviour · Sustainable production and consumption · Sustainable marine fisheries · Transport and supply chain efficiency · Reducing plastic waste · Organic and healthy local produce, reduced pesticide use 	
RECYCLING COOPERATIVES	<ul style="list-style-type: none"> · Green jobs · Waste management · Improved recycling rates and reducing landfill · Public health and sanitation 	
TRANSPORT COOPERATIVES	<ul style="list-style-type: none"> · Green mobility and jobs · Climate friendly delivery services · Reducing pollution and emissions · Greening the supply chain · Public health 	

Cooperatives in the literature

Theory on cooperatives and their role in environmental protection and confronting climate change is an area that remains relatively underdeveloped at present, despite an expansive interest in the role of cooperatives and the Social and Solidarity Economy in sustainable development and Agenda 2030. This section highlights a few central currents of thought surrounding the subject.

Work on the collective management of natural resources and the potential of cooperatives in tackling it took a radical turn after the work of Elinor Ostrom (1990), who became instrumental in showing how commons can be managed collectively by their users. Ostrom successfully questioned and challenged the pervasive theory that commons or shared resources were destined to be exploited or overused, famously developed by Garrett Hardin (1968) as the 'tragedy of the commons'. Her work led to a rules-based framework in order to facilitate the self-governance of commons resources in a community setting and its adaption to challenges, as well as conducting field research on existing cases of success, including cooperatives (Ostrom, 2005; Wall, 2017; Hagedorn, 2013).

More recently, research has been conducted on how cooperatives can play a key role in biosphere reserves as part of a socio-ecological system. In such literature (Fredricson & MacTaggart, 2017), social and ecological systems are considered together, with no arbitrary separation between humans and nature. Further, the concept of resilience, which is becoming central to efforts of building back better (Billiet et al. 2021), retains its original root in the field of ecology (Holling 1973; Adger et al. 2005). Diversity, a key feature of resilient systems, also resonates strongly with the economic and social diversity of the cooperative model, as well as polycentric governance mechanisms that cooperatives can offer in solving environmental problems.

In addition to commons and biosphere reserves, a third area of political theory concerns economic growth. Cooperatives can be a suitable enterprise model for a post-growth or degrowth era (Novkovic & Webb Eds., 2014).

Here, emphasis is placed on transitioning away from economic systems that pursue growth to a holistic conception of the economy that prioritises ecological and social wellbeing (Kallis, 2015; Hickel, 2020). This alternative vision of the economy also resonates with the indigenous concept of *buen vivir*, in which cooperatives can also play an important role (Giovannini, 2012; Kothari et al. 2014; Guttmann, 2020).

Building upon these theoretical strands, the field of doughnut economics, best known for its visual display of an inner and an outer circle incorporating social elements and an ecological ceiling. Setting those limits in a local reality establishes economic activity that functions within planetary boundaries (Raworth, 2017; Rockström et al. 2009). Cooperatives can work particularly well for Raworth's donut theory and are linked to a number of its principles. For example, for the principle of distribution by design, cooperatives distribute their surplus to members.

Such bodies of work are only a fraction of the literature and are just the beginning in cementing the role of cooperatives as key actors in solving environmental problems. Additional work has also been conducted on environmental self-governance through cooperatives, their plural approach to types of capital (McCulloch & Ridley-Duff, 2019) the role of cooperatives in collective action on climate change (Schröder & Walk, 2013), and the numerous ways in which cooperatives contribute to the SDGs (ILO & ICA, 2015). More work will still be needed to examine how cooperatives can and do play a greater role in our transition to a green economy.

Cooperatives in the policy space

Recent years have witnessed the issue of climate change and environmental degradation move from the fringe of the political debate to grabbing the full attention of policymakers, due to increasing recognition of its potentially catastrophic affects. Cooperatives and their representative organisations, as part of the solution, are already actively contributing to policy at local, national, regional and international level, which this section briefly highlights.

At local level, as we have seen cooperatives can be an expression of citizens coming together to solve environmental problems, a tool of democratic citizen-led responses in fields such as disaster reduction and renewable energy. At national level, cooperatives are part of national policy of governments and opposition parties in a number of countries such as Bolivia, the United Kingdom, Bhutan, and Rwanda, to name a few, and in more than 100 countries, ILO Recommendation 193 has ensured the strength of the cooperative identity based upon its values and principles. More recently, countries that have introduced legislation dedicated to cooperatives have also included implicit environmental components for sustainable development, in countries such as Bhutan and Japan, as well as in the Americas region.

At regional level, in the European Union for example, the EU's flagship environmental policy, the European Green Deal, also contains several components with which cooperatives can act as an important solution to reach net zero emissions by 2050. Cooperative's role in agricultural production, agroecology and food supply chains makes them an important tool for the Farm to Fork strategy or the Common Agricultural Policy, to give just two examples. In the field of renewable energy, in 2019 the Clean Energy Package for All Europeans puts citizens in the driving seat through ownership of energy projects, including energy cooperatives. Further afield, in EU external action policies, the European Consensus on Development has acknowledged the role of the democratic and inclusive nature of cooperatives

in poverty eradication and food security. Finally, and most recently, the NDICI Global Europe regulation recognised the key role of cooperatives in reaching Europe's climate goals, highlighting their potential for green economic democracy. Other clear potential responses of cooperatives in their different areas of activity are shown in the table above.

At the international level, cooperatives are recognised as a crucial actor by the United Nations, such as recently within the UN Economic and Social Council Secretary General's Report for a socially just transition for sustainable development (UN, 2020). Organisations such as UNEP and OECD call for alternative new business models and a shift away from GDP, for which the cooperative is a model of choice. Cooperatives are also contributing to the G20, a forum for international cooperation. An ICA G20 working group will develop contributions, whilst the C20 working groups include the topics of Climate, Biodiversity and Ecological Transition. Prior to this, under the ICA-EU Partnership, a campaign was launched in 2017 called Co-ops for 2030. The campaign is intended to support cooperatives to learn more about the SDGs, commit to pledges to contribute to achieving the SDGs and report on their progress.

This brief overview demonstrates that at every level, cooperatives can and do make an important contribution to the ongoing policy responses to our environmental challenges. Examples from each ICA regional office are presented in the following sections.



©aroundtheworld.coop

02

CASE STUDIES





AUSTRALIA

Hepburn Community Wind Park Cooperative

HEPBURN COMMUNITY WIND PARK COOPERATIVE IS AUSTRALIA'S FIRST COMMUNITY-OWNED WIND FARM

Hepburn Community Wind Park Cooperative (Hepburn Wind) is Australia's first community-owned wind farm in the town of Leonards Hill, Hepburn Shire¹, Victoria. Hepburn Wind was established in 2007 by like-minded people from the community who, looking to address climate change, formed a community wind farm with more than US\$ 10 million (AU\$ 13.5 million) in investment. The 4.1 MW wind farm hosts two turbines called Gale and Gusto, which produce electricity for over 2,100 homes. Hepburn Wind falls under the category of 'user cooperative' and currently has 2,013 individual members.

The cooperative manages the wind farm, provides financial returns to its members, funds community projects and supports the development of new energy projects. Hepburn Wind was established as a model for local communities and has a strong focus on community engagement, regional economic benefits, local jobs, community empowerment and capacity building.

The origins of Hepburn Wind can be traced back to 2005, when a wind farm developer held a community consultation regarding the proposed Clarkes Hill wind farm. The development proposal received strong community opposition but led some community members to articulate a different vision for local renewables. Inspired by community-owned wind farms in Europe, this group decided to investigate the potential of the cooperative model. Hepburn Wind was established as a cooperative by the Hepburn Renewable Energy Association, now known as the Sustainable Hepburn Association – Renewing the Earth (SHARE). The Association was formed to garner local support for the wind park. It did this through a wide range of educational activities, including community forums, personal visits to site neighbours, information meetings, bus tours, festival displays, newsletters and fortnightly street stalls in Daylesford.

Two turbines were ordered in December 2009, and a full construction contract was signed in April 2010. The turbines were erected in March 2011 and began generating power in June 2011. The landowner at Leonards Hill has agreed to a 25-year lease for the wind farm, with options to extend.

Due to the success of generating wind power, Hepburn Wind has investigated other sustainable sources of energy. In 2017, Hepburn Wind installed a solar monitoring device to determine if Leonards Hill would be suitable for solar energy. According to Hepburn Wind, they are well placed to contribute to the target as the cooperative has both the technical capacity and physical infrastructure needed to build a mid-scale solar farm. The solar farm will generate enough energy to power approximately 1800 residential homes and deliver community benefits (such as new employment and skill development opportunities) through the Hepburn Wind Community Fund. Hepburn Wind is also a key partner in the Hepburn Z-NET Community Transition Pilot (Hepburn Z-NET) in Victoria, which aims to reach net-zero energy by 2025 and net-zero emissions by 2030. As a result of this partnership, Hepburn Shire would be the first zero-net emission shire in Australia.

This would be a significant achievement because currently, Hepburn Shire produces 262,041 tonnes of carbon per year. The new solar farm project by Hepburn Wind will allow the community to generate more renewable energy with a combination of both wind and solar energy. The locally generated renewable energy from Hepburn Wind is estimated to prevent an average of 12,200 tonnes of CO₂ emissions from being released into the atmosphere every year.

¹ Shire is a local government area or municipality

At present, the east coast of Australia receives power through the National Electricity Market (NEM) or the 'electricity grid', with fossil fuels as the main power source. The clean energy produced by Hepburn Wind currently feeds directly into the local grid. This locally generated renewable energy offsets the emission intensive sources supplying the wider electricity grid.

Every kWh of energy produced by Hepburn Wind reduces the need for an estimated 1.1 kWh that is generated elsewhere by coal-fired power stations. On average, it generates 11,000 MWh per year, which is equivalent to the demand of 2100 average households in Victoria. Hepburn Wind notes that the wind and solar power methods of producing clean energy is an important part of the mix to mitigate and offset CO2 emissions.

In the span of nine years until 2020, it has generated 93,365 MWh of electricity, offsetting 100,834 tonnes of carbon dioxide emissions.

The cooperative difference

Hepburn Wind cooperative is an accredited social enterprise built by and for the community and instills social justice and environmental values in its work (in line with Cooperative Principle 7: Concern for Community).

Just one example of the cooperative demonstrating its commitment to the community is an Impact Fund it manages which supports local sustainability efforts and community events. It frequently partners with other local groups and organisations to deliver critical projects, such as energy

efficiency upgrades to low-income housing. The wind farm is considered a community asset and accessible for the whole community, and this is achieved through the cooperative model. Hepburn Wind's members, who are mostly local, are engaged in democratic decision making and building collectivist approaches to environmental challenges. This approach fosters a shared sense of responsibility among members to act on climate change and support sustainability. This also enables the cooperative to draw on the expert knowledge, passion and interest of members to drive their environmental projects forward, creating more meaningful outcomes for the community.

Hepburn Wind has a lean operating model. The total paid staff hours come to the equivalent of just over one full time staff member. The volunteer board contributes their knowledge and expertise in bi-monthly meetings and sporadically for the specific projects or committees they oversee.

Since its establishment, the core focus of Hepburn Wind has been to generate renewable energy while supporting community needs through the cooperative's services, programs and projects. Hepburn Wind Cooperative presents a one-of-its kind best case practice on alternative energy models for a greener economy. Driven by and for the community, it demonstrates how emerging needs of community, specifically the need for affordable and clean energy, can be met by a collective will and action to make a change. The case of Hepburn Wind Cooperative is worth further research to assess the feasibility of scaling and replicating renewable energy cooperatives in Australia, as well as in low to middle-income countries with limited public, unaffordable, or unsustainable energy infrastructure.



The work of Hepburn Wind on producing energy needs of the community through wind and solar energy directly contributes to SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all).



By switching from coal-backed power supply to renewable energy to meet electricity needs of the community, Hepburn Wind's work contributes to SDG 13 (Take urgent action to combat climate change and its impact).



BRAZIL

Certel

IN BRAZIL, RENEWABLE ENERGY COOPERATIVES HAVE SUCCESSFULLY MET THE ENERGY NEEDS OF RURAL COMMUNITIES, WHILST DIVERSIFYING THEIR ACTIVITIES TO SUPPORT OTHER ENVIRONMENTAL AND CONSERVATION OBJECTIVES

Access to energy is key to ending poverty, while committing to clean energy sources is crucial for ensuring environmental sustainability. There is much progress to be made: more than a billion people in the world do not have access to electricity, and more than three billion still use fuels like wood, charcoal, coal and dung for cooking and heating. With the ongoing revolution in renewable energy, clean energy is becoming more affordable and more accessible, broadening the potential for SDG 7 to be achieved by 2030. Cooperatives are important contributors to SDG 7. Electric cooperatives bring energy to many rural areas where other companies may not be willing or able to invest in the infrastructure. They can contribute to the goal of 'energy for all' – the drive to bring clean, modern energy to the 1.3 billion people in developing countries without access to electricity (COPAC, 2018).

One renewable energy cooperative working for greater environmental sustainability is the Certel Cooperative.

Certel is the oldest energy cooperative in Brazil, founded on February 19, 1956. It is also the largest cooperative in the sector in terms of number of members, currently it has approximately 73,000 member families across 48 municipalities in the state of Rio Grande do Sul. At the time of its creation, Certel was founded to serve the District of Teutônia, then belonging to the municipality of Estrela, which lacked an adequate energy supply. The energy company that was operating at the time was not interested in bringing power to

the more remote interior regions, due to their sparse population. Over time, Certel grew and incorporated new regions, providing communities with an essential service for social and economic development.

With more than 73,000 member families and around 700 employees, Certel operates mainly for the generation and distribution of electrical energy, providing energy that is recognised for its quality and reliability. Throughout its 65 years, it has significantly invested in the modernisation of its infrastructure, guaranteeing its members a unique service. Certel has four small hydroelectric power plants and two photovoltaic plants located in Teutônia and São Pedro da Serra. In the near future, the cooperative is also planning to build a Hydroelectric Power Plant at Vale do Leite and a wind power plant between Teutonia and Westfalia.

The cooperative has focused on environmental issues since 1985. Certel is a reference point for numerous sustainability projects, such as projects for the neutralisation of greenhouse gas emissions, projects for the protection and recovery of areas with native species, other initiatives aimed at the correct collection and management of solid waste and environmental education programs, through talks with schools and communities in the cooperative's area of activity. At this time, environmental sustainability is also addressed with an emphasis on the processes related to its new ventures in hydroelectric energy, solar energy and wind energy.

The Certel Cooperative specifically aims to contribute to the following SDGs:



Certel provides technical, academic and specialised training for the employees, members and executive leaders of the cooperative.



Certel focuses on generating its electricity from renewable sources such as photovoltaic, wind and hydroelectric.



Installation of permanent preservation areas next to their electric projects such as the Private Reserve of Natural Heritage of 46 hectares owned by the cooperative.

CERTEL's links with the environment are varied, but the generation of clean and renewable energy, reforestation projects, maintenance and recovery of permanent preservation areas (PRNH), solid waste management, monitoring of fauna and water, and direct participation in committees, councils and forums stand out. In this way, the cooperative has gone beyond energy provision in its commitment to the environment.

For example, the Private Reserve of Natural Heritage (PRNH) was created on available areas near Certel's Hydroelectric Salto Forqueta project, with the acquisition of the land based on the exceptional characteristics associated with the wide biodiversity of fauna and flora. It is a voluntary initiative of Certel, rather than a legal obligation of the cooperative. The PRNH was officially instituted in 2020 and covers 46 hectares, and currently the cooperative is preparing a management plan for submission to the state agency that manages the protected areas. The management plan prioritises actions for environmental conservation, environmental education, and scientific research.

The PRNH is a category of conservation created by the will of the owner, that is, without any expropriation of land. By deciding to create an PRNH, the owner is committed to the conservation of nature. In addition to preserving scenic beauty and historical environments, it also focuses on protecting water resources,

managing natural resources, developing scientific research, maintaining ecological climate balances, among many other environmental services. Recreational, tourist, educational and research activities are permitted in the reserve, as long as they are authorised by the environmental agency responsible for their recognition.

The cooperative difference

Cooperation proved to be a solution to the problem of electrification and has met a concrete need for the inhabitants of Teutônia, who lacked an adequate electricity supply prior to the foundation of the cooperative. In the 1950s, the state was simply not interested in electrifying rural and smaller towns, and Certel was created to meet this pressing need. Today, the cooperative electrifies 48 municipalities, benefiting a population of more than 300.000 people, and Certel is a strong example of the potential cooperative model for rural and urban development. Throughout its 65 years, the cooperative remains committed to providing an excellent service to members and demonstrates very high levels of member satisfaction. Certel therefore demonstrates that such needs can be provided successfully through the cooperative enterprise form.

In addition, Certel has prioritised diversifying its electricity production while maintaining a focus on clean energy through implementing hydroelectric, photovoltaic and wind projects. This strategic reinvestment is important, as not only does it allow the cooperative to venture into other environmental and conservation activities, it also ensures a diversification of risk across its power plants. For example, in many other renewable energy projects, backup energy supplies in the case of failure of the renewable sources may be carbon based. By contrast, Certel's backup sources are renewable.

As a cooperative, Certel is committed to its members in order to bring quality and reliable energy to their homes and offices. Because the sources of electricity generation are renewable, they work continuously in order for subsequent generations to be able to continue to enjoy the natural environment.



COSTA RICA

Cooperativa de Electrificación Rural de San Carlos – Coopelesca R.L.

IN COSTA RICA, THE NEED FOR RENEWABLE ELECTRICITY GENERATION TO SUPPORT SOCIAL AND ECONOMIC DEVELOPMENT HAS BEEN SUCCESSFULLY ADDRESSED THROUGH COOPERATION, AS ENERGY COOPERATIVES PRODUCE AND DISTRIBUTE RENEWEABLE ENERGY IN A SUSTAINABLE WAY.

In Costa Rica, more than 98% of the electricity produced and consumed in the past year comes from renewable sources such as hydroelectric plants, geothermal plants, wind generators and solar panels, positioning the country in a harmonious relation with its nature. The country's National Decarbonization Plan aims to generate 100% of its electricity with renewable sources by 2050. One organisation involved in sustainable energy production and distribution is the Cooperativa de Electrificación Rural de San Carlos, or Coopelesca R.L.²

Coopelesca is in the Huetar Norte region of the country, near the border with Nicaragua. The area it serves covers the entire canton of San Carlos and several districts of the cantons of Los Chiles, San Ramón, Grecia and Alajuela (all of them in the province of Alajuela), as well as a district of the canton of Sarapiquí (in the province of Heredia), with 100% electricity coverage throughout its area of activity.

Before the operation of the cooperative, the region experienced a high rate of immigration, as well as other fundamental transformations, and increased the production of meat, milk, wood, sugar, coffee and rice. However, the lack of elec-

tricity supply proved to be a major obstacle to social and economic development, as such services were only available in the main cities of the region.

The cooperative was officially founded in January 1965, with the participation of 365 members and an initial capital of 45.750 Costa Rican colones (approximately 5.300 USD at the time). It began supplying electricity in May 1969, building 259 kilometers of distribution lines and connecting 1.065 users. It currently has more than 104.000 members and electrifies an area of 4.770km.²

The conservation of basins and the protection of aquifers is one of the main objectives that Coopelesca works towards. Beyond these environmental aims, it also involves children, young people and community organizations in the planting of trees in the protection of forested areas, as well as in caring for rivers, all intended as a contribution towards preventing global heating. This environmental commitment of the cooperative, as well as its other activities, have allowed it to become certified as Carbon Neutral for the seventh consecutive year, and was also the first cooperative in Latin America to be certified Carbon Neutral in 2013.

² Coopelesca is also featured in a recent film by aroundtheworld.coop, a documentary film project capturing innovative practices of cooperatives around the world. 13 films have been produced in the framework of the ICA-EU Partnership. Find out more at <https://aroundtheworld.coop/> and watch the film at https://coops4dev.coop/en/c4dev_resources/aroundtheworldcoop/costarica



Coopelesca provides technical, academic, and specialised training to employees, members, and executive leaders of the cooperative.



Coopelesca focuses on generating its electricity from renewable sources such as hydroelectric and photovoltaic.



Development of innovative projects in the distribution of electrical energy through LED public lighting and the installation of a supply point for electric vehicles.



The acquisition of 1,136 hectares of forest in the Juan Castro Blanco National Park for permanent conservation, an area from which drinking water is obtained for the San Carlos area.

The cooperative's environmental commitment is a priority for its managers and members. Currently, it produces 90% of its energy with its own renewable sources through 5 hydroelectric plants and a Solar Park. In addition, the cooperative also develops public lighting with LED technology to reduce electricity consumption.

In 2019, the first cooperative solar park was built by the Consorcio Nacional de Empresas de Electrificación de Costa Rica R.L (CONELECTRICAS R.L.) and Coopelesca R.L. This photovoltaic generation park is one of the largest in the country,

producing 5 MW with 19.000 solar panels. In the dry season, when water resources for hydroelectric production decrease, it guarantees the quality and continuity of the electricity service to residents in the area, preventing emissions of more than 6 400 tons of CO₂.

In terms of reforestation, Coopelesca R.L. has more than 370 ha of forest in natural regeneration in the vicinity of the rivers in La Vieja, Puerto Viejo, La Esperanza and Platanar. These forests remove more than 11 400 tons of CO₂ from the atmosphere, acting as a valuable carbon sink.



©Coopelesca R.L.

The cooperative difference

Coopelesca is a cooperative enterprise that puts the cooperative principles and values into practice, and by doing so has facilitated important economic and social development for the people of San Carlos, in an area located far from the capital, focused primarily on agriculture, meat and milk production. The provision of reliable electricity, without interruptions or blackouts, and a service which prioritises environmental sustainability, has generated an economic boost for the region and the well-being of its 104 000 members.

Coopelesca R.L. also utilises innovative financial solutions for cooperative members. Within the electricity bill of members, 800 colones (1,3 USD) is added in addition to the electricity consumption, which is then used as a social contribution, 75% towards information communications and 25% for the purchase of land in the Juan Castro Blanco National Park, with the aim of environmental conservation. These investments, which were agreed by majority in the General Assembly of members, are what sets the cooperative apart from other types of enterprise. In the case of Coopelesca R.L., users and owners of the cooperative decided that they should contribute towards the cost of additional environmental activities, demonstrating the potential of the cooperative Principle 7 on Concern for Community and putting it into action.

With the additional contributions, Coopelesca R.L. has achieved the purchase of 1.136 hectares within the limits of the Juan Castro Blanco National Water Park and its surrounding area, with a focus on the regeneration of its exuberant biodiversity. The objective is to ensure the sustainability of the National Park and conserve it for its natural vocation, which is the protection of species and the production of abundant water for the North Zone of the country. The resources obtained through this collection are reinvested in the protection and acquisition of lands from private ownership, with organisations such as Coopelesca making a key contribution towards their permanent conservation.

Overall, Coopelesca R.L. is therefore a strong example of a cooperative engaged not only in the generation of renewable energy which provides valuable services, but also of the successful collective management of natural resources for conservation purposes.





FINLAND

Metsäliitto Cooperative

IN FINLAND, LONG TERM STRATEGIES IN THE FORESTRY SECTOR SHOW HOW EVEN LARGE-SCALE COOPERATIVES CAN WORK TO SAFEGUARD BIODIVERSITY AND REDUCE ENVIRONMENTAL IMPACTS

Forestry cooperatives are active in the entire forest value chain and encourage sustainable practices and the redistribution of forest-related benefits at a local level. Members actively participate in the management of forests, with the surplus generated by economic activities redistributed on the basis of the members' use of cooperative products and services or their in-work contributions. In addition to reducing the amount of carbon dioxide in the atmosphere, forests are also important sources of biodiversity, as they have many habitats hosting thousands of different species. Deforestation remains a pressing global problem, with vast areas lost to agricultural land conversion every year. Between 2015 and 2020, the FAO (2020) estimates a rate of deforestation of 10 million hectares per year.

One forestry cooperative working for greater environmental sustainability is **Metsäliitto Cooperative**.

According to its by-laws: *"The purpose of Metsäliitto is to support its members' forest management and organise the marketing of the wood produced by its members in an economical and technologically efficient manner, seeking profit in accordance with the principles of sustainability."*

The organisation's history goes back to around 1934, before it became a cooperative in 1947. It first focused on its sawmill business before expanding into the chemical forest industry in the 1950s. This expansion continued as Finland's forest industry grew strongly from the 1960s onwards. By the 2000s, Metsäliitto was the owner of an international forestry group with operations and employees in different countries.

According to Jari Voutilainen, Metsä Group's Senior Vice President, Corporate Affairs, the basis of the group's operations remains rooted in cooperativism today. As of 2020, Metsäliitto had roughly 100,000 forest owner members who collectively own around 50% of all privately-owned forests in Finland. It has 9,200 employees and Metsä Group currently operates in 30 countries worldwide. Metsäliitto Cooperative is the parent company of the Metsä Group, employing a subsidiary ownership structure which allows for greater flexibility in organising its business operations, which include wood sourcing and forest services and wood products, with subsidiaries for tissue, paperboard and fibre.

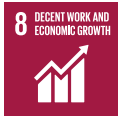
Metsä Group's main link to the environment is that its business model depends on forest growth, which promotes the use of forests as sinks for carbon dioxide while providing renewable raw material for various bioproducts (Metsä Group, 2019). Metsä considers its cooperation with smaller and industrial partners as key to creating efficient ecosystems as part of sustainable bioeconomy and circular economy. Resource efficiency and a broad network of partners enables the creation of bioproducts for a variety of end uses such as wood for construction, pulp for papers, paperboards for packaging, hygiene products and renewable energy. In 2019, Metsä Group renewed its long-term sustainability objectives, which it aims to achieve by 2030, in line with SDGs. For production, for example, 90% of fuels used to power the group's mills are currently based on side-streams from its own production. By 2030, the group aims to have eliminated the use of fossil fuels at its mills. Metsä Group specifically targets contributing to the following SDGs:



Metsä targets a 25% decrease in the use of process water by 2030.



The majority of Metsä's operations are run with renewable energy.



Metsä's wood products efficiently store carbon for their entire lifespan and its fibre-based products are recyclable.



Metsä aims to have fossil free mills and use only fossil free raw materials by 2030.



Metsä aims to ensure that by 2030 all its suppliers are sustainable in their operations.



Sustainable forest management practices ensure forests grow more than they are used and safeguard biodiversity.



Safeguarding biodiversity is one of Metsä's strategic sustainability objectives.

In terms of specific initiatives, Metsä Group aims to safeguard biodiversity by increasing the amount of decaying wood in forests. This sustainability objective is ensured through an initiative to create and preserve high biodiversity stumps. Since late 2016, all types of felling operations carried out by Metsä Group have included the creation of these stumps. High stumps start to decay after a few years, benefiting fungi, insects and forest-dwelling birds. Therefore, they are a forest owner's voluntary addition to efforts aimed at supporting the biodiversity of forest nature. From early 2020, the goal was set at four high stumps per hectare. In 2020, high stumps were created on approximately 85% of Metsä Group's felling sites and the aim is to leave groups of retention trees on all sites.

The cooperative difference

Metsä's cooperative structure is important to its long-term strategic planning and contributes to its sustainable practices. As interviewee Jari Vuutilainen stated: "the quarter of a cooperative is 25 years". By this, it is meant that instead of focusing on short-term profits, cooperatives work towards achieving the longer term economic, social and

cultural needs of their members. Metsä Group's forest-owning members plan ahead for the long term to ensure the viability of their forests for current and future generations.

Metsä's cooperative structure also creates a strong foundation of values for sustainable operations. For instance, it engages with the cooperative principle of Concern for the Community. The focus of Metsä's social engagement is on the well-being of children and young people. Every year, Metsä Group offers around a thousand summer jobs as well as hundreds of thesis work and trainee programmes to students.

Overall, it is clear that sustainability, a long-term vision and a holistic application of environmentally friendly practices in its strategies are key components to Metsä Group's success. Metsäliitto Cooperative's large membership, diversified ownership structure, and the scale of its operations demonstrate that cooperation for the management of renewable resources is possible on a grand scale. It also shows that with a long-term perspective, successful forest management and thriving business can go hand in hand, whilst respecting the cooperative values and principles and the interests of members, the wider community, and the sustainability of Finland's forests.



TANZANIA

Buchosa Housing Cooperative

IN TANZANIA, BUCHOSA HOUSING COOPERATIVE ILLUSTRATES HOW COOPERATIVES CAN PROVIDE AFFORDABLE HOUSING TO MEMBERS USING INNOVATIVE ENVIRONMENTAL MECHANISMS

In forested areas, the construction of houses can negatively affect the environment, as large-scale tree cutting leads to deforestation and environmental degradation and weakens the ability of the ecosystem to withstand climate change. In Buchosa District, Tanzania, the Buchosa Housing Cooperative tackles this challenge by supporting its members to acquire low-cost housing in a way that prevents deforestation, utilising burnt brick technology, made using rice husks and interlocking bricks.

Buchosa Housing Cooperative was formed in 2018 with a project called *Promoting Adequate Housing for Women and Young People (PAHWAYP)*, funded by WeEffect for 2018-2022. It was set up with the aim of supporting its members with the acquisition of land and modest, cost-effective houses. Members of the cooperative include men, women and young people who collectively aim to improve their livelihoods and promote a healthy environment. The total membership of 486 includes 312 women and 156 men. The cooperative uses a Community Managed Micro Finance Model, formerly initiated by Tanzania Home Economics Association (TAHEA), to facilitate access to credit.

Since its inception, Buchosa Housing Cooperative has placed a focus on the environment. Support

has been provided by TAHEA, an organisation who place a focus on environmental conservation and enhancement as a cross-cutting issue in all interventions. TAHEA operates within local, regional and international contexts and works towards Agenda 2030 for sustainable development.

The use of alternative technology to build houses using rice husks for fire treated bricks has helped to reduce the use of trees for building houses or baking of the bricks, which in turn prevents deforestation and environmental degradation. Fuel for treating the bricks comes from rice husks which would otherwise be left to litter the environment, as previously they were of no use to households. By using the husks for this purpose, it has helped protect the environment by cleaning and repurposing the waste husks.

In addition, kilns are designed and fired by agro-waste. Rice husks, which were previously considered as waste, are now used in the construction of field kiln and for firing bricks. The project has created added value on a product whilst indirectly assisting in managing the waste. The cooperative is therefore making contribution to the surrounding environment by improving energy efficiency and eliminating waste.



©Buchosa Housing Cooperative

The cooperative difference

Providing education and training to cooperative members on protecting the environment is an example of the cooperative impact of the Buchosa housing cooperative. These activities contribute to the modification of tree cutting practices, reducing deforestation whilst also improving the management of natural resources. The aim is to encourage a reduction in the cutting or felling of trees in the communities in which the project operates, as members and non-members adopt alternative environmentally friendly technologies and practices.

Crucially, the cooperative has also enabled members to acquire housing, which positively contributes to the SDG 11 agenda. Membership of the cooperative is granted through a share purchase, and each legal shareholder has the right to occupy one housing unit. The advantage is that by pooling the members' resources, their buying power is leveraged, thus lowering members' costs for all services and products associated with home ownership.

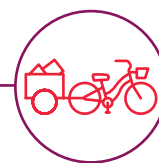
The cooperative operates on the values of self-help, self-responsibility, equity, and solidarity. The members also hold belief in the cooperative values of honesty, openness, social responsibility and caring for others, thereby aiming to integrate the cooperative principles and values in daily life of the cooperative. Since one of the values of the cooperative is to conserve the environment, through Principle 7 of Concern for

Community, the members have placed a focus on raising awareness on the importance of adopting suitable practices of environmental conservation. Secondly, by providing a platform for all members to acquire material values such as land and houses, regardless of gender, the cooperative promotes the principle of member economic participation. The commitment to support gender equality and women's empowerment also helps to address traditional challenges to women's ownership of the land, which remains a difficulty in a number of communities.

Cooperatives should be more involved in the ongoing promotion of climate change mitigation, by training their members and the community on the use of environmental strategies, such as alternative charcoal production using organic products (briquettes), reducing tree cutting or increasing tree planting. Climate change awareness in the wider communities is a continuous effort of the cooperative, as well as training for community members on eco-friendly building materials such as interlocking soil stabilised blocks, risk management and climate change adaptation. For housing cooperatives, there are many routes to sustainability, through the take-up of sustainable building materials, retrofitting for sustainable energy solutions, and a focus on quality and affordable housing for those in need. Across all these areas, housing cooperatives will continue to make an important contribution to a greener economy.

©Buchosa Housing Cooperative





FRANCE Toutenvélo

IN FRANCE, BICYCLE DELIVERY COOPERATIVES WITH A SCALABLE MODEL PROVE THAT ENVIRONMENTAL AND SOCIAL IMPACT CAN BE COMBINED TO DELIVER A MORE SUSTAINABLE LAST MILE

Sustainable transport is featured across several SDGs and targets, such as food security, health, energy, economic growth, infrastructure, cities and human settlements. In this context, the importance of transport to sustainable development and the Paris Agreement cannot be understated, especially given that almost a quarter of energy-related global greenhouse gas emissions come from transport (UNDESA, 2021).

Sustainable transport has also been linked to modal shifts from motorised transport to more active forms such as bicycles (European Commission, 2021). Cycle logistics services have the potential to serve demands for goods deliveries in a more efficient way than by motorised transport, and research shows that cargo bikes have the potential to replace vans in 32% of delivery trips and 50% of service trips (Cycling Industries Europe, 2021). Exchanging motorised last-mile delivery for bicycles means that short journeys are completed with far less harm to the environment, particularly for measures such as air quality, which have become increasingly important in urban centers (EEA, 2019, p.10).

In this wider context, bike delivery cooperatives can play a crucial role. Toutenvélo was established in 2009 in Rennes and was registered in France as a SCOP, or worker cooperative, in 2011. The motivation for setting up a bicycle worker cooperative was to ensure each member had a voice in working towards their collective interest, replacing car and van deliveries with environmentally friendly bikes in urban centres. Focusing on the *dernier km* (last mile), Toutenvélo provides services such as rapid deliveries and removals of items up to 300kg. Since 2012, Toutenvélo has even manufactured its own trailers which are specifically designed to facilitate deliveries by bike in an urban

environment. They are capable of carrying heavy loads and are made to a reduced width to allow for easier transport. This solution is not only beneficial to the environment and human health, but as the last mile is also the most expensive and time-consuming part of the delivery process, it is also more efficient and cost-effective, providing a strong economic benefit (Dolan, 2021).

Toutenvélo successfully expanded from one small cooperative focusing on a modest level of entrepreneurship to a growing national network of cooperatives, creating greater visibility for the Toutenvélo brand as an emerging actor in sustainability. As Olivier Girault, manager and member of Toutenvélo explains, this has led to a change in the scale of the partners that the cooperative interacts with, including public services, actors within the Social and Solidarity Economy and national cooperative unions. From Girault's perspective, it demonstrates a real link between Toutenvélo's work and wider public policy.

At the national level, Toutenvélo collaborated with the French Environment and Energy Management Agency, ADEME, as part of a project for the cooperative to release indicators on the impact of its actions. To do this, they measure the volume of CO₂ emissions saved from their activities, as well as the number of deliveries made by bicycle. A 2019 report forecast that the delivery of 1.3 million parcels via the Toutenvélo network could save 52 tonnes of CO₂ throughout 2019 and 2020 (Toutenvélo, 2019).

Despite these immediate impacts, Girault notes that the environment is rarely discussed explicitly when the cooperative interacts with the public, its customers and its partners. For these stakeholders, the more immediate concern is the social impact of the cooperative's work. An important

contribution it makes in this area is its provision of services to people who receive housing assistance from the French government (*fonds de solidarité logement*) (Girault, 2019). Half of the cooperative's removal services are provided in partnership with public welfare services to people living in social housing. The idea is to assist the mobility

of families in difficult circumstances by providing an affordable removal service. Therefore, both in Rennes and the wider network of cooperatives across France, Toutenvélo pursues positive social impact for people in the town or city served by the cooperative, positioning itself within the French Social and Solidarity Economy.



Toutenvélo's activities contribute to SDG 11 through reductions in CO₂ emissions and air pollution in urban areas, as well as reductions in noise and congestion.

The cooperative difference

Toutenvélo's expansion has been largely due to its continuous support for the development of independent cooperatives in different French cities. The cooperative uses a model it describes as 'Freechise.' The term means to combine the words "free" and "franchise", meaning there is no cost to enterprises who adopt the model, either for entry or as a percentage of turnover.

The *Freechise* model helps to ensure that the participating regional cooperatives are directed at the local level, taking into account the circumstances specific to each region. On the other hand, according to Toutenvélo, the use of the same image and logo both ensures coherence throughout the network across France, and can ensure the success of each regional cooperative, operating in a highly competitive sector with tight profit margins. The model encourages constructive dialogue between different cooperatives, which allows them to share ideas and best practices with each other. In this sense, the *Freechise* model employs a philosophy of cooperation reminiscent of the sixth ICA principle of cooperation among cooperatives.

The provision of trailers and trainings on cycling in urban environments and material handling is also important, especially since, according to Girault, many of those who set up a new Toutenvélo cooperative in their town are new to the world of logistics and can benefit from education and training materials. The day-to-day governance of Toutenvélo is also heavily influenced by its cooperative structure. As a worker cooperative with democratic decision-making, the employees of the coopera-

tive are directly involved in the functioning and decision-making of the enterprise, each having one vote. For Girault, it is important for each individual to be involved in the cooperative at a personal level, in order to reinforce the interest of workers in their enterprise. Furthermore, an important benefit of democratic governance of the cooperative is that there is a very low worker turnover.

Sustainable towns and cities are a crucial component of Agenda 2030, and much work remains to be done to mitigate the vast environmental impacts of urban lifestyles. Cooperatives of all types, as well as those organised specifically for sustainable urban transport, are leading the way in showing that sustainable, democratic and people centered alternatives exist. Toutenvélo's expansion from a small cooperative to a network of sustainable cooperative transport across France is emblematic of this trend and has increased the visibility of the cooperative model in sustainable logistics. During the Covid-19 pandemic and the increased reliance on delivery services, Toutenvélo is also an example of a cooperative's resilience, and demonstrates that not only large-scale multinational companies can adapt in times of crisis and disruption.

As well working towards a more sustainable last mile, Toutenvélo demonstrates a strong commitment to social objectives via their support for disadvantaged families. And despite the positive impacts on the ground, the potential for cooperative development and growth emerging from the *Freechise* approach, through the sharing of best practices and a commitment democratic governance and ownership, demonstrates scalability that holds promise in changing the face of the courier industry, whilst bringing environmental benefits to towns and cities across the country.



KENYA

Africa Nazarene University Cooperative Savings and Credit Society (ANUSACCO)

IN KENYA, ANUSACCO ILLUSTRATES HOW FINANCIAL COOPERATIVES CAN PLAY A PART IN FINANCING ENERGY SAVING PRODUCTS AND SUPPORT CLIMATE CHANGE OBJECTIVES

The design, investment and application of green energy technologies has been predominantly undertaken with projects by state or corporate actors, often on a large scale. However, cooperatives have become highly relevant in providing bottom-up and collective solutions to meet local needs and tackle environmental issues, such as the provision of clean and renewable energy to their members and to wider society, as well as climate friendly financial solutions.

ANUSACCO was registered in 1999 primarily to mobilise savings and deposits, and to extend credit to its members. It has 220 members including employees from Africa Nazarene University and its affiliate bodies, NGOs, other organisations and individuals admitted in accordance with its by-laws. It seeks to empower its members through education, savings mobilisation and affordable credit facilities.

With this background, ANUSACCO contributes both to SDG 7 and SDG 13 by providing finance mechanisms to its members for the purchase of clean and sustainable products such as energy saving stoves (Jiko Koa), solar panels, lamps, torches and mobile phone chargers. Affordable finance mechanisms include subsidising costs, payment in instalments and credit facilities to its members and the credit society's wider network. The SACCO has also advanced loans for members to buy and plant trees on their land.

One of the clean burning charcoal stove products is known as the 'BioLite JikoMalkia'. The BioLite JikoMalkia offers high fuel savings and durability due to advanced combustion technology. The typical consumer will save over \$20 per month

in fuel savings and benefit from a 75% reduction in smoke when compared with the average charcoal stove. Clean cooking stoves reduce the combustion rate by approximately 80%. Clean cooking stoves also reduce fuel consumption, indoor air pollution, and improve efficiencies that ultimately reduces the cost of living for the average Kenyan household, as well as reducing associated health risks. According to ANUSACCO, over 300 cooking stoves have been purchased by members.



© ANUSACCO

The cooperative difference

ANUSACCO operates in accordance with the cooperative values and principles, including Principle 5, providing education, training and information to its members regarding environmentally friendly products during its annual general meetings and through regular trainings.

Moreover, the SACCO provides its members with several benefits, such as through the implementation of fair finance mechanisms. For instance, members can make payments in instalments and with very low rates of interest. One of the beneficiaries stated: *"the prices are cheaper than the supermarkets due to the negotiated rates by the SACCO with suppliers, and the SACCO provides after sales service in case of any default or problems"*.

Another beneficiary explained: *"This energy saving stove is easy to light, uses a third of charcoal compared to a normal one and retains heat to cook for longer hours, hence it saves money. It has a heat regulator through the bottom door, no need of removing charcoal, children can use it without worrying of breakage and it has a long-life span. Buying through the SACCO made it easier as I paid in instalments"*.

Finally, the introduction of solar products and other complementary clean energy products has been helpful in providing solutions to meet local needs. For example, a member bought solar lights that are used in rural areas which are off grid, to be used during community functions and for household use.

According to ANUSACCO, 50 solar lamps have been purchased by members. ANUSACCO has also initiated a Corporate Social Responsibility (CSR) Sub-committee within its board, to explore how the SACCO can give back to the communities and further support and care for the environment.

Through the provision of affordable finance mechanisms for environmentally sustainable products and dedicated training to members, this financial cooperative demonstrates that even at a small scale, mainstreaming environmental activities in the cooperative financial sector, such as the involvement of cooperatives in energy saving programs, will support the transition towards a more sustainable and environmentally conscious society.

"Even at a small scale, mainstreaming environmental activities in the cooperative financial sector will support the transition."



THAILAND

Association of Asian Confederation of Credit Unions (ACCU)

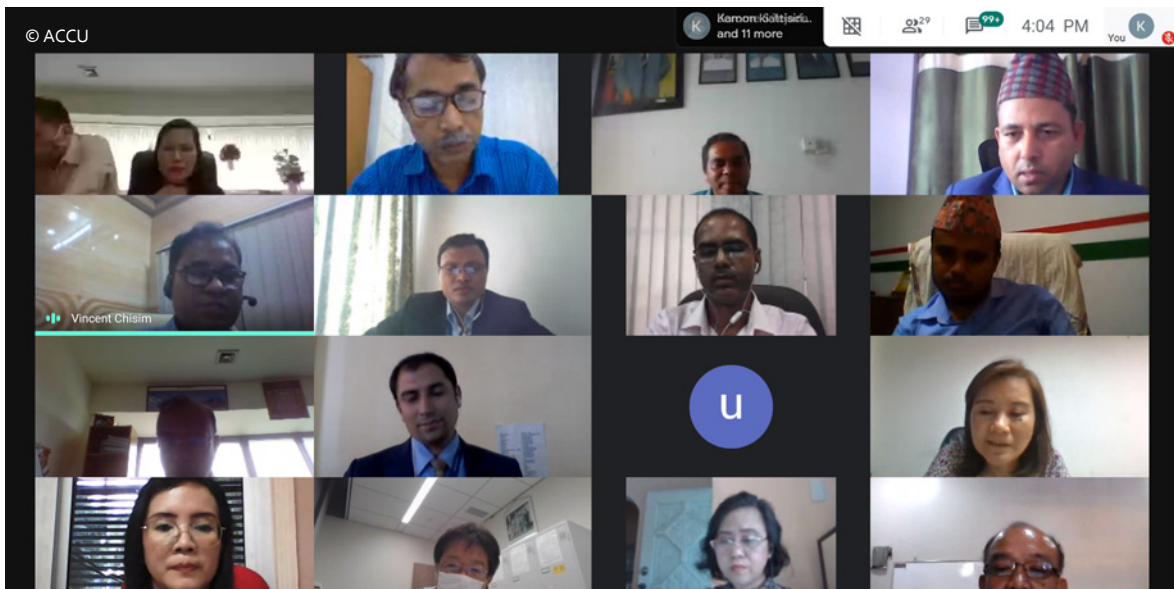
IN ASIA, ACCU INTRODUCES CLIMATE COMPLIANCE AND CLIMATE ACTION IN CREDIT UNIONS AND FINANCIAL COOPERATIVES

Founded on April 28, 1971, the Association of Asian Confederation of Credit Unions (ACCU) is a regional organisation for credit unions in Asia. Its service includes technical assistance and information and training aimed at promoting and strengthening credit unions as a vehicle for people’s social and economic development in Asia. It is affiliated to the International Raiffeisen Union, United Nations Economic and Social Council (UN-ECOSOC) with a Special Consultative Status, World Council of Credit Unions, Proxfin (Canada) and the ICA (a member since 1992). As of 2019, ACCU represents 40.1 million individual members and 32,742 financial cooperatives (ACCU, 2020).

Concerned by the effects of COVID-19 pandemic on credit unions, ACCU developed a series of business solution guides in 2020 to help credit unions identify the impact and responses to COVID-19. As part of this series, it released the CU Business Solution No:26 Guide to Credit Unions on Climate Action. According to ACCU: “*The solution to climate action has an interlocking relationship with the health and immunity of people - an important element to protect individuals from contracting the virus*”. The Guide on Climate Action has been prepared in the belief that institutionalising climate actions and educating members on climate risks and making them assess their vulnerability is essential for preparedness.



ACCU recognises that climate change causes floods, droughts, and unpredictability of seasonal weather, which results in loss of property and income for members of cooperatives. This has immediate and long-term effects on the financial stability and sustainability of cooperatives. It’s new initiative on the CU Business Solution 26: Guide to Climate Action aligns directly with SDG 13 on Climate Action.



ACCU has introduced the climate action mechanism in its credit union network presented in the CU Business Solution 26: Guide to Climate Action, which:

1. Recognises the impact of climate change on humanity
2. Enforces the urgent need to integrate climate action in the daily lives of members and credit union operations
3. Leverages the significant force of the credit union network
4. Develops an evolving menu of climate action programs which sends out the message that even the smallest contributions can counter a global climate challenge (ICA-Asia and Pacific, 2020).

The Guide to Climate Action has six components called as 'game changers'. These include:

1. 6th C of Credit in lending: ACCU has introduced climate compliance as the 6th C of credit for assessing loan applications.
2. Do-it-yourself energy audit: This includes simple procedures and rating mechanisms for an energy audit that can be undertaken by individual members.
3. Self-assessment for waste audit by credit unions: This includes assessment of products based on how much waste they generate and how the waste can be managed. For example, if the products can be reduced, recycled, or re-used.

4. Waste audit and management of the business: This includes an assessment of resources used in business processes and determining how to manage the waste that is generated by resources.
5. Green finance principle in lending: This includes incorporating the 6th C of credit into the assessment of current and new loans.
6. Integrating climate actions in ACCU business solutions wherever applicable.

ACCU has also launched an SDGs contribution monitor for credit unions. It encourages credit unions and financial cooperatives to report the achievements on eight priority SDGs determined by ACCU and its members. Among the priority goals are SDG 6 (Clean water and sanitation) and SDG 7 (Affordable and clean energy). Credit unions are encouraged to report on the following:

1. number of members who received education on sanitation and water management,
2. number of members who received loans for sanitation and water,
3. members and percentage to total membership who received loan for renewable energy, and
4. amount of loans granted for renewable energy and its percentage to the total loans (ACCU, 2020).



The cooperative difference

In order to promote the Guide to Climate Action among credit unions, ACCU conducts international trainer's training workshops on credit union's contributions to SDG 13. It has conducted these workshops in more than nine countries in Asia.

In 2020-2021, ACCU partnered with the Philippine Federation of Credit Cooperatives (PFCCO) and National Confederation of Cooperatives (NATCCO, ICA member) in the Philippines to conduct training of trainers on climate action. Following these trainings, the staff and cooperative leaders that were trained (known as climate warriors) are working with their credit unions to build a substantial number of advocates for climate action.

According to ACCU, climate action will be a priority for ACCU going forward. It would like to add compliance with climate action in its terms and conditions for considering loan applications by cooperatives. The initiative by ACCU to incorporate business guide on climate action in its credit union and financial cooperatives' network is timely and relevant. The introduction of climate compliance as one of the conditions for loan assessment and training of credit unions and cooperatives on climate action shows climate-responsible actions on the part of ACCU and its invaluable contribution to SDG 13. In the long run, it will also ensure that climate responsibility and accountability is practiced in the wide network of ACCU members in Asia.

ASSOCIATION OF ASIAN CONFEDERATION OF CREDIT UNIONS

ACCU

**Supporter Members Webinar:
Orientation on CU Business Solution No. 26
CU Contribution to SDG-13: Climate Action**

Google Meet
Wednesday - Friday, July 22-24, 2020
11:00 am (GMT +7)

© ACCU

03

CONCLUSION



THIS REPORT PROVIDES AN OVERVIEW ON HOW COOPERATIVES AROUND THE WORLD ARE ACTING TO PROTECT THE ENVIRONMENT, AS WELL AS MITIGATING AND ADAPTING TO THE IMPACTS OF CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION. THROUGH THE EIGHT FEATURED CASE STUDIES, IT IS CLEAR THAT COOPERATIVES ARE ALREADY PLAYING A VERY IMPORTANT ROLE IN CLIMATE ACTION IN A VARIETY OF SECTORS, AND THIS REPORT HIGHLIGHTS IMPORTANT CONNECTIONS AND INTERLINKAGES BETWEEN COOPERATIVE ENTERPRISES AND POSITIVE ENVIRONMENTAL OUTCOMES.

As people come together and organise collectively to meet their basic development needs or tackle social and environmental challenges, conscious democratic decisions and strategies are adopted by cooperatives and their members that can support the transition towards a green economy. Through each of the examples presented, the research demonstrates how cooperatives can continue to cement their role as key actors in transitioning to green economy, as well as how they can contribute to the SDGs and Agenda 2030. All the case studies demonstrate the 'cooperative difference', a characteristic and added value that sets cooperatives apart from business as usual.

Each of the featured case studies presents a different thematic piece of the puzzle. On renewable energy provision, the case of Certel, the oldest energy cooperative in Brazil, shows that clean affordable renewable energy provision is not only a goal of new or emerging cooperatives and sectors. Access to electricity is an important infrastructural need and energy cooperatives are active in areas where investor-owned businesses or governments may be unable to provide services. In addition, once the core activity of the cooperative has been established, cooperatives such as Certel and Coopelesca R.L. have been able to successfully widen their scope of activity to include conservation objectives, as well as other positive social actions. Further afield, in Australia, the case of Hepburn Wind demonstrates that when people join hands to cooperate and are willing to make conscious choices, they can make community owned renewable energy a success, reducing their emissions and contributing to sustainable development.

The size and scale of the cooperative enterprise is an important factor when thinking about how to improve environmental sustainability. Action at a large scale will be crucial for larger cooperative enterprises, such as agricultural cooperatives, to reform value chains and to mainstream environmental management into business practices. At the local level, the cases also demonstrate that small measures adopted by cooperatives are crucial and have the potential to create lasting impact in the long-term. Whether it is Toutenvélo, the bicycle cooperative from France working for eco-friendly transportation services, or Tanzania's Buchosa Housing Cooperative, innovation and an out-of-the box mindset has enabled these cooperatives to meet the needs of their members and community.

The cases demonstrate that putting people at the centre of the enterprise whilst integrating environmentally friendly decisions are not incompatible aims, but rather mutually reinforcing, in line with the principle 7 on Concern for Community. Whether it is the introduction of 6th C on climate in credit compliance by ACCU from Thailand, or responsible financing for the purchase of clean and sustainable products by ANUSACCO from Kenya, both initiatives show the potential for replicable and sustainable change in the wider credit union and cooperative banking movement. Sustainable financial systems will be critical in valuing and preserving our natural world, where cooperatives are already playing an important role. At this level, the case of Metsäliitto from Finland demonstrates how the protection and management of common and natural resources is best pursued through a collective sense of responsibility, ownership and long-term strategic thinking.



Looking ahead to what is needed to strengthen the role of cooperatives in climate and environmental protection, a few areas are important to note. Though cooperatives hold great potential, they are not simply a silver bullet and it is important not to romanticise their role in the face of an issue as complex and serious as climate change. The inherent tensions present in squaring social and environmental needs with economic objectives must be acknowledged and actively managed. New debates are emerging as to whether Principle 7 is truly fit for purpose, in a world where the effects of climate change are already being felt, such as extreme weather events, drought, flooding and rising sea levels. The inclusion of young people in the cooperative movement and in cooperatives, many of whom will be face the worst effects of the climate crisis and will be tasked with solving complex environmental problems, should be a priority for cooperatives. Partnerships with social and environmental movements will also be instrumental, as well as improved data and research on cooperatives and their environmental contributions, such as non-financial reporting mechanisms, social auditing practices and environment self-assessment. Changes in the legal framework may also come to recognise ecological law as an im-

portant emerging area in the future, and cooperatives will play an important role in the management of common resources. In all sectors, the pathway and actions that cooperatives choose to follow now will define their potential as a sustainable enterprise form in the future and their climate legacy, as they face increasing competition from other enterprise forms.

Through this report, the contribution and potential of cooperatives towards environmental protection are clearly demonstrated, providing a non-exhaustive and innovative overview. Despite the work remaining for the cooperative movement, cooperatives are a great model for mitigating climate change and for a post-growth economy that respects planetary boundaries and provides sustainable development for all. However, the universal effects of climate change and environmental degradation are producing complex and interrelated challenges, with increasing urgency and frequency. Enormous work is still to be done to meet national and international commitments of the Paris Agreement and Agenda 2030 to bring impactful change at a global scale. This report can launch a conversation for cooperators and other important stakeholders on how cooperatives can take their place at the forefront of an ecological transition.



References

- ACCU (2020)** Advancing Despite Adversity, *Annual Report 2019/2020*.
- Adger, W. & Arnell, Nigel & Tompkins, Emma. (2005)**. Successful Adaptation to Climate Change Across Scales. *gsc*. 15. 77-. 10.1016/j.gloenvcha. 2004.12.005.
- Billiet A, Dufays F, Friedel S, Staessens M.** The resilience of the cooperative model: How do cooperatives deal with the COVID-19 crisis? *Strategic Change*. 2021; 30:99–108. <https://doi.org/10.1002/jsc.2393>
- Campbell, C. and Sacchetti S. (2017)** Editorial: Community-Based, Collaborative Solutions to Sustainable Economic Development in and around Biosphere Reserves, *Journal of Entrepreneurial and Organizational Diversity*, Volume 6 Issue 1, October 2017.
- Circle Economy, European Environmental Bureau, Fair Trade Advocacy Office (2020)** Avoiding Blind Spots: Promoting Circular & Fair Business Models, (Circle Economy-EEB-FTAO report, various authors).
- COPAC (2018)**. *Transforming our world: A cooperative 2030 – Cooperative contributions to SDG 7*.
- Cycling Industries Europe, 'Cargo Bikes for Liveable Cities and a Carbon Neutral Environment'**, available at: <https://cyclingindustries.com/what-we-do/expert-groups/cargo-bike-cycle-logistics>
- D'Alisa, G., Demaria, F., & Kallis, G. (2015)**. *Degrowth: A vocabulary for a new era*.
- Dolan, S.** 'The challenges of last mile delivery logistics and the tech solutions cutting costs in the final mile', *Business Insider*, 2021, available at: <https://www.businessinsider.com/last-mile-delivery-shipping-explained?r=US&IR=T>
- European Commission, Mobility and Transport, Transport Theme 6.2, Cycle Logistics, 2021**, available at: https://ec.europa.eu/transport/themes/urban/cycling/guidance-cycling-projects-eu/cycling-measure/cycle-logistics_en
- European Environment Agency, 'The first and last mile — the key to sustainable urban transport; Transport and environment report 2019'**, EEA Report No 18/2019.
- FAO and UNEP. (2020)**. *The State of the World's Forests 2020. Forests, biodiversity and people*. Rome.
- Fredricson, M. and MacTaggart J. (2017)** Social Economy in UNESCO Biosphere Reserves., *JEOD, Journal of Entrepreneurial and Organizational Diversity*, Volume 6, Issue 1, pp. 69-78 Published online 18 October 2017.
- Giovannini, M. (2012)**. "Social enterprises for development as buen vivir", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 6 Iss 3 pp. 284 – 299.
- Girault, O. (2019)**. 'Logistique urbaine au service du développement durable: Pérenniser le projet collectif au-delà des personnalités fondatrices', *Toutenvélo*.
- Guttman, A. (2020)** Commons and cooperatives: CIRIEC Annals, A new governance of collective action, Volume 92, Issue 1, *The New Age of Commons: Innovation or Necessity?*, March 2021, pp. 33-53.
- Hagedorn, K. (2013)**. "Natural resource management: the role of cooperative institutions and governance," *Journal of Entrepreneurial and Organizational Diversity*, European Research Institute on Cooperative and Social Enterprises, vol. 2(1), pp. 101-121, September.
- Hardin, G. (1968)**. The tragedy of the commons, *Science*, 162(3859): 1243-1248. DOI: <http://dx.doi.org/10.1126/science.162.3859.1243>
- Hickel, J. (2020)** What does degrowth mean? A few points of clarification, *Globalizations*, DOI: [10.1080/14747731.2020.1812222](https://doi.org/10.1080/14747731.2020.1812222)
- Holling, C.S. (1973)** Resilience and Stability of Ecological Systems. *Annual Review of Ecology, Evolution, and Systematics*, 4, 1-23. <http://dx.doi.org/10.1146/annurev.es.04.110173.000245>

- Hoyt, A. (1996).** And then there were seven: Cooperative Principles Updated, University of Wisconsin Center for Cooperatives, *Cooperative Grocer*, January & February.
- ICA. (2013).** Co-operatives and Sustainability: An investigation into the relationship. Geneva: ICA.
- ILO. (2002).** Recommendation 193 Concerning the Promotion of Cooperatives, Geneva: ILO.
- ILO. (2013).** Providing Clean Energy and Energy Access through Cooperatives, Geneva: ILO.
- ILO and ICA. (2014).** Joint Paper, Cooperatives and the Sustainable Development Goals: A Contribution to the Post-2015 Development Debate, April 2014.
- ICA. (2015).** Guidance notes to the cooperative principles. Brussels: International Cooperative Alliance
- ICA Asia and Pacific (2020).** [ICA Asia and Pacific Annual Activities Report.](#)
- ICA Asia and Pacific (2020)** ICA-EU Partnership Country Snapshot for [Australia.](#)
- ICA-Asia and Pacific (2020).** [ACCU Presentation, Follow-up webinar on ICA-AP Regional Capacity Building Programme on SDG-13: Climate Action.](#)
- Kothari, Ashish & Demaria, Federico & Acosta, Alberto. (2014).** Buen Vivir, Degrowth, and Ecological Swaraj: Alternatives to Sustainable Development and Green Economy. *Development*. 57. 57-3. 10.1057/dev.2015.24.
- La Republica (2020) Garza, J.** 'Costa Rica genera más del 98% de su electricidad de forma renovable por sexto año consecutivo' <https://www.larepublica.net/noticia/costa-rica-genera-mas-del-98-de-su-electricidad-de-forma-renovable-por-sexto-ano-consecutivo> Accessed 12 July 2021
- McCulloch, M. & Ridley-Duff, R. (2019)** To profit or not to profit? That is the wrong question, EMES Conference Paper, Sustainable development through social enterprise, cooperative and voluntary action, Sheffield Hallam University, 24-27 June 2019.
- Metsä Group (2019).** [Sustainability Report 2019.](#)
- Novkovic, S. and Webb T., Eds. (2014)** Co-operatives in a post-growth era creating co-operative economics, New York, Zed Books.
- Ojo La Clima (2021) Segura Vargas A.** 'Costa Rica electrificó 337 días del 2020 con energía renovable' <https://ojoalclima.com/costa-rica-electrifico-337-dias-del-2020-con-energia-renovable/> Accessed 12 July 2021.
- Ostrom, E. (1990).** Governing the commons: The evolution of institutions for collective action. Cambridge University Press.
- Raworth, K. (2017).** Exploring Doughnut Economics. Available at: <https://www.kateraworth.com/doughnut/> [Accessed: February 2017].
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F.C., Lambin, E. F., Lenton, T.M., Scheffer, M., Folke, C.H., Schellnhuber, J., Nykvist, B., de Wit, C.A., Hughes, T., van der Leeuw, S., Rodhe, H. Sörlin, S., Snyder, P. K., Costanza, R., Svedin, U., Falkenmark, M., Karlberg, L., Corell, R.W., Fabry, V.J., Hansen, J., Walker, B., Liverman, D., Richardson, K., Crutzen, P. & Foley, A.J. (2009).** A safe operating space for humanity. *Nature*, (461): 472-475
- Schröder, C. and Walk, H (2013)** Local Climate Governance and the Role of Cooperatives, Chapter in Knieling, J. Walter Leal Filho (eds.) *Climate Change Governance: The Challenge for Politics and Public Administration, Enterprises and Civil Society*, E-Book, Springer Berlin Heidelberg.
- Toutenvélo, 2019.** 'Porter le réseau de Scop Toutenvélo collectivement pour mieux entreprendre localement'.
- Toutenvélo, 'La Freechise, quésaco?'**, available at: <http://www.toutenvelo.fr/formation-logistique-douce>
- Wall, D. (2017)** Elinor Ostrom's Rules for Radicals Cooperative Alternatives beyond Markets and States, Pluto Press.
- United Nations (2020)** The Sustainable Development Goals Report. Accessed 15 April 2021 <https://unstats.un.org/sdgs/report/2020/The-Sustainable-Development-Goals-Report-2020.pdf>
- United Nations, Department of Economic and Social Affairs, Sustainable Development, Sustainable Transport,** available at: <https://sdgs.un.org/topics/sustainable-transport>
- United Nations Economic and Social Council (2020)** Report of the Secretary-General 'Socially just transition towards sustainable development: the role of digital technologies on social development and well-being of all', E/CN.5/2021/3, 23 November, 2020
- United Nations Environment Programme (2021).** Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies, Nairobi. <https://www.unep.org/resources/making-peace-nature>

This document has been produced with the financial assistance of the European Union.
The contents of this document are the sole responsibility of the International Co-operative Alliance
and can in no way be taken to reflect the views of the European Union.

The European Union is a unique economic and political partnership between 27 European countries. In 1957, the signature of the Treaties of Rome marked the will of the six founding countries to create a common economic space. Since then, first the Community and then the European Union has continued to enlarge and welcome new countries as members. The Union has developed into a huge single market with the euro as its common currency.

What began as a purely economic union has evolved into an organisation spanning all areas, from development aid to environmental policy. Thanks to the abolition of border controls between EU countries, it is now possible for people to travel freely within most of the EU. It has also become much easier to live and work in another EU country.

The five main institutions of the European Union are the European Parliament, the Council of Ministers, the European Commission, the Court of Justice and the Court of Auditors.

The European Union is a major player in international cooperation and development aid. It is also the world's largest humanitarian aid donor. The primary aim of the EU's own development policy, agreed in November 2000, is the eradication of poverty.

COOPERATION FOR THE TRANSITION TO A GREEN ECONOMY

GLOBAL THEMATIC RESEARCH REPORT

ICA-EU Partnership



International
Co-operative
Alliance



Co-funded
by the
European Union