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Energy, Water and Waste Management Sectors and the Social and Solidarity Economy

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Abstract

Social and solidarity economy (SSE) and circular economy concerning circular use of energy and materials such as water and waste are in many ways complementary approaches. Both aim at transforming global production and consumption patterns to become more sustainable. While the environmental benefits of the circular economy are well documented and analysed, less is known about its impacts on socio-economic aspects, such as employment, inclusion and poverty reduction. SSE actors in sectors such as energy, water and waste management are providing solidarity-based alternatives for production and consumption, where their structure allows for more inclusive and participatory access to these vital services, including for underserved populations. These SSE initiatives are in many cases aligned with circular strategies and function as a link between environmental sustainability, the capacity to promote decent work, and social inclusion. To be able to achieve this at a broader level, SSE actors will need to be part of the discussions on the circular economy, and demonstrate the value of SSE as playing a key role in circular transition.

Keywords

climate change; just transition; circular economy; employment; sustainable development; energy; water; waste

Introduction

The impact of climate change is one of the most significant challenges of our times. Our current patterns of production and consumption and the way we use natural resources are unsustainable. These hinder our path towards sustainable development and have significant implications for the environment, economies, global health, the future of work and livelihoods. Addressing and reversing the impacts of climate change and moving towards a just transition to environmentally sustainable economies and societies for all that contributes to sustainable development in its economic, social and environmental dimensions is a priority. Solutions such as decarbonisation of the economy and carbon neutrality are needed. However, these must align with the goals of decent work for all, social inclusion and the eradication of poverty (ILO 2015).

Moving towards a circular economy has the potential to contribute to these objectives through its focus on changing the dominant linear production and consumption patterns. In essence, a circular economy minimises the resource inputs and maximises the reuse of materials. It can be seen as an alternative approach to the current linear economy of “take-make-use-dispose”, and instead focus on reduction of the use of raw materials and resources, reuse of materials at different stages, recycling more effectively, and increasing the lifetime of products and materials by keeping them in use for longer. Therefore, a circular economy can be a useful approach in promoting greener and more sustainable production and consumption practices and help achieve the Sustainable Development Goals. Currently, however, only 8.6 per cent of the global economy is circular (Circle Economy 2021).

While the environmental benefits of the circular economy are well-documented and analysed, less is known about its impacts on socio-economic aspects, such as employment, inclusion and poverty reduction. To fully contribute to a just transition, the circular economy needs to place a stronger emphasis on all three dimensions of sustainable development and enhance its focus on the importance of participation, social dialogue, democracy and innovation (Circle Economy 2020). This way, it can achieve broader sustainability objectives, including those about a human-centred recovery from the COVID-19 crisis.

A shift towards a circular economy will see millions of jobs lost or transformed. On the other hand, this transition is a significant opportunity for the world of work: the ILO has estimated that it has a potential for a net growth of 7 million jobs globally by 2030, primarily driven by job increases in waste management and recycling and the services sector, and through the creation of sustainable enterprises (ILO 2019a). Hence, this transition would need to include protection and investment in skills development and reskilling opportunities for those whose jobs are lost and changed, as well as ensure decent work opportunities and rights for all workers, including women and youth. With the participation of relevant ministries and employers’ and workers’ organisations, social dialogue should play a central role in this transition.

1. The role of Social and Solidarity Economy in energy, water and waste management sectors

Social and Solidarity Economy (SSE), with its approach based on values such as inclusiveness, innovation, and democratic decision-making and community participation, while promoting entrepreneurship and, in many cases, environmental aspects, can contribute to bridging the gap between circular economy and social objectives. This

includes SSE values and decent work being embedded at the core of the circular economy practices. By placing social aspects, such as community and personal well-being and quality of life, at the centre together with economic and environmental considerations, SSE can further become a useful approach in moving towards sustainable circularity that benefits large numbers of people around the world.

The idea of combining environmental and social aspects is not new for SSE actors. From regenerative agricultural or energy cooperatives and environmental, social enterprises to community forestry and ecological schools, they have contributed towards environmental sustainability objectives alongside care for the community and social and economic well-being. SSE values such as cooperation, solidarity and mutualism, along with its focus on complementing social innovation with technological solutions, are crucial and highly relevant as the world is moving towards human-centred recovery from the COVID-19 crisis that is inclusive, sustainable and resilient.

However, to fully leverage the potential of SSE would require investment in and establishment of enabling policy and regulatory environments. This will allow for SSE actors to create more and better jobs and to ensure the existing jobs remain relevant, participate and provide social benefits in the circular economy, and have an established role in the environmental governance more generally to contribute to a just transition towards a circular economy.

To understand the role that SSE can play in shaping an inclusive circular economy, it is necessary to recognise its instrumental role in the functioning of our current economies and societies. SSE organizations and enterprises (SSEOs) play a key role in the provision of services such as energy, water and sanitation, and waste management. They are essential for lives and livelihoods, balancing between environmental, economic and social objectives, and responding to the need of some basic required services for allowing people to live, work and prosper.

SSE's provision of these services demonstrates its potential to contribute to the greening of the economy in general and the circular economy. SSE can add value in promoting innovative, locally-based solutions for specific challenges. SSEOs in sectors such as energy, water and waste management are providing solidarity-based alternatives for production and consumption, where their structure allows for more inclusive and participatory decision-making, the ability to keep prices affordable, reinvestment of any profits to the community, and access to some of these vital services, including for underserved populations, and in many cases aligned with circular strategies. In addition, SSEOs provide training and skills development opportunities for their members and workers to contribute towards addressing the skills gap for a just transition.

1.1. Energy

Access to stable and affordable energy is essential for social and economic development, and the move towards cleaner energy is a key component of a just transition. Despite steady progress in the past decades, access to clean and affordable energy and energy services continues to be a major challenge in many parts of the world, and it is often the most vulnerable segments of the societies who are most impacted by these challenges. In 2019, an estimated 759 million people lacked access to energy, while 2.6 billion people remained without access to clean cooking facilities (IEA et al., 2021).

People around the world have responded to this lack of access by establishing their own enterprises providing missing or otherwise unsuitable services. SSEOs contribute to the energy transition, both in terms of providing cleaner energy services and making them available to underserved populations facing energy poverty, including in times of

otherwise soaring energy prices. Energy cooperatives and social enterprises have a long history of producing, supplying and distributing energy, serving millions of people and providing significant proportions of overall energy provision in many countries, often at exceptionally high levels in rural areas. They have also been active in promoting clean cooking energy or providing renewable energy solutions such as solar panels. SSEOEs can produce solar, wind or water energy, manage biomass power plants, or organise as renewable energy villages, for example. Their main objective need not be in energy provision. Agricultural producers' associations, for instance, can move to using alternative and renewable energy sources that can provide energy for cold storage facilities or water pumps for irrigation systems. On the other hand, housing cooperatives can aim at energy self-sufficiency through producing and using renewable energy (ILO 2013).

From a circular economy perspective, energy production through biomass holds potential for, for example, agricultural producers' or community forestry organisations that can make use of by-products. Agricultural waste and manure can be used for developing biogas or ethanol, while residues from tree harvesting or sawdust from sawmills can be turned into bioenergy. While some of the technologies for these and other innovative circular solutions can be expensive, pooling resources from members and being able to negotiate with financial service providers, for example, provide SSEOEs with the possibility to access these.

Locally owned energy structures based on SSE principles and values can provide the technologies and affordable access to cleaner energy, while ensuring local ownership and the ability to decide on sustainable energy consumption and use. Their self-organised and decentralised structures that aim towards energy self-sufficiency can improve life quality and enhance sustainable resource use and management (Morandeira-Arca et al. 2021). This kind of social innovation that SSEOEs contribute to in the energy sector has multiple benefits, promoting not only technologies for energy efficiency, self-sufficiency and lower carbon emissions, but also empowerment and enhanced well-being for members and communities. SSEOEs also provide local populations with the opportunity to decide on aspects related to energy production and consumption, and to organize, produce and distribute energy provision themselves at an affordable cost.

SSEOEs often move towards multi-purpose approaches, investing in other services as required by their members and users, such as financial services, improved infrastructure, and training and awareness-raising, including on benefits of locally-produced energy. They can also create additional income in cases where surplus energy produced can be then sold to the national grid – this can be invested into further improving the facilities, or in other community projects and initiatives. Furthermore, having energy production at the local level can improve decision-making and democracy beyond the organization, including in relation to the policy-makers and authorities (ILO 2013).

1.2. Water

The right to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use, and the right to sanitation, are basic human rights. Globally in 2020, around 2 billion people lacked safely managed drinking water services, while 3.6 billion people lacked sanitation services (UNWater 2021). In addition, food production is highly dependent on access to water, while at the same time uses large amounts of global freshwater resources. Hence, access to water has direct implications on the economies, human health, food security, and many other aspects of human life.

Across the world, services related to water supply and sanitation are mainly organized by the public sector and managed by municipalities, but there are many types of public,

private and mixed governance arrangements. Often, particularly marginal urban areas and remote rural areas can face limited water infrastructure and consequently lack of access to water and related services.

This is where SSEOEs, including social enterprises, community-based water cooperatives, and water user associations, have proven useful for addressing water supply challenges. These organisations are important for ensuring sufficient and good-quality water for household and productive uses at affordable prices in various countries, particularly in Europe and North and South America. While most common in rural areas, water cooperatives are sometimes the main water providers, even in major cities like Santa Cruz de la Sierra, Bolivia. In regions like Southeast Asia and parts of Africa, water users associations or producers' organisations coordinate community-based irrigation management for agricultural production, for example (Arvonen et al., 2017). These organisations can improve the management of increasingly scarce water resources, provide access to technologies, finance, and skills and training, and hence improve agricultural productivity, and consequently, community and household incomes and well-being (Zhang et al. 2021).

Circular water reuse is a key strategy for water security. It can be applied through activities such as rainwater harvesting, transforming sewage sludge for biofuel production, using wastewater as organic fertiliser, and treating water for various reuse purposes, such as irrigation or industrial refrigeration, among others (UNESCO and UNESCO i-WSSM 2020). SSEOEs can promote and make use of these and other circular approaches to water management, in addition to contributing to the protection and sustainable management of water resources.

Promoting local, community-based water solutions and social innovation based on SSE principles and values can also improve water treatment practices and decrease related health problems. In addition, they can have positive implications on gender equality, improving the situation of women and girls, who are often responsible for fetching water, sometimes for very long distances, meaning less time for education and earning incomes. Social enterprises and other types of SSEOE actors can promote sustainable entrepreneurship, particularly for women, making clean water available and also improving the safety of those responsible for fetching. SSEOEs can also promote safer and more hygienic sanitation facilities as improved service. When the users of the service design these, they are more likely to be suitable for local conditions, improving hygiene and safety, and often also being environmentally more sustainable solutions.

When SSEOEs own and manage the water structures and systems, this increases the sense of ownership and allows for deciding on their use. Water mains, wells, sanitation facilities and other structures that have been installed as part of development projects, for example, may not have always provided the expected results, when not based on the actual needs of and consultations with the communities and users of the facilities. When coordinated through SSEOEs, this allows for deciding on specific technologies and solutions, including circular ones, that are suitable for the community and households, as the users themselves have been involved in the decision-making processes.

In addition to water supply, and linking to waste management, sewerage and irrigation, SSEOEs can benefit the sanitation workers, who often face highly dangerous, unhygienic working conditions, with no protection and limited opportunities for organization through trade unions. Forming or joining SSEOEs can provide not only bargaining power, voice and representation, but also serve as a pathway towards formalization and improved working conditions (World Bank et al. 2019).

1.3.Waste management

Waste management is essential for safeguarding well-being and public health, ensuring environmental protection, and overall hygiene and attractiveness of urban and rural areas alike all around the world. When left untreated, waste becomes a problem from both environmental and public health perspectives, with the consequences often falling on those in vulnerable situations. While most often offered as a public municipal service, in many countries the sector is underfunded and not able to keep up with increasing population and waste streams. In addition, informal waste management systems have developed in many countries alongside the formal, public systems. In this space, SSEOEs such as social enterprises and cooperatives have been established to address the related issues, from recycling and reusing used textile or plastic waste to turning food waste into fertilizer, among others. SSEOEs are often the preferred and common form of organization of informal waste workers, many of whom are women, in their attempts to move towards formalization to improve their conditions and access to formal waste management (see also the entry “Work integration and SSE”).

SSEOEs in waste management can help in organising the waste systems. In countries like Brazil, Colombia or India, there are major cities where much of the municipal waste collection system is based on cooperatives. In Brazil, for example, waste picker organisations have created networks through which they have been able to further increase their position in the waste systems, including formal arrangements with municipal authorities (Gutberlet et al. 2020).

SSEOEs are increasingly active in managing electrical and electronic waste, where circularity takes place through recovery, repair, refurbishment, reuse, repurposing and recycling of used electrical and electronic equipment. Here, the role of cooperatives and other types of SSEOEs has been acknowledged, including in relation to their capacity to promote the rights of informal workers through advocating for their inclusion and recognition, helping them organise to fight for their rights and improve their livelihoods, provide avenues for skills development, and to create formal and decent work opportunities in the sector while contributing to circular and environmental objectives (ILO 2019b).

Due to the lack of well-developed and effectively implemented recycling policies and systems, much of the global waste streams continue to be dumped in landfills, including plastics, electronics and other materials that would have further recycling value. Recycling is a key aspect of the circular economy, and moving from waste management to waste reuse plays a key role in this. In recycling, waste is seen as a resource that maintains some of its original value and can be further made useful. Circularity has been part of waste management cooperatives and other types of SSEOEs for a long time, and their participation has not only improved local waste management systems but also generated socio-productive inclusion, in which SSEOEs and their members have been able to improve their working conditions (Gutberlet et al. 2020).

Informal waste collectors join and establish SSEOEs to tackle these and other challenges. SSEOEs can support informal waste workers in strengthening their collective voice and representation in policy-making processes, including with both public and private actors in the waste management chains. In some cases, SSEOEs have been able to enhance collaboration with trade unions for improved representation and capacity building. In other cases, waste workers have first organised into a trade union and then moved towards formal business by establishing a cooperative. Through SSEOEs, waste workers can move towards formalisation, underlining their roles as recyclers, and this way help to move towards becoming recognised as public service providers. In addition, these

organisations can provide and facilitate access to social protection and services such as finance, insurance, housing, childcare and children's education, in addition to skills development and training. Sometimes, however, while cooperatives have been able to secure stable incomes for their members, decent work deficits and dangerous working conditions have remained (ILO & WIEGO 2017) (see the entry "Working conditions and wages in SSE").

Conclusions

Social and solidarity economy and circular economy are in many ways complementary approaches, aiming to transform global production and consumption patterns to become more sustainable. Focusing on environmental and circular aspects is not new for SSE, which places the triple bottom line of sustainable development at the heart of its objectives and actions. Promoting a just transition in sectors such as energy, water, and waste management is essential for tackling environmental and climate change and promoting human and community well-being. Values such as community participation, solidarity, democracy and innovation, help place SSEOs in these three sectors, as well as in many others that contribute towards circularity, as key actors to function as a link between environmental sustainability, the capacity to promote decent work, and social inclusion, while improving the access to vital services to their members as well as to the community at large. To achieve this at a broader level, SSEOs will need to be part of the discussions on the circular economy and demonstrate the value of SSE as playing a key role in the circular transition. This is even more relevant now with the additional challenges brought about by the COVID-19 pandemic and on the way towards a human-centred recovery that is inclusive, sustainable and resilient.

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