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RESEARCH ON THE EUROPEAN GREEN DEAL AND SOCIAL SERVICES

Research on the European Green Deal and Social Services

This study was subcontracted to Kveloce I+D+I (Senior Europa S.L.) and authored by Arantzazu Blanco Bernardeau, Mireia Ferri Sanz and Maite Ferrando García.

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Acronym List

CF	Cohesion Fund
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EEC	European Economic Community
ERDF	European Regional Development Funds
ESF	European Social Funds
ETC	European Territorial Cooperation
EU	European Union
FAO	Food and Agriculture Organisation
JTF	Just Transition Fund
LCA	Life-Cycle Assessment
LTC	Long Term Care
IA	Innovation Action
ILO	International Labour Organization
NGOs	Non-governmental Organisation
OCDE	Organisation for Economic Co-operation and Development
RIA	Research and Innovation Action
RDPs	Rural Development Programmes
SDGs	Sustainable Development Goals
SMEs	Small and Medium-sized Enterprises
VAT	Value-Added Tax
VET	Vocational Education and Training
WISEs	Work Integration Social Enterprises

Executive summary

The world is facing challenges in all the three domains of sustainable development - economic, social, and environmental- that have a direct impact on the societies and their potential to share natural resources in a sustainable way. In this context, the concept of "**environmental social work**" has been used as an adaption of social work values to respond to environmental degradation, although there is still a knowledge gap due to the complex dynamics existing between social care and the interactions with the environment. The 2030 Agenda **of the United Nations**, signed in 2015, already stated that eradicating poverty was a requirement to achieve the sustainable development and ensure the survival of societies and bioecological systems, through the fulfilment of 17 **Sustainable Development Goals.** Some of these Goals explicitly mention disability and persons with disabilities; and all of them are relevant to ensure inclusion, development, and wellbeing of people with disabilities. Furthermore, the **European Green Deal** announced in 2020 represents a new growth strategy framed in this context, focused on transforming the EU into a fair and prosperous society, addressing the resource efficiency, the achievement of no-emissions economy and the protection of natural capital, while ensuring a just and inclusive transition, which entails also adequate social services and protection systems

FIGURE 1 | Green Deal and social work

The **aim of this report** is therefore to analyse the social services' opportunities, needs, and barriers to move to a Greener Social Service sector taking most of the opportunities offered by the EU Green Deal and other EU policies and funding programmes. To this end, a systematic review was carried out using different databases of academic journals as well as other publications and institutional websites of the EU and Ministries of the member states object of this study (Belgium, Finland, Romania, Spain, and UK). Additionally, a total of 9 stakeholders coming from these 5 European countries were selected from the EASPD network for a semi-structured interview on the "ecological" dimension and investment needs of social services, such as their infrastructure needs (renovation, energy processes, etc.), the purchasing of products and services (catering, cleaning, maintenance, etc), the service provision itself (transport, etc.), the type of area where services are provided (rural development, industrial transition, etc) and the impact on employment opportunities (social economy enterprises, inclusive farms, etc), identifying possible areas for ecological/green improvement and the barriers to such improvements.

The results obtained had been structured around 5 dimensions of social services: (i) long term care and (ii) social housing; (iii) childcare, (iv) employment and training services, and (v) social assistance, and linked to the funding opportunities offered by the H2020 Green Deal topics, but also calls in other funding programmes, as well as best practices already being put in practice, in order to design a roadmap with recommendations for greening the social services and adapt them to the requirements and challenges posed by Climate Change.

1. Introduction. Conceptual approach

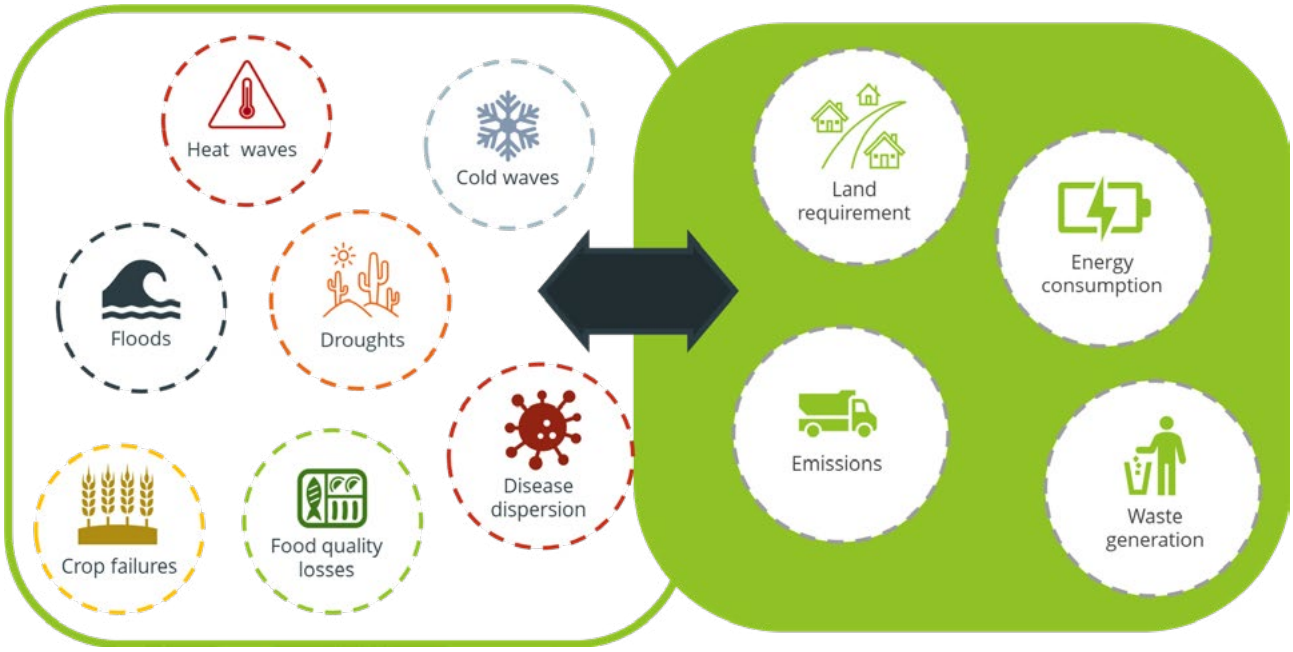
The world is facing challenges in all the three domains of sustainable development - economic, social, and environmental - that require global responses that leverage further economic and social progress, demanding growth, and employment and at the same time strengthening environmental protection (Mishra, 2020).

Social services provision is not excluded of those challenges. In fact, the International Federation of Social Workers (2014) recognised that the natural and built environments have a direct impact on people's potential to develop and achieved their conditions and the need to share the earth's resources in a sustainable way. For that reason, the Federation endorsed the recommendations on the environment presented by the United Nations in some international conferences, for instance the vigorous enforcement of existing environmental protection laws and standards. Despite of this, many authors have detected a **lack of attention to the environmental approach** (Dewane, 2011) **and education** in social work (Ramsay & Boddy, 2017). Both gaps are related with a lack of clarity on the concept of **"environmental social work"** that assist society to create and maintain a biodiverse planetary ecosystem adapting core social worker values to promote social change at the same time that they contribute to respond and mitigate environmental degradation (Ramsay & Boddy, 2017). According to Coates & Gray (2012) and Gray et al, (2012) the concept is not new, and its foundations are based on robust findings in health and social science, and not only in environmentalist intentions. Indeed, the concept of "environmental social works" runs parallelly to other conscious initiatives, including healthcare and social service. These initiatives have run from the appearance of modern environmental movement and, more recently, the discourse has turned into giving consideration of the effects of environmental degradation on health and wellbeing and the synergistic effects of environmental conservation programmes.

1.1 The connection between social services and natural sustainability

Social services are closely connected to environmental challenges, which are in turn particularly relevant in social interventions with vulnerable communities (Belchior Rocha, 2018), with complex dynamics in which social care may play a role in the interaction with environment (Pellow & Nyseth-Brehm, 2013). In fact, there is a growing evidence that link environmental problems with human problems, impacting in all the dimensions of human living (Belchior Rocha, 2018). In the case of **climate change**, there are evidences that social care systems will be strongly influenced, in particular by the increasing frequency and severity of weather-related hazards and the growing of vulnerable population (Miller et al., 2012; Nyahunda et al., 2020; Otto et al., 2017; Oven et al., 2012). In addition to heat and cold waves, droughts, floods, and dispersion of diseases, climate change will also affect food security, through food production losses and crop failures. From the other perspective, **social care systems** have a significant impact in environment, for example through the requirement of spaces and buildings, energy consumption, emissions related to transport, and generation of a wide variety of waste types, some of them from disposable materials to pharmaceuticals products (Charlesworth & Jamieson, 2017; Kallio et al., 2018; Naylor & Appleby, 2012; Tomson, 2015).

FIGURE 2 | Interaction between social work and climate change



Therefore, **the interlinkages and interactions between environmental and social policies** should be revised to avoid conflicts between policy objectives, while contributing to create synergies that reinforce each other (Pye et al., 2008) and facilitate the provision of **Green Social Services**.

1.2 European and global strategies for a Green society

In 2015, the Heads of State and Government and High representatives, gathered under the United Nations, signed the 2030 Agenda, which is an action plan for the people, planet and prosperity aimed at eradicating poverty as an indispensable requirement for sustainable development (United Nations, 2015). The 2030 Agenda was based on the purposes and principles of the Charter of the United Nations and grounded on the Universal Declaration of Human Rights and other treaties. It aims to go beyond the Millennium Goals signed by the United Nations in year 2000, also reaffirming the outcomes of United Nations conferences that aim for sustainable development, among them: the Rio Declaration on Environment and Development[1]. The 2030 Agenda recognised the natural resource depletion and the adverse impacts linked to environmental degradation, including desertification, drought, land degradation, freshwater scarcity and loss of biodiversity, as well as climate change, among others, as great challenges that undermine the ability of all countries to achieve sustainable development and threaten the survival of societies and bioecological systems. Thereby, the 2030 Agenda announced a framework of 17 Sustainable Developments Goals (SDGs)[2] associated with 169 targets and corresponding indicators, which are integrated and indivisible, that would come into effect on 1 January 2016, to be implemented by the countries, but also at the regional and global level, considering their different capacities and the economic integration and interconnectivity that sustainable development entails.

It must be highlighted that the SDGs also explicitly include disability and persons with disabilities, especially in the parts related to education, employment, inequality, and accessibility. Moreover, although the word disability is not mentioned explicitly in all SDGs, the 2030 Agenda pledges no to leave no one behind, and consequently all the Goals are relevant to ensure the inclusion, the development, and the wellbeing of persons with disabilities. The Sustainable Development Goals, as summarised in Figure 3:

1 Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992, vol. I, Resolutions Adopted by the Conference https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf

2 https://sdgs.un.org/goals

FIGURE 3 | Sustainable Development Goals.

Source: United Nations.

In this context, the **Green Deal** represents a new growth strategy that aims to transform the EU into a fair and prosperous society, tackling challenges such as the decoupling of economic growth and resource use, the achievement of an economy with no net emissions of greenhouse gases and the protection and enhancement of natural capital, while protecting the health and wellbeing of citizens. To achieve these objectives, a roadmap (The Green Deal action plan[3]) has been launched, describing the investments that will be required and the financing tools that will be provided, to ensure a **just and inclusive transition**. That is, it must put people at first, with relevant consequences for the social services sector.

Among a broader package of actions, the European Climate Law[4] will set up the conditions for the transition, enshrining the climate neutrality objective in legislation, ensuring that all EU policies contribute to the climate neutrality objective and that all the required sectors play their part, among them the social services sector. In fact, this transition will require deep transformations and significant investments and innovations in sectors such as the building, transport, industry, and agriculture, some of them will experience a growth, creating new, local and high-quality employment opportunities. For other sectors, such as the social services, difficulties to face this transition are expected and some regions may decline or will have to transform and shift to new production processes with new skills required, which implies social consequences that must be considered to deploy relevant policies and measures, entailing also adequate social protection systems in order to not to leave anybody behind.

3 The European Green Deal. COM/2019/640 final https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019DC0640&from=EN

4 Amended proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law). COM/2020/563 final https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020PC0563&from=EN

1.3 Methodology

As mentioned, the **aim** of this report is to analyse the social services' opportunities, needs, and barriers to move to a **Greener Social Service sector** taking most of the opportunities offered by the EU Green Deal and other EU policies and funding programmes. To achieve this objective, the methodology followed to perform this study entailed a systematic review and interviews with stakeholders from 5 EU countries:

Systematic review: Different databases have been used for the elaboration of this report, including Web of Science, SAGE Journals Online, Wiley Online Library, Elsevier's SCOPUS, and Semantic Scholar, using the phrase "social work" and "social services" with the terms detailed in Table 1. The systematic review also included the references of the articles, as well as the articles citing the results of the initial search.

TABLE 1 | Keywords and databases used in the systematic review.

Keywords	Databases
Environment	Google Scholar, Science direct, SCOPUS, Wiley, SAGE, Nature
Sustainability	Google Scholar, Science direct, SCOPUS, Wiley SAGE, Nature
Circular economy	EU website
Green Deal	Funding and tenders' portal
European Social Funds	EU website, Sustainable Development Commission (UK), Ministry of Ecological Transition (Spain)
Green Jobs	EU website, Sustainable Development Commission (UK), Ministry of Ecological Transition (Spain)

The research team considered the following exclusion criteria for the articles/publications derived from the detailed keywords and databases:

- ★ Articles published before 2011 were excluded to ensure that the opportunities, challenges and needs in this report reflected current trends. On the other hand, for other types of publications such as books, reports, or legislative documents, the published date of exclusion was expanded to 2008, when the International Labour Organisation published a report about the employment impact of climate change adaptation and also the Food and Agriculture Organisation published the report about Climate Change and Food Security, both considered as key sources in this research.
- ★ Articles/ publications not related to opportunities, barriers and needs of social work, based in the title and abstract.
- ★ Only articles/ publications in English and Spanish were considered.

Abstracts of journal articles and publications were reviewed and those that mentioned both social work or social services and the natural environment were included in the review. This resulted in a deep review of **86 scientific articles and 24 publications**. In addition to the mentioned sources, other sources such as institutional websites were also examined, including the Funding and Tenders Portal and the European Commission Website, and websites for Sustainable Development Commissions and Ministries in the member states object of this study (Belgium, Finland, Romania, Spain, and UK).

Interviews: The research team contacted a total of 9 stakeholders coming from 5 EU countries and covering different disciplines such as social work, education, engineering, financial, law, and political sciences, among others. The countries were first agreed with the EASPD considering a suitable geographical coverage (Belgium, Finland, Romania, Spain, and UK).

Contacts for the interviews were provided by EAPSD from their network. Once the stakeholders accepted to participate in the study, the research team provided them a **brief concept note** about the study and the topics to be discussed before their interview (see Annex I: Concept note and topics shared with the stakeholders before the interview), so they could have it as guideline during the interview. In this concept note, participants were also informed about how their data was going to be anonymised and the exclusive use for the purpose of this research. Interviews were video recorded for the ulterior thematic analysis. For this reason, also in the concept note, participants were informed about the recording and how to proceed if they did not want to be recorded.

Semi-structured interviews were conducted one to one: the researcher and the participant agreed on a date and schedule for conducting the online interview. The time average spent is expected was 45-60 min per interview. The personal data of the participants was anonymised and had been only used for this research to guarantee gender balance (44.44% female) and age coverage (from 28 to 70 years old).

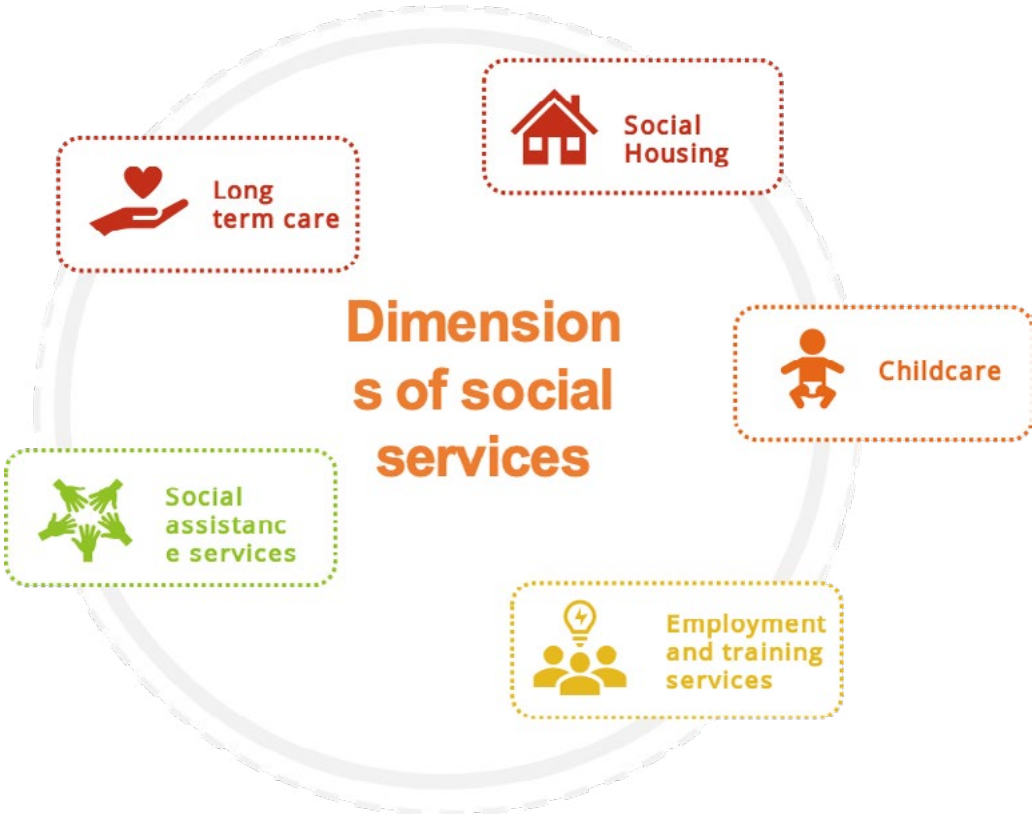
The list of the persons interviewed is presented at the beginning of the document in the Acknowledgements section and the template used for the interviews is in Annex.

2. The ecological dimension of social services

In this section, the ecological dimension of the social services provision is analysed based on the systematic review and the semi-structured interviews performed with international stakeholders with special focus on people with disabilities. In fact, the (United Nations, 2020) reported that persons with disabilities may experience climate change impacts (directly and indirectly) differently and more severely than others. For example, persons with disabilities are often among those most adversely affected in an emergency, sustaining disproportionately higher rates of morbidity and mortality, and are among those least able to access emergency support. Natural disasters and adverse events can seriously affect their access to food and nutrition, safe drinking water and sanitation, health-care services and medicines, education and training, adequate housing, and decent work.

In this line, this section analyses the impact of the climate change on social services and vice versa, needs and opportunities of social services around the Green Deal, and highlight some good practices in the field. This information is structured around the **5 dimensions of social services agreed with EASPD**: (i) and (ii) long-term care and social housing; (iii) childcare, (iv) employment and training services, and (v) social assistance.

FIGURE 4 | Dimensions of social services



(i) Long-Term Care and (ii) Social Housing

Long-term care (LTC) covers a wide range of services and situations from in-home help with basic activities such as bathing, dressing, and meals, to more complex health and social services such as attendance at day care centres or institutional settings. Moreover, paid home care is often unregulated and associated with poor wages and lack of benefits for the caregivers (United Nations, 2016), which compromise the achievement of SDG1 (End Poverty) and SDG3 (Good Health and well-being), since it leads to poverty and difficulties to access health services, but also SDG 5 (Gender Equality), since a great amount of caregiving work is carried out by women.

Social housing is a relevant dimension of social policies and affordable housing provision. It represents more than 28 million dwellings and circa 6% of the total housing stock in OECD and non-OECD EU countries (OECD, 2020). Social housing comprises a heterogeneous set of measures both public and private, involving the state as well as the market, concerning different aspects from spatial planning to social implications (Chávez-Alvarado & Sánchez-González, 2016; Galdini & Lucciarini, 2019). *The State of Housing in the EU* (2019), the landmark biennial overview of Europe's Housing sector produced by the Housing Europe Observatory capitalist, stresses the increasing difficulties for European citizens and the poorest segments of the population to find a home. In this sense, there is increasing demand for housing from a wide range of publics, from young people to older people and migrants. Special attention to people with disabilities should be considered as they are more likely to rent social housing (with 24.7% of disabled people aged 16 to 64 years occupying property in this way in the UK, according to the Office of National Statistics[5]) which is closely related to their socioeconomic contexts. Given the current dynamics in housing and labour markets, there is an increasing sector of society, reaching the middle class, that is at risk of housing exclusion, due to the increasing share of household budget dedicated to expenditures at home (which includes rent and utilities). *The State of Housing in the EU* (2019) also stresses the role of housing inequalities both as a symptom and a cause of existing income inequalities, since poor households cannot afford better homes and live in neighbourhoods that in turn exacerbate inequalities.

The increase in in-home support means that more and more social services are building forms of social housing and also because the impact of both social services dimensions to climate change and vice versa are quite linked, both services are considered together in this section.

The **impact of climate change in LTC care and social housing** is related to the consequences of extreme weather effects and fires, which may be more acute for vulnerable groups such as older people and people with dependences. This includes the occurrence of extreme weather events (cold and heatwaves, floods, storms) which are likely to be exacerbated in urban areas due to high soil sealing and drainage systems already at their capacity, resulting to an increased risk of water flooding and that may be accompanied by failures in the electric systems. This risk is also related with a poor urban planning and the occupation of flood plains for residential or infrastructure uses. Moreover, there is an expected increase in extreme heat events that will worsen the conditions in cities (Jia et al., 2019). These changes will impact specially residents in social houses, who are typically more vulnerable since they are often the least likely to be able to afford measures that help them tackling this risk. In fact, a common feature in social housing blocks is the low energy efficiency of buildings (Brandão & Lanzinha, 2020; Pierangioli & Cellai, 2016), together with the rising costs of energy, that leads to an increasing number of households that cannot afford the costs of heating, suffering the so-called **"energy poverty"** (BEIS, 2020; Escandón et al., 2019).

Besides the risks that extreme temperatures (concerning the need of heating or air conditioning systems), and their susceptibility to dehydration, infections, respiratory and cardiac problems, it must be taken into consideration that many devices on which disabled or older people rely upon such as wheelchairs and mobility scooters, nebulizers or dialysis machines depend on electricity. In addition, in case of evacuation, elevators that can be operated with power outage will be required to move these people safely and quickly, avoiding also the possibility of falls or fractures. Lastly, these and other events linked to climate change can have strong consequences in mental health,

5 https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/disability/bulletins/disabilityandhousinguk/2019

from depression and anxiety to post traumatic shock disease, leading to further disability or premature death (Cianconi et al., 2020).

Climate change may also affect to resources such as water and land, reducing food availability (reduced yields in crop and livestock systems, increase of pests, decrease food quality), access (price rises, disruption of supply and transportation infrastructure), utilisation (decrease of nutritional quality by toxins or microorganisms), thus favouriting undernourishment and related health problems (Mbow et al., 2019).

In turn, the **impact of LTC and social housing in climate change** is related to a wide variety of factors, that also depend on the type of care that is provided, and therefore they are divided in: (i) LTC in residential institutions, and (ii) home care.

LTC in residential institutions:

INFRASTRUCTURE

The first factor implies the use of land to create new buildings, which may require the transformation of soil to change from natural or agricultural use in peri-urban land into urban soil, which maybe in addition more isolated from cities and urban communities. This produces the sealing of soil and a greater vulnerability in case of floods, since public land is often located in unstable soil, and where relocation is difficult due to the barriers posed by the councils themselves, as it happens in Romania according to one of the interviewers. In this sense, particular attention should be paid to land planning from policy makers, civil engineers, architects, etc. since this chapter is closely linked to transport needs. This problem is aggravated by the need of creating transport infrastructures, roads and sideways for accessing, as well as the supply of water and energy conductions, to serve these facilities. As for any other building, greening of residential home care is linked with the definition of strategies to encourage recycling of materials and the implementation of **Life-Cycle Assessment (LCA) approaches** from the design phase of the project (Karji et al., 2019; Marrero et al., 2020; IRP,2020). To this regard, the European Commission has recently published a set of principles for the sustainable design and building and will launch a new **Strategy for a Sustainable Built Environment**, to align this sector with the New Circular Economy Action Plan (2020), ensuring coherence across the relevant policy areas such as climate, energy and resource efficiency, management of construction and demolition waste, accessibility, digitalisation, and skills. Among the needs and challenges regarding infrastructures, the following can be highlighted: need of comprehensive urban planning and link with other related policies, investment for promoting sustainable built environment, and consideration of the circularity principles. An opportunity also arises in transforming the concept of LTC into Green Care Facilities, in which users live in small communities that include activities in natural environments, access to green areas and contact with animals (Buist et al., 2018). This possibility could be limited in urban environments to small gardens and terraces, green roofing and façades (not always accessible), but in any case, the creation of green areas and fostering ecosystem services in urban an peri-urban environments is recommended, since they improve the quality of life of people residing in care facilities (in terms of physical activities, recreation and social interaction) as has been demonstrated by different authors (Artmann et al., 2017; Hegetschweiler et al., 2017).

In Belgium, the European Rural Development Funds (ERDP) have co-financed the adaption of agricultural holdings into Green Care facilities for therapeutic purposes, operating in partnership with public or private-sector healthcare institutions. End-users carry up tasks such as looking after animals and managing habitats. This also represents an opportunity for economic diversification of rural environments, since these Green Care farms are considered ideal therapy environments. In addition, it also involves the required training of rural businesses in Green Care skills.

ENERGY CONSUMPTION

LTC in residential care, day care and respite care centres also comprise challenges related to energy consumption, particularly for space and water heating. An additional factor that must be taken into consideration is that certain disabilities or conditions have consequences regarding energy, since for example people with mobility difficulties have often to expend inside considerable periods, adding to heating and lighting costs; disabled people may also need a higher ambient temperature in cold seasons. Other energy costs that may be accentuated in residential care can include extra laundry costs, extra costs of cooking because of dietary requirements, use of electrical aids or equipment, or the needing to charge batteries for electric vehicles such as wheelchairs or scooters, as well as accessibility requirements (George et al., 2013; Tebbutt

et al., 2016). All these should be taken into consideration when calculating the LCA and the energy balance of the smart building and grids (Louis et al., 2015), since it will require the deployment of additional ICT equipment that lead to an energy consumption (Mujan & Aleksic, 2019). Moreover, it will also require the acquisition of digital competencies and skills by the users (not only in the field of energy or environment) to ensure accessibility of the electronic devices implemented in smart facilities, so can be understood by the staff or end-users.

As consequence, there is a need to **increase energy efficiency** and more attention should be pay to **study the feasibility of energy autonomy for social infrastructures**. Considering challenges, the energy poverty is one of the big challenges to be faced to guarantee the wellbeing of people living in social buildings, being the access to affordable and sustainable energy included in the 2030 Agenda as SDG7; moreover, poverty (in all its forms) is included in the SDG1. An additional opportunity raised with the Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency[6], which requires 3% of public buildings to be renovated each year to meet minimum energy standards and could be strengthened to apply also LTC residential facilities and social housing, among others. However, structured financial support is required, especially in regional and local administrations. Barriers in EU rules to invest in energy performance improvements should also be eliminated (Toleikyte et al., 2016).

In Scotland (UK), the Energy Efficiency Business Support[7], funded by the Scottish Government and European Regional Development Fund, offers free advice and technical support to be more energy efficient and reduce carbon footprint in different sectors (hospitalities, educational buildings, third sector, etc). Different case studies and best practices can be found in their website. It is worth highlighting the case of the Scottish Council for Voluntary Organizations (SCVO), where the office building was renovated to improve energy efficiency.

Water management

Water quality and scarcity also presents a global threat to human health and wellbeing (UN Water, 2015). Unpredictable weather conditions and natural disasters linked to climate change can also decrease the quality of water or become a source of water pathogens (Seenivasan et al., 2005) that can cause infections and deaths. Depending on the LTC facilities, water is required in several devices: sanitation and hygiene, kitchens and canteens, catering facilities, heating, and cooling, laundering services, and even rehabilitation pools in some cases. Therefore, water consumption in LTC facilities lies in different management strategies, being the first step the audit and development of **water management plans** in the household or institution. Water Management Plans are an essential tool to achieve a sustainable water consumption, considering water use monitoring, identifying saving options, determining targets and engaging and training building users (Priyalal et al., 2015).

Among the needs and challenges regarding water management, these can be summarised in:

- ★ the renovation of water systems and the implementation of technical efficiency measures, reducing barriers that prevent access to sanitation facilities (i.e., automatic flushes).
- ★ behavioural and educational measures for both users and staff.
- ★ implementation of water conservation measures (rainfall collection, installation of filters and depuration systems for water reuse); and
- ★ monitoring and auditing water management measures.

As an example, the Health Technical Memorandum for Environment and Sustainability published by the UK Government's (Department of Health, 2013) contains the guidelines for Water management plans. Specifically, this document, includes in Chapter 5 a description of how to develop a water strategy for health care centres, recommending an initial audit and reminding the dynamic nature of such a document, linked to a continuous process of monitoring, adaptation, and implementation.

6 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02012L0027-20210101&from=EN

7 https://energy.zerowastescotland.org.uk

The subsequent chapters of the document deepen in the different aspects and elements to be considered (auditing water consumption and waste, monitoring, sanitation structures, boilers and heating systems, sanitary appliances, cooking and catering services, etc). The reports also facilitate recommendations on available support for auditing and study cases of health centres, that may be adapted to residential LTC.

One of the interviewees reported that in one of the companies they manage, they have implemented innovative measures and processes that guarantee efficient consumption, as well as a responsible and sustainable use of water. Among them, the use of spilled water recovery systems and the implementation of washing at 65°C in industrial laundries. The interviewed person recognised that the main barrier to implement this in the social services sector is the lack of funding, although it will fit perfectly in the sector.

WASTE MANAGEMENT

Many disposable goods required by older people or people with disabilities (diapers, medicines) have an impact on climate change, due to the generation of large amounts of waste. LTC facilities generate different types of solid waste, at different rates. Depending on the type of facilities (respite homes, day-care homes, etc.), the type and amount of waste is different. This way:

- ★ Paper and cardboard represent a big amount of waste, coming from the management office but also from the delivery of supplies.
- ★ Plastic components include bulk containers for chemical products (used in laundry and housekeeping) and dietary food keeping.
- ★ Incontinent products such as diapers (which include plastic parts) are a significant waste stream in LTC residential facilities.
- ★ Waste generated from sanitary and healthcare provisions (cleaning chemicals, medications, drugs, sharps) that are disposed according to specific regulations, being the reduction of this type of waste difficult or not possible.

Moreover, LTC facilities produce construction and demolition waste, related to maintenance and renovation projects, redesigning and expansion of rooms, as well as structures and furniture. These can be reduced transferring them from older facilities. White waste includes large goods and appliances such as dryers, washing machines, and wheelchairs, which are often separated from the main waste disposal streams and recycled, although some of them are disposed producing rubber and metals to enter waste streams.

Although many capacities have separated bins and separate waste streams (paper and cardboard, plastics, biohazard) and municipal recycling collection is often available, their location in exurban sites could difficult this separation and recycling and cause all the stream to be sent to landfills. In the case of hazardous waste such as medicines, and sharps, they must be managed by authorised agents in most of the countries[8]. Yet some of the streams can also be managed at the facility, in example composting organic waste for use in gardens, adequate installations are required to avoid pests and smells.

The European Circular Economy Stakeholder Platform[9] collects different projects and good practices, that provide examples of circular economy and valorisation of a wide range of materials, also including green public procurement as a tool to promote circular economy. In addition, the European Commission promotes good practices experiences on Green Public Procurement[10] with examples of how public tenders and offers can be greened, including the use of life-cycle costing, as well as social requirements. These good practice cases also provide some ideas that may be replicated. It is also important to highlight that circular economy solutions (such as waste collection, refurbishing, and repairing services) could be linked to green education and employment opportunities, that will be discussed later in this document.

8 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008L0098-20180705

9 https://circulareconomy.europa.eu/platform/en

10 https://ec.europa.eu/environment/gpp/case_group_en.htm

Another good practice that could be implemented for goods and services in LTC and healthcare facilities has been described by World Health Organization (2018): the development of sharing marketplaces for care organizations, allowing a more intensive use of goods and equipment. This practice has been already implemented in Netherlands and Belgium, allowing facilities to share equipment (i.e., those used for rehabilitation purposes) and to lease those that are not used, avoiding the need to acquire goods through leasing schemes (in which the use for a certain period is sell, and not the good itself. This type of sharing economy has also been applied for home care in other countries, as analysed by Miller et al. (2020).

The EMBRACED project[11] funded under H2020 programme (2017-2022) aims to convert Absorbent Hygiene Products (AHP) such as diapers, nappies, sanitary towels, and incontinence products which are currently considered a non-recyclable fraction, to avoid their incineration and deposit in landfills reducing greenhouse emissions, producing instead valuable resources such *as biobased building blocks, polymers, and fertilisers.* The project is cooperating with industries, local waste management companies and public institutions.

Another experience of work in the field of industrial recycling is Recycling4al[12]l, an enterprise that arises from an agreement between Repsol and Ilunion (created by Fundación ONCE) in Spain. Recycling4all is specialized in the large-scale recycling of Waste Electrical & Electronic Equipment (WEEE) and covers all the value chain of these type of products, with the vision to extend the activity to products and materials linked to energy transitions such as PV plates, solar panels, etc. The staff is composed by 147 employees, being than 65% of whom are people with disabilities.

In this section, it must be taken into consideration that the different legislations in EU countries regarding waste management may imply a **challenge** or even a barrier to sustainable waste management. The delivery of A New Circular Economy Action Plan (2020) by the EU Commission provides an agenda to accelerate this change building on the actions implemented since 2015 and foresees the harmonisation of collection systems, as well as set of interrelated initiatives regarding key product value chains to prioritize the reduction of waste and to reinforce internal markets for secondary raw materials.

CATERING SERVICES AND FOOD DELIVERY

Different authors have studied the environmental impact of catering services and food delivery in health care and LTC facilities across Europe, finding that a great amount of material is wasted (Hansen & Derdowski, 2020; Strotmann et al., 2017)**,** which represents an inefficient use that contribute to natural resource depletion and environmental pollution (Corrado et al., 2019). Canali et al., (2017) classified drivers for food waste: economic (organisation of food businesses, integration along the food chain, management choices); legal and political (inefficient legislation of the food sectors and other related fields); the social context (user's behaviours and choices) and technical. Regarding the technical drivers, factors like product quality and conservation possibilities are included, but also climate change, since it is predicted that increasing temperatures will cause losses due to droughts, moisture, contamination and harvest reduction because pests and diseases (FAO, 2008). An additional factor occurs in LTC facilities, such as the presence of different health conditions, nutritional needs as well as presentation requirements (minced or mashed foods, puddings to facilitate chewing and swallowing) that ensure health and wellbeing of users considering security issues (intoxications, choking).

11 https://www.embraced.eu/project

12 Sources: https://www.fundacionrepsol.com/en/news/repsol-foundation-has-created-company-promote-recycling-and-workforce-inclusion-together and https://www.marronyblanco.com/ilunion-y-fundacion-repsol-crean-recycling4all-para-el-reciclaje-de-raee/

Reducing food waste requires a **shared responsibility** across the supply chain, connecting all the stages or activities and stakeholder's behaviour (producers, manufacturers, end users) at the regional and global level (Göbel et al., 2015). This has been also appointed during one of the interviews, suggesting the synchronization of food delivery services with other social services in terms of food distribution and use of services. This would be facilitated through the development of normative and business models that promote the reutilisation of food.

Some opportunities for greening have been detected based on studies in different healthcare and LTC facilities (Corrado et al., 2019): information (sensitisation on the topic of food waste among staff, users and relatives); communication (between the caregiving staff and the kitchen for adequate planning, among caregivers regarding nutrition protocols, with end-users making menus easily understandable and descriptive); and processes (prioritising individualised services and food supply rather than tray service, definition of protocols to quantify served and wasted food). An opportunity in this field arose from the **Circular Economy strategy**[13] published in 2015 (and the more recent New Circular Action Plan[14] delivered as part of the European Green Deal in 2020), and the **EU Platform on Food Losses and Food Waste**[15] established in 2016, that aimed to support all actors in the definition of measures to prevent food waste, the sharing of best practice, and the evaluation of progress made over time. The platform was planned to end in 2019 but it has expanded until 2021. The set of recommendations published included all the stages of the value chain including redistribution of food which would represent also an opportunity in terms of employment generation (EU Platform on Food Losses and Food Waste, 2019). Nevertheless, barriers have been detected in the implementation of these measures, mainly by the big industries, as was also stated by one of the interviewees.

An example of best practice in this field is provided by the FUSIONS (Food Use for Social Innovation by Optimising Waste Prevention Strategies) project[16] funded under FP7 programme (2012-2016). In the final report, the project delivered six groups of recommendations concerning policies, practices and effective approaches for food waste prevention and reduction (WASS et al., 2016). Moreover, the project included an inventory of social innovation projects, as well as feasibility studies of social innovation models, including production, retail, and household practices.

The project REFRESH[17] funded by the H2020 programme (2016-2019) aimed at the reduction of avoidable waste and the improvement in the valorisation of food resources, backed by research and through and holistic framework, to support decision making by industry and consumers. The project developed strategic agreements to reduce food waste with different stakeholders, such as governments and businesses in four pilot countries (Spain, Hungary, Germany, and the Netherlands) and guidance was provided to legislators and policy makers.

In the case of Sweden, public catering services cover a large number of meals through municipal organisations, among them older people care homes (Eriksson et al., 2017). In the municipality of Sala, quantification of served and wasted food was the first step to prevent food waste. Among the results, it was found that kitchens that received warm food prepared in another kitchen (satellite kitchens) had more waste levels than kitchens preparing the food themselves, which could be related to the higher flexibility in cooking the right amount of food, according to the users' needs.

13 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Closing the loop - An EU action plan for the Circular Economy (COM/2015/0614 final). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614

14 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A new Circular Economy Action Plan For a cleaner and more competitive Europe (COM/2020/98 final) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614

15 https://ec.europa.eu/food/safety/food_waste/eu_actions/eu-platform_en

16 http://www.eu-fusions.org/index.php

17 https://eu-refresh.org

TRANSPORT

Residential LTC facilities are often located in suburban land, which implies that both the caregiving staff as well as the residents require transportation options (public transport infrastructures and services) that are often scarce, or not accessible (also due to high transport rates). This also supposes an additional difficulty to access community services such as health, educational or leisure centres. Transport is therefore a barrier for greening, since vehicles used by social services are propelled with diesel, and the construction and renovation of infrastructure and vehicles, as well the development of multimodal transport terminals, paying special attention to accessibility (both physical and cognitive), connectedness and integration (European Disability Forum, 2020) are needed.

Home care

INFRASTRUCTURE

Land planning issues could be also a barrier, since public housing projects are often located away from city centres and community services, while in other cases social services are provided in already existing buildings in urban environments. In the case of social housing neighbourhoods, little attention is paid for complementary infrastructure and transportation options to employment centres and other services, as described later.

ENERGY CONSUMPTION

It should be taken into consideration that many buildings used in social housing may be old or built under low-quality requirements, and thus require renovation to accommodate to isolation requirements, heating systems or cooling systems, being the latter exacerbated by the increase of temperature in urban cores, called "urban heat islands" effect (Hamilton & Erickson, 2012). Moreover, installation of renewable energy infrastructures (PV facilities) is not possible in every building, due to structural limitations and the fact that in countries such as Romania, social houses are often not owned by the inhabitants, as remarked by one of the interviewees. Social housing and home care is also a sector where the additional risk of energy poverty, arises, that is, the impossibility of tenants to afford energy costs (which is also related with renovation requirements for insulation or enhancement of energy efficiency). On the other hand, the increase of energy efficiency in homes and care centres can be considered as a contribution to climate change adaptation in the housing sector, yet different studies have reflected barriers related with resource availability, regulatory constraints, lack of awareness and behavioural factors, and scarce cooperation with administrations (Boezeman & Vries, 2019; Forde et al., 2019; Hayles & Dean, 2015; van de Moortel et al., 2018).

Participants in the interviews from Flanders reported as good practice the energy scans offered by Infrastructure Fund for Person-Related Matters (VIPA) and the Vlaams EnergieBedrijf (VEB) to make facilities in the welfare and care sector more energy-efficient. In concrete, VIPA provides a free customised energy scan where experienced energy specialists examine how buildings can become more energy efficient.
As a result, the energy scan provides a dynamic action plan with proposed energy saving measures. The energy scan is completely free of charge for facilities that implement all measures that pay for themselves within five years. Thus, VIPA covers the scan costs, but if the beneficiary does not implement the recommended measures with a payback period of less than five years within three years, the cost of the energy scan is charged to the beneficiary. To implement those measures, the healthcare facility can also ask for climate subsidies to VIPA.

As an example, the CASH project (2010), funded under European Region Development Funds (ERDF) programme within URBACT II, led to the creation of the CASH Network, bringing together different cities and a region seeking for solutions for climate efficiency in social housing, finding that these solutions could also imply opportunities in vocational training and the creation of jobs. Some of the solutions proposed were making roof surface available for energy production; the implementation of energy audits in social houses, the application of policy mechanisms such feed-in tariffs, in which there is an obligation to buy renewable electricity enabling the development of renewable energy projects; the promotion of decentralised community energy systems, in which combined heat and power (CHP) serve district heating; and the subsidising of building isolation measures and/or energy savings. On the contrary, the conclusions of the project revealed that there are many challenges and barriers that make difficult the greening of social housing: the wide amount of ownership structures that difficult the replicability of measures; the inclusion of energy costs in renting bills that result in a lack of transparency and a discouragement for change; the lack of financial support schemes that require investment from the households. In addition, many measures must be underpinned by policies and planning at different levels, such as Sustainable Energy Action Plans at the local/regional level.

In this domain, it is also worth highlighting the LEMON project, funded within the H2020 framework, aimed at providing assistance to public and private entities for the energy retrofitting of 622 social housing units in Italy (Reggio Emilia and Parma), supplementing regional and national loans and incentives to improve energy efficiency of the houses. The project leveraged on different initiatives already existing in the region, such as ERDF, European Cohesion Funds (ECF), as well as Tax and VAT incentives for energy efficiency refurbishment (Ecobonus) that support energy efficiency interventions in buildings, being available for private owners and also for social housing. Two types of actions were carried out: (i) the renovation of the building, improving their energy efficiency using Energy Performance Contracts between tenants and owners and energy suppliers, which are agreements where the investments (works, supplies or services) made are paid according to the level of efficiency, stablished through energy performance criteria such as financial savings (European Directive 2012/27/EU[18]); and (ii) the project also comprised training activities for tenants and policy makers at different levels in relevant fields such as energy dwelling management, regulations and energy saving strategies. As a conclusion of this project, it must be highlighted that most social housing buildings assessed had low energy efficiency (energy class F to G[19]) and the retrofit programme did not have a great impact on the energy efficiency classification of the buildings and in most of the cases the dwellings achieved the C energy class, which limits the efficacy of the project.

In Romania, some city councils have invested in renewable energies to support vulnerable families living in isolated areas through the building of photovoltaic panels parks that provide energy with their corresponding maintenance and security services. As mentioned, in Romania it is not always possible that each house has its own panel because the houses do not support these facilities, the property of the house is not usually owned by the inhabitants, and the families do not have the knowledge required to their maintenance. Installing panels in a public area is a solution that is being tested in Romania. The management of those panel parks can be carried by NGOs who have the required knowledge. With this initiative, Romania will provide energy to isolated vulnerable areas solving the challenges stated before.

In UK, Scotland's Home Energy Efficiency Programmes are funded by the state and have three distinct components: grants via local authorities, subsidies for vulnerable households, and interest free loan schemes- Home Energy Scotland provides oversight advice and support[20]. Also, in UK, there are different social businesses working as cooperatives, that provide tools and knowledge to enable communities to develop and own their own renewable energy, including services and professional skills. An example is Repowering London[21], a Community Benefit Society that use their financial returns in local benefits, installing energy assets in other low-carbon projects such as schools and vulnerable neighbourhoods managed by the communities.

In summary, there is a need to increase energy efficiency in social homes and care centres and more attention should be pay to study the feasibility of energy autonomy for social infrastructures. Considering challenges, the energy poverty is one of the big challenges to be faced to guarantee the wellbeing of people living in social buildings, being the access to affordable and sustainable energy included in the 2030 Agenda as SDG7, while poverty (in general) is included in the SDG1. It is also important to highlight the importance of promoting funding schemes from local and regional authorities, not only in the form of cash grants, but also as different amounts of specialised staff time, low-interest loans, or guarantees (Samson, 2018), as well as clear and consistent eligibility criteria for obtaining them, since they may be different depending on the region or conditions may fluctuate along time (Snell et al., 2018).

18 https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=CELEX%3A02012L0027-20201026

19 Energy efficiency classes: https://europa.eu/youreurope/business/product-requirements/labels-markings/energy-labels/index_en.htm

20 https://www.homeenergyscotland.org/find-funding-grants-and-loans/interest-free-loans/

21 https://www.repowering.org.uk/l

WATER MANAGEMENT

As mentioned before, the decrease of water resources and the degradation of their quality is a risk that will be faced in the near future. Unlike LTC residential facilities, home care and social housing represent a water management more like any other household, including sanitation and hygiene, kitchen, and heating and cooling devices. In Europe, the 12% of water consumption is attributed to households, with great differences among countries[22]. Together with the renovation of water systems and the implementation of technical measures such as water-saving flushes, or showers instead bathtubs, awareness-raising activities (through easy-reading infographics, formal education curricula and other media) should be put in practice among caregivers and users to identify saving options and reduce the water footprint as consumers.

In the UK, the Code for Sustainable Homes (Great Britain & Department for Communities and Local Government, 2009) regulate all new public building developments, that are subject of obligatory water efficiency benchmarks. The codes include flow restrictors to reduce outlet flow, grey-water recycling systems to use shower or tap water instead of potable water in WC flushing or washing machines, or the installation of green roofing and rainfall collectors.

Some water companies such as Anglian Water provide the opportunity for partnerships with charities, aimed at providing support to groups with vulnerabilities in their contracts, or for caregivers. They are already collaborating with different NGOs. This measure could be improved with discounts and advantages from these water companies to social services entities, or through the promotion of financing schemes similar to the existing Energy Performance Contracts for energy, in which renovations for water savings achieved are used to refinance the measures' investment cost.

WASTE MANAGEMENT

As in the case of water management, waste management may be show similarities to other households (organic, plastic and metal containers like bottles and cans, glass, paper and cardboard, etc), with exception of some disposable goods, such as diapers and medicines, that may be not reusable or recyclable and should be managed separately. Nevertheless, in home care, the amount of these types of waste is much lower as in residential LTC facilities. The installation of separated bins at home, together with awareness-raising activities for reduce, reuse, and recycle waste, should be implemented for end-users and their caregivers to avoid, taking into consideration physical and cognitive accessibility, to be later managed by municipal collection. Efforts should be reinforced by local administrations, to ensure the availability of separated collection systems also in peri-urban areas, as is already required by most national regulations.

CATERING SERVICES AND FOOD DELIVERY

Unlike residential LTC facilities, food consumption in home care is managed at a smaller scale, and taking into consideration the user's preferences and needs, that may be only slightly different to other households due to health conditions, special nutritional needs as well as presentation requirements that ensure health and wellbeing of users considering security issues. This leads to a lower food waste compared to larger scale kitchens, unless this support is provided by external catering services, as was also described by some of the interviewees during this research. All in all, different measures to prevent food waste including infographics have been published by the **EU Platform on Food Losses and Food Waste** including the individual or community level, with recommendations to be taken into consideration when going to supermarket (planning meals, writing shopping lists to avoid waste, buying bulk goods instead of packed food) or at home (freezing, using leftovers, storing the food properly, etc).

TRANSPORT

As described for residential LTC, social houses located in suburban or exurban land often lack with appropriate transportation options to community services (bus or train lines), which determines residents' transportation patterns and costs. In fact, proximity to employment centres, other daily needs and transportation networks also partially determine housing residents' transportation patterns and costs, which introduces the key role of land and urban planning in the design of cities (Rode et al., 2017). In this sense, special attention must be also paid to affordability, since families where a disability exist may have lower incomes and therefore be less able to pay for

22 https://ec.europa.eu/eurostat/statistics-explained/index.php/Water_statistics#Water_uses

a car (or a car with the required adaptations), while at the same time, urban neighbourhoods with best accessibility by public transport, walking or other alternative means may become increasingly unaffordable, as it has been described in places like Bath or Cambridge, causing a net loss of affordable home exacerbated by regeneration schemes (Transport for New Homes Report, 2018). One of the interviewees suggested that special transport tickets should be implemented to cover broader routes, since affordable rates are often only available (Rode et al., 2017).

One of the interviewees related a tension between current trends, aligned with the UN Convention on the Rights of Persons with Disabilities[23] that promotes home care as the opportunity to choose their place of residence and the access to in home and other community support services, while imply large costs in terms of transportation and required staff, which could be cut concentrating services in large facilities. This would also apply to day-care centres and respite centres, where users must be transported twice daily. Anyway, the interviewee stated that the care for the environment should not entail a decrease of social services provision, that is, for example that professionals should visit individuals at home the necessary times although it entails more pollution; so, the service should try to be more environmentally friendly without losing its quality. At this regard, one of the interviewees also appointed that the hiring of additional staff could reduce the number of shifts required, allowing the caregivers to stay longer (2-3 hours) while reducing the transport impact; moreover, the inversion in electric/zero emission vehicles could also contribute to mitigate the emissions. Other interviewee pointed out they are analysing the possibility to decentralise some of the services to provide them at neighbourhood level, so the users' mobility is reduced (less pollution), but also the access to them is increased (special relevant for users with mobility problems).

Good practices regarding transportation and accessibility comprise a complex package of measures, many of them require an adequate land planning and infrastructure design from policymakers. In this sense, the Local Government Association in UK has delivered a series of briefings prepared by the DecarboN8 Research Network and the Centre for Research into Energy Demand Solutions that set out a framework of actions that would be most effective for local governments in the transport sector[24]. These briefings do not provide a prescription, rather a collection of options that will need to be combined. Among the options included, it is worth highlighting the concept of "20-minute-neighborhood" as a long-term planning strategy that provides an alternative to car-dependency, constituting a vision of neighbourhoods where people's daily needs are within a 20-minute walking for their home, maintaining and enhancing local facilities in the existing neighbourhoods (Campbell et al., 2020), as it has been announced in cities such as Paris recently. However, the briefings also recognise the need of accessibility planning and the importance of efficient and reliable public transport networks (Walker et al., 2020).

It is also worth noting the PE4TRANS project[25] funded under the INTERREG Programme that addresses the improvement of public transport policies by including citizens to the design and implementation of sustainable transport strategies and plans. PE4TRANS partners (among them Valladolid city in Spain, and Coventry University Enterprises in the UK to mention those in the countries of this research study) use participative principles to find solutions in each territory to enhance the use of sustainable mobility solutions, including best practices such as networking collaboration among policy makers to promote public transport integration, the promotion of Intelligent Transport Services and electric vehicles.

23 UN Convention on the Rights of Persons with Disabilities https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/convention-on-the-rights-of-persons-with-disabilities-2.html

24 https://www.local.gov.uk/decarbonising-transport

25 https://www.interregeurope.eu/pe4trans/

In summary, the sector of social housing and LTC are marked by the **need** of adequate land planning and market regulations that increase the availability of affordable houses (Montaner et al., 2016; Planning House, 2020) that are in addition energy-efficient and that can contribute to reduce private transport use, enhance public transport use, ease traffic congestion, and reduce air pollution. Nevertheless, accessibility is an important factor that must not be left aside (i.e., regarding mobility requirements for those that cannot walk or use bikes or other transport means). In the case of LTC facilities, this may include the need of changing the concept of care homes itself, to **Green Care Facilities** in which users live in small communities that include activities in natural environments, access to green areas and contact with animals (Buist et al., 2018). This possibility could be limited in urban environments, but in any case, the creation of green areas and fostering ecosystem services would be needed, since they improve the quality of life of people residing in care facilities (in terms of physical activities, recreation and social interaction) as has been demonstrated by different authors (Artmann et al., 2017; Hegetschweiler et al., 2017).

Besides, funding opportunities that specifically address the needs of people with disabilities (such as renovation with physical and cognitive accessibility criteria) would be required. This was also related by some of the interviewees, highlighting the accessibility aspect since it is perceived as a pending challenge. Also, for LTC in private homes, the research carried out has revealed the need of longer shifts (accompanied by the reinforcement of staffs) that allow reducing the number of travels from one location to another, accompanied by an improved planification. Moreover, a better planification and integration of health and care services is required in LTC, which in turn would be related to reduced health costs, fewer lost hours and reduction on energy dependency, which aggregated cost can be utilised for poverty reduction and implementation of other social welfare measures (Dulal et al., 2011; UNECE, 2020).

Finally, the training of caregiving workforce, regarding health impact assessment, circular economy and waste management, energy and water management, prevention of disease, health promotion, planning and response on diseases and pandemics, as well as man-made and natural disasters such as those arising from climate change are highly required, as was already stated in the Green Paper on the European Workforce for Health[26] by the European Commission in 2008.

26 Decision Paper. COM (2008) 725 final. https://ec.europa.eu/health/ph_systems/docs/workforce_gp_en.pdf

In summary, how public authorities could facilitate the green transformation in the NGO service providers?:

- ★ Implementing funding opportunities for care services to ease the implementation of audits, in different forms (direct grants, loans, guarantees, free service provision).
- ★ Regulations on land planning taking into consideration transport infrastructures, to ensure physical and cognitive accessibility of users and staff of LTC services.
- ★ Furniture and office supplies: foster Green Procurement, including clauses that exclude or give a lower value to those suppliers that do not use recycled materials or repairable devices.
- ★ Avoid food waste: serving smaller portions; planning menus in advance and prioritising self-cooked meals adapted to end-users rather than caterings or pre-cooked menus; promote local value chains for the acquisition of food and supplies.
- ★ Fostering Green Care communities that combine living in private houses with activities in natural environments.
- ★ Direct funding calls and guarantees specially focused at social services to build facilities using recycled materials or considering bioclimatic criteria and Net-Zero Energy Buildings (NZEB), or those that require renovations of existing buildings to increase the efficiency and/or implement renewable energy production.
- ★ Improving the regulations to promote Energy Performance Contracts for LTC institutions, both in residential or day-care facilities and social housing.
- ★ Transport: Tenders involving vehicles that are less contaminant (electric/hybrid) awarded with extra points in the acquisition of fleets.

(iii) Child care

Children and families use social services daily to respond to their healthcare and school needs, and often for more specific needs like social support and justice (Fernandes Guerreiro & Sedletzki, 2016). In this sense, formal and informal childcare should be distinguished (Janta, 2014):

- ★ Formal childcare often encompasses education at preschool or compulsory school, childcare at centre-based services before or after school hours, and childcare at day care centres.
- ★ Informal childcare is characterised as unregistered by the state, often provided by grandparents and other relatives, unregistered child-minders, and au pairs.

In this section, authors focus on the particularities of childcare, referring to previous section for the common domains of transport, infrastructures, catering, energy efficiency, etc.

Climate change impacts childcare contributing to the spread of disease, especially in middle income countries. Children are more vulnerable to vector-borne diseases than adults. They face greater dangers from undernutrition and diarrheal diseases. The physical dangers of extreme weather events entail great threats to children physical and mental wellbeing (Unicef, 2015).

Moreover, the impact of climate change in crops and livestock may generate hunger, as well as water shortages, hurricanes and coastal flooding due to extreme weather events, being the effects more noticeable in countries where primary sector is the major source of income, and their intensification is expected to result in more deaths, injuries and trauma (Ahdoot et al., 2015; Xu et al., 2012). Furthermore, severe weather events can destroy or disrupt infrastructure critical to children's wellbeing, including schools, health facilities and transport. Because of the risks associated to climate change are often high in areas with poverty and low access to essential services (i.e., flood and drought zones), the climate change will not impact equally all. That is, children and families who are already among the socially vulnerable groups are likely to face some of the most immediate dangers (Unicef, 2015).

The provision of childcare impacts in climate change in the following extents:

- ★ Climate change education should be considered in the provision of childcare as it increases the children adaptive capacity and among their communities (Unicef, 2012). In fact, if it is included in the education curriculum for children and young people, they will develop and early understanding and contribution to the topic.
- ★ Promotion and implementation of initiatives that contribute to environmental care also involving children and their families, as part also of the educational curriculum. For example, reducing the amount of packaging used in children's launches through education families about the impact of plastic and other ways of packaging and introducing other ways of packaging that are environmentally friendly.
- ★ Early provision of vaccinations should be also considered to face potential increases of diseases (i.e., in areas where malaria and dengue are likely to increase, programmatic adjustments will be needed) (Unicef, 2015).
- ★ Infrastructures preparation to avoid education interruptions, safe schools, etc.

Among the **needs** required in childcare facilities, adequate spaces that allow physical activity must be taken into consideration (Henderson et al., 2015). In summary, childcare should provide services that reinforce the resilience of those families that is influenced by their access to adequate nutrition, health, education, water and sanitation and all forms of protection.

In Romania, isolated regions receive technical kits for electricity generation that entails high costs to NGOs providing the support, but that allow children of these regions attend their online lessons in Covid-19 period and do their homework. At the same time, their parents are supported in their transition to labour market. Professionals providing these kits and support are not trained in ecological issues but are aware about the high costs and benefits. Friendly solutions in this sense are being analysed.

In summary, how public authorities could facilitate the green transformation in the NGO service providers?:

- ★ Providing adequate spaces, with access to green areas with high biodiversity, and ease the implementation of outdoor activities.
- ★ Funding allocation to prepare infrastructures avoiding education interruptions, in the form of direct grants but also as loans or guarantees.
- ★ Include climate change and resource management in educational activities with parents and guardians, to build resilient communities (i.e., saving water and energy, installation of recycling bins) also taking in consideration health literacy and disaster prevention (for heat and cold waves, floods, wildfires)
- ★ Promote healthy and safe nutrition, with local products, and foster social farming practices in school yards and parks.
- ★ Transition to labour market: including skills in the field of sustainability, bioeconomy, energy efficiency, water, and waste management.
- ★ Revising and adapting children health programmes, to avoid the emergence of diseases such as dengue, malaria, zika… including vaccination programmes.

Childcare

(iv) Employment and training services

European **employment**, social affairs and equal opportunities policies aim to improve living conditions by promoting employment, sustainable growth, and greater social cohesion[27]. Europe seeks to increase employment and worker mobility, quality of jobs, working conditions and to modernise social protection systems. In concrete**, through the European pillar of social rights**, the EU works to safeguard the rights of citizens by ensuring: equal opportunities and access to the labour market, fair working conditions, social protection and inclusion[28]. The **European Employment strategy** constitutes part of the Europe 2020 growth strategy and implemented through the European Semester involving[29]: (i) employment guidelines, (ii) joint employment report, (iii) national reform programmes, and (iv) country reports with specific recommendations. Climate change is closely linked to the world of work. In fact, the Commission highlighted the link between climate change and preserving growth with a set of policy options to preserve the European competitiveness and growth at the same time benefiting EU population and contributing to climate-neutral economy (ESDE, 2019). The transition to a climate-neutral economy is expected to create 1.2 million jobs in the EU, on top of the 12 million new jobs already expected by 2030. The transition could mitigate the ongoing job polarisation resulting from automation and digitalisation by creating jobs also in the middle of the wage and skill distributions, particularly in construction and manufacturing.

On the other hand, to foster economic growth, the EU will need to invest in **people's skills and innovation**. In this sense, education and training services are competence of the Members States who face the same problems and opportunities. For that reason, the European initiatives for skills aim to mobilise all EU agents with three lines of action: skills for jobs, working together and helping people to develop skills through their lives[30]. Concretely, the European Skills Agenda tries to strength sustainable competitiveness as set out in the European Green Deal[31].

The **impact of climate change in labour markets** can be observed both directly, through the reduction in labour productivity; and indirectly, through the effect in jobs and work conditions (International Labour Organization, 2018; OECD, 2010; Pye et al., 2008). More specifically, impacts from climate change are increasing the challenges faced by persons with disabilities in the labour market. According to the International Labour Office (2019), when the job opportunities are reduced because the economic losses caused by climate disasters, persons with disabilities may especially struggle to find work if employers doubt about their work capacities. At the same time, persons with mobility limitations and health conditions may find heat stress. In fact, extreme weather events can have multiple effects on the lives of persons with disabilities such as loss of accessibility or damages to assistive devices, which can highly impact their lives and employment. Furthermore, the International Labour Office (2019) stated that poorly designed actions to combat climate change can intensify exclusion and deteriorate the conditions for persons with disabilities in the labour market.

From the other perspective, **the impacts of the training and employment services sector in climate change** are related with different aspects (UNESCO, 2017):

- ★ the infrastructures themselves, including resource consumption (water, energy), procurement methods and waste management (reduction of waste, upcycling, adoption of circular economy strategies) – these domains had been already analysed previously in this report.
- ★ through the integration of green skills in training curricula, equipping both trainers and trainees with competencies they need to deliver relevant contents across disciplines.
- ★ through their relationship with the community, industries, enterprises, and local markets, through the development of business practices; and lastly,

27 https://eur-lex.europa.eu/summary/chapter/employment_and_social_policy.html?root_default=SUM_1_CODED=17

28 https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights_en

29 https://ec.europa.eu/social/main.jsp?langId=en&catId=1001

30 https://ec.europa.eu/social/main.jsp?catId=1146&langId=en

31 https://ec.europa.eu/social/main.jsp?catId=1223&langId=en

★ through the transportation means required to access the training and employment services, both by employees and users.

Through the revised literature and the interviews carried out, it has been shown that the most urgent needs would be related to the energy efficiency of buildings and the implementation of assessment tools and funding for the retrofitting in an energy-efficient way; it has also been observed that skills for green transition are still not part of technical or vocational training curricula (International Labour Organization, 2018; UNESCO, 2017) due to a disconnection between environmental policies and educational systems and institutions. Private sector is playing a key role in providing **opportunities** for work-based learning such as internships and apprenticeships, but at the longer term these skills must be incorporated into the formal education system.

In the particular case of social work training, the inclusion of skills for green transition has been already proposed by different authors, at least in the United States, as a form of service-learning (Beltrán et al., 2016; Holbrook et al., 2019; Lucas-Darby, 2011) to understand and address environmental factors, particularly working with people of limited financial means. This is particularly important in the case of people with disabilities, since it has been recognised that they do not often access information about climate change due to isolation, a lack of engagement by climate advocates and other stakeholders, and a shortage of accessible materials (Saxton & Ghenis, 2018). Besides, according to the interviews, this is not the current focus of the training although it is coherent with their way of working and principles.

A remarkable good practice in the field of training has been found in the UK, which is in addition linked to the domain of social housing and green care of vulnerable and "hard to reach" participants: the **Down to Earth**[32] is a non-profit entity that delivers community building and housing while fostering skills development among the workforce (Davies et al., 2020). Also, in the UK, the initiative **School Energy Efficiency**[33] brings together universities, renewable energy industries, technology businesses, and funders, providing expertise and solutions for schools' energy needs, engaging the whole staff reducing the energy impact of educational centres, although it is not specifically aimed at centres that train people with disabilities.

As an example of greening curricula, **Green Care and Social Farming** initiatives can include practical training and employment opportunities, also comprising the inclusion of social enterprises. This way, social farming on private land can be an example of activity to create training and employment opportunities for vulnerable social groups, as it has been already carried out in some countries such as Austria or Slovenia (Ludvig et al., 2019). This could be considered as a reinforcement of the bioeconomy sector, which is considered a strategic economic orientation by the European Commission, since it could lessen environmental pressures strengthening green innovation, markets and jobs, existing evidences of its buffer role in times of economic crisis (Ronzon et al., 2020).

32 https://downtoearthproject.org.uk (accessed 10/12/2020)

33 http://www.schoolenergyefficiency.co.uk (accessed 14/12/2020)

It is also worth highlighting Good Practices funded under the Erasmus+ programme, that directly address the development of green competences and curricula. As an example, ***Liverpool Networks of Resilience*** *(KA1 Action, Project number* 2017-1-UK01-KA104-036114[34]) offered trainings to increase skills, social inclusion and engagement, providing the participants with competences to harness capacity for attention to better work with stressful circumstances (such as those posed by climate-change) as well as new and innovative land-based skills that can be directly applied to urban regeneration and community agriculture projects in Liverpool, including an acknowledged Certificate in Permaculture Design. Also, for adults, the project **Compétences pour l'éducation au changement climatique dans les communautés vulnérables** (Project number 2016-1-RO01-KA204-024763[35]) was aimed to develop interdisciplinary competencies that are needed for Education for Climate among collaborators of the partners that carry out activities in vulnerable communities, integrating them in three climate briefcases that allow the development of 108 educational activities, integrated as an Open Educational Resource. Furthermore, in the field of School Education, **SUSKIDS project** (Project number 2018-1-ES01-KA201-050639[36]) aims to connect the education and training of people with Down Syndrome in the field of sustainability, providing training courses and a coherent curriculum also using ICT, to help educators and families to transfer concepts on recycling and sustainable construction while increasing autonomy and opportunities of inclusion.

The Adapting and Installing Vocational Training for Renewal Energy (AIRE)[37] network provides youngsters (15-year-old) an opportunity to build a small remote controlled solar car model. The project also counts as part of prevocational qualification, required to enter VET courses in Germany, including a handbook for teachers to prepare the required lessons and propose activities, and is recognised with a European Qualification Framework (EQF) Level 2 Certificate. The network has different target groups depending on the country; among them children with Down Syndrome in Italy.

In the domain of **jobs**, social enterprises have emerged and developed in many European countries thanks to the interaction of bottom-up (led by the community) and top-down (led by external drivers) dynamics. Although the concept of social enterprise differ according to the legislations (Borzaga et al., 2020), social enterprises have arisen boosted by groups of citizens aiming to fill gaps in welfare or as service providers funded by public entities, seeking to increase efficiency. Additionally, many non-profit organisations have been pushed to a stronger entrepreneurial stance, also leading to the emergence of social enterprises.

Particular attention on this regard should be given to Work Integration Social Enterprises (WISEs), which are a special type of social enterprises operated by private and autonomous enterprises that operate in the market and that comply with a minimum threshold of 30% of disadvantaged workers over the total workforce, being their core mission the integration through work of disadvantaged people, in example people with disabilities. In several countries, among them Romania, Finland and Spain, the status of WISEs as social entrepreneurship have been included specifically to facilitate the inclusion of disabled people. Depending on the country, WISEs can be benefited by reduced VAT rate, a reimbursement of insurance costs for staff, a reduction of social society contributions of workers at risk of exclusion, or subsidies for economic compensation of the labour costs. Some examples of sectors in which people have been employed include eco-construction, energy efficiency and energy auditing, green area maintenance, waste disposal and recycling industry, directly implemented by public entities or in partnership with private organizations (Eurocities, 2015). However, the development of green works also arises occupational risks (emissions, exposure to physical and chemical hazards, and unexpected accidents) that must be taken into consideration (European Agency for Safety and Health at Work, 2013).

34 https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2017-1-UK01-KA104-036114

35 https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2016-1-RO01-KA204-024763

36 http://suskids.eu/

37 http://photovoltaire.de/. Handbook: http://photovoltaire.de/downloads/Handbook%20Aire%202013.pdf

In the case of public entities, an additional opportunity also merges through the regulations on Public Contracts; on this regard, the Directive 2014/24/EU of the European Union[38] (transposed into EU national Laws) supports the professional integration of disabled and disadvantaged persons, reserving the right of sheltered workshops and social enterprises to perform certain contracts or to participate in award procedures.

Some social services providers such as Caritas have signed joint statements on different issues related to a variety of topics, mainly in services such as re-use, recycle, repair, developing the second-hand market by facilitating access to re-usable goods, designing more durable and repairable products, informing consumers about the impact of their consumption and integrating the related costs can be fed into the just transition, remarking the opportunities of Green Deal for training and jobs[39]. This is also connected with the **New Circular Economy Action Plan (2020)**, which promotes product durability, reusability and reparability.

For the case of public procedures, Barcelona City Council has implemented an innovative collaboration between two entities, the Parks and Gardens Municipal Institute and the Municipal Institute for People with Disabilities, providing jobs for people with disabilities, so that 8.3% of the institute employees have an intellectual, mental, physical, or sensory disability. This programme also aims to improve other aspects such as psychological well-being, social skills, or housing issues. Besides, the programme contributes to make the Council more inclusive and to build the skills of management staff in working with people with disabilities[40]

In the case of Amsterdam, the road construction company Rutte[41] has a public contract with a social return clause. The company has implemented a training pathway of two years aimed at people aged 18-25 on social welfare or with disabilities, consisting of an education and work programme in civil engineering that ensures a six-month full-time contract after participation. Participants learn how to run a business using environmentally friendly methods and preventing environmental hazards in construction.

Other examples of job creation for people with disabilities are funded using the European Agricultural Fund for Rural Development (EAFRD), which also includes opportunities in the field of Social Farming (Tulla et al., 2014). As an example, De Laarhoeve[42] in Netherlands is a care farm employing people with mental issues that cannot enter the labour market, which processes agricultural products that are not suitable for the market due to different shape, colour or ripeness, or discarded (also contributing to alleviate food waste). In this case, the support of the Rural Development Plan was used to design and to build a processing line for these products, as well as a kitchen which is safe to people with disabilities, used to try new recipes. This has developed an innovative business model and a cooperation network with farmers, retailers, and educational centres.

38 Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0024

39 https://www.caritas.eu/wordpress/wp-content/uploads/2019/12/Joint-Statement-on-European-Green-Deal-Caritas-Europa-Euclid-Network-Microfinance-Centre-RREUSE-PDF.pdf

40 https://ajuntament.barcelona.cat/accessible/ca/tematiques/ocupacio

41 https://www.ruttegroep.nl/wegenbouw/social-return/

42 https://www.delaarhoeve.nl/

Another example funded by EARDF is L'Olivera cooperative[43] in Catalonia, a social integration enterprise with a long run (since 1978) linked to agrarian products (wine and oil) and working with people with disabilities as a Special Job Centre. In 2014, the cooperative had 50 employees, 50% of whom had some type of psychological disability or mental disorder. Their organisational model fully integrates the employees, who can also become members of the cooperative. More recently, they have created networks with other economic initiatives such as ecotourism, developing a more comprehensive rural development project.

Finally, it is worth to mention the service provided by the Spanish Association Inserta Empleo specialised in the labour inclusion of people with disabilities, developing strategies related to social inclusion addressed to foster the same opportunities, rights, and access to services.

In summary, how public authorities could facilitate the green transformation in the NGO service providers?:

- ★ Building and renovating educational infrastructures with sustainability criteria regarding energy production, water management, and waste management.
- ★ Foster public transportation to educational centres and employment services, improving accessibility through adequate frequencies and seasonal tickets or bonus for students and staff.
- ★ Widening green curricula in all education stages to include green competences and skills as part of technical or vocational training.
- ★ Promoting regulations and clauses that foster the employment of people with disabilities in green sectors.
- ★ Transition to labour market: fostering work-based learning such as internships and apprenticeships.

Employment and training services

43 http://www.olivera.org

(v) Social assistance services

Regarding the effects of climate change in this domain, they cover a wide range of aspects, that vary depending on the services covered. In concrete, this section covers other services not included in the above, such as food provision and, legal and social tutoring of people with disabilities, and leisure activities.

Food supply:

Environmental effects, together with economic effects, have a great impact in impoverished households and communities, leading them to experience food hardships (Kaiser et al., 2015). On the one hand, current food losses and waste affect the availability of primary resources (land, water, fertilization). On the other hand, food losses and the increasing demand of agricultural land contribute to the emission of Greenhouse Effect Gases, due to mineralisation and climate change. In this sense, there are many evidences in the literature that relates health and food environments, as well as poor diet decisions in disadvantaged environments, due to the scarce access to healthful food, including fresh products, low-fat dairies and whole grain foods while high-calorie and low quality foods are easy to access (Cannuscio et al., 2014; FAO, 2008). The problems to be solved by social services are addressing food justice at multiple system levels, contributing to the accomplishment of SDG2 (Zero Hunger) but also other SDGs such as SDG12 (Responsible production and consumption), and the prevention of chronic diseases and mental health problems related to poor diets (SDG3, Good health and wellbeing). As an example, due to the recent Covid-19 crisis, food charities experimented an increased demand in different EU countries, due to the augment of unemployment; at the same time, many of them have reported a decrease in donations (European Commission, 2020b).

According to the report "'Food in a green light" (European Environment Agency, 2017), which describes the challenges that Europe faces in shifting to a sustainable food system, shifting consumer's preferences to reduce meat and animal-derived products or to increase the awareness on food waste is positive although insufficient, and the harmonisation of different governance measures and legislations is required. An opportunity in this field arises from initiatives led by civil society at the local level, including community food production, initiatives that directly connect producers and consumers, and partnerships between initiatives to reduce food waste. The FAO Framework for the Urban Food Agenda (FAO, 2019) also recognises the value of social farming and short supply chains, articulating inclusive and transparent forms of market governance, protecting local biodiversity, providing a more efficient use of resources and energy (i.e. refrigeration) and reduce packaging, food losses and wastes. Moreover, urban and peri-urban agriculture creates social cohesion, reconnects people with nature and provides development opportunities and engagement opportunities. Also recovering food (considering safety conditions) that is at risk of being discarded should be considered an objective, facilitating redistribution and donations, simplification date marks and supporting social protection.

Some social services have already developed Sustainability Plans for their entities, that also include the provision of food at the daily basis or in special event, ensuring healthy and nutritive menus promoting those offered by NGOs and non-profits, taking into consideration sustainable agriculture and local markets. Moreover, one of the interviewees mentioned that food served from the own kitchens (in the case of long care centres) reduced waste; in the case of home support, this included awareness raising from personal assistants at shopping and cooking, to reduce packaging and food waste.

The project "Agrisociale: Coltiviamo Cittadinanza" promoted by Sulcis Local Action Group in Sardinia (Italy) created a network of actors in Social Farming including participatory processes and specific training, supported by ERDF and ESI Funds. The participatory process started in 5 municipalities with 3 social cooperatives and 4 agricultural firms, and the participatory process resulted in focusing on social inclusion of people with disabilities, constructing paths for training and later providing work placement (De Vivo et al., 2019). Social Farming can avoid the negative effects of the current food model and its negative impacts, cutting back intermediaries and increasing benefits of local farmers, promoting consumption of fresher and healthier products, while persuading people to commit to local consumption (Tulla & Martín, 2019). Similar experiences have been carried out in Ireland, with positive experiences in health and wellbeing of the participants (Social Farming Ireland, 2019).

Legal and social mentoring:

At this regard, it is worth highlighting the emissions related to home visits, in a similar way to LTC, especially in the case of some entities attending users in broad area or in rural environments, where public transport is not enough or inefficient, or there is a lack of measures to promote their use (i.e., social transport tickets that do not cover all the network at an affordable price), compelling users and social services staff to use private vehicles. Other impact related to legal and social mentoring is related with the bureaucracy and administrative or legal procedures that are required, many of them are still not available using digital means, which requires the use of huge amounts of printed documents, or even duplicated due to the diversity of administrations in charge (local, regional, national).

Among other measures that could be implemented in this domain, the following could be highlighted: digitalisation of administrative procedures, avoiding the use of paper when possible and simplifying bureaucracy, providing also public servants with the required skills; using technologies to reduce energy consumption and mobility in offices, such as the installation of renewable energy sources, the renovation of building to increase energy efficiency, the improvement of public transport, the implementation of more accessible and affordable transport tickets covering wider areas or the supply of funding for electric or hybrid vehicles.

Leisure activities:

Barriers for the inclusion of people with disabilities are present in many social and recreational activities, which include sports, shopping, museums, or tourism. For instance, in the UK, a higher proportion of disabled adults have reported fewer choices over their free time, compared with non-disabled adults, including the necessary infrastructure to deliver sport and cultural activities (Papworth Trust, 2018). Poor urban planning and low accessibility of leisure infrastructures such as parks could also hamper the access of people with disabilities (Seeland & Nicolè, 2006). On the other hand, socioeconomic factors should also considered, such as poverty, distance, the required expenses and time and transport restrictions (von Benzon, 2010). These barriers may be exacerbated by climate change, due to extreme temperatures, floods and weather events. Nevertheless, leisure activities in contact with nature (comprising outdoor sports, observation of nature, gardening, social farming, or even volunteering in pro-environmental organisations) may represent and opportunity to green these leisure services, with additional benefits in the health and wellbeing of people with learning disabilities, as it has been recognised by researchers in different countries (Natural England, 2016; Shanahan et al., 2019), also providing educational outcomes for the end-users. To overcome this barrier, the following actions may be recommended. (a) training staff to understand the needs of people with a learning disability; (ii) providing easy-read information about these leisure activities; (iii) Providing greater funding for resources and public transport, to reach the facilities.

There have been different initiatives aimed at increasing the accessibility of nature-based activities, i.e. the Guide of accessible spaces and activities in nature elaborated by PREDIF (2011) gathering different places and facilities around Spain, includes cards with information regarding different types of disability (physical impairment). Moreover, an study on adapted water sports (kayak, paddle surf) for people with disability also gathered positive narratives from the users involved in the programmes, but highlighted barriers regarding risk-management policies and leisure-funding concerns (Merrick et al., 2020).

In summary, how public authorities could facilitate the green transformation in the NGO service providers?:

- ★ Implementation of measures to ensure food justice: regulation and facilitation of redistribution from supermarkets, restaurants and other hospitality services to food banks and soup kitchens.
- ★ Reducing food waste: clear labelling on nutritional value and date marks, awareness raising among staff and users on menu planning and food storage.
- ★ Including clauses for the acquisition of sustainable food products in catering contracts.
- ★ Measures to shift consumers' preferences to sustainable food systems: awareness-raising programmes to reduce animal -derived products, reduced prices for fresh products.
- ★ Fostering social farming and short food value chains, including community food production, through development of cooperative business models.
- ★ Promoting the reduction of packaging in food products, and the use of returnable bottles.
- ★ Digitalisation and simplification of administrative procedures in legal mentoring and personal assistance.
- ★ Provision of clear, accurate information in accessible formats, off-site and on-site, that allows people to decide for themselves whether to visit a site and how well they would be able to use it once there.
- ★ Consultations with local disability groups about the best ways of addressing access design issues.
- ★ Provision of funding for accessible outdoor activities (hiking tracks, public beach weelchairs)

Social assistance services

2.1 Green deal alignment and funding opportunities

Climate change and environmental degradation are worldwide current threats[44]. The atmosphere is warming, and the climate is changing every year. One of the eight million species on the planet are at risk of being lost. Forests and oceans are being polluted and destroyed[45]. To overcome these challenges, Europe lunched the **European Green Deal**, a new growth strategy that will transform the Union into a modern, resource-efficient, and competitive economy, where: there are no net emissions of greenhouse gases by 2050; economic growth is decoupled from resource use; and no person and no place are left behind. Reaching this target will require **action by all sectors of our economy**, including:

(i) investing in environmentally friendly technologies;

(ii) supporting industry to innovate;

(iii) rolling out cleaner, cheaper, and healthier forms of private and public transport;

(iv) decarbonising the energy sector;

(v) ensuring buildings are more energy efficient;

(vi) working with international partners to improve global environmental standards.

44 European Commission (2020). A European Green Deal. Striving to be the first climate-neutral continent. Available: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

45 Sources: (i) Intergovernmental Panel on Climate Change (IPCC): Special Report on the impacts of global warming of 1.5°C; (ii) Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services: 2019 Global assessment report on biodiversity and ecosystem services; (iii) The International Resource Panel: Global Resources Outlook 2019: Natural Resources for the Future We Want; (iv) European Environment Agency: the European environment state and outlook 2020: knowledge for transition to a sustainable Europe

Climate change is a worldwide citizens threat and even more for persons with disabilities (EDF, 2019). In fact, the EU Green Deal considers the social dimension of the sustainability and clearly remarks the aim of not leaving people behind. The Commission is aware that the transition can be only successful it is conducted in a fair and inclusive way considering the most vulnerable people that, at the same time, are the most exposed to harmful effects of climate change and environmental degradation[46].

In this sense, **Social services contribute to and are affected by climate change**. For example, as described before, the contribution of LTC infrastructure, that is, large residential care homes, day care and respite care centres, supported living housing, transport vehicles and much more. Such infrastructure relies on energy sources to heat, light, cater, drive, and digitalise these services. Similarly, many services are needed to ensure the quality of care provided including catering, medical equipment, toiletries and much more. The human side to LTC is also huge, with over 11 million staff in Europe who provide care and support to many millions more; the significant majority of which have not received training on climate mitigation measures in their work and lives. The individuals using LTC services are amongst the groups who have least access to knowledge about climate change and how it affects them. Indeed, climate change is rarely just a one-way direction, with LTC providers impacting the climate but not suffering from its consequences. The increase in natural disasters such as heat waves and summer floods all impact the provision of LTC in the areas concerned. Climate change will affect people's health, the communities they live in and the sustainability of the LTC services themselves as public money is drained elsewhere.

The **current New Deal call** includes different topics, many of them may imply opportunities in the domains of Social Services. For example, the New Circular Economy Plan, together with the Farm-to-Fork strategy, also include opportunities to green LTC, through funding of projects and the development of regulations and recommendations to reduce food waste and to make catering services more sustainable and resilient to climate change, within the Green Deal call. As an example, topic LC-GD-6-1-2020 includes a subtopic regarding food value chains; furthermore, Horizon Europe Programme will also cover this topic in the following years through Cluster 6.

Below, the Green Deal call topis are analysed as a potential tool to fund the existing needs and opportunities among the Social Services, as detailed in previous sections, and consequently a way to become greener at the same time aligning Social Services and Sustainable policies and initiatives:

Towards Climate-Neutral and Socially Innovative Cities

(IA, CSA) - TOPIC ID: LC-GD-1-2-2020

Opportunities in this topic lie on the development and implementation of climate action plans and social-innovation action plans, through the involvement of research organisations, academia, industry including social entrepreneurs, the financial sector including impact financiers, investors, philanthropists, NGOs, national and local authorities, and citizens. The topic requires the management of competitive calls addressed to third parties to fulfil the objectives of this action and promotes the coordination of ongoing European activities in climate neutrality for cities and should be sustainable, scalable, and self-financed beyond the life of the action.

This proposal includes 4 activities, all of them to be carried out by the projects proposed, being in the activity 3 where most opportunities can be arisen: **Social innovation and citizens' engagement. Nevertheless, activities 1 (development of action plans), 2 (investment preparation and finance) and 4 (development of pilots) may also imply opportunities in domains of interest, particularly care and community living.**

Climate-resilient Innovation Packages for EU regions

(IA, CSA) TOPIC ID: LC-GD-1-3-2020

This topic aims to scale up and demonstrate at large scale systemic solutions and new ways of decision making to support regions and communities most exposed to climate change impacts through adaptation solutions, among key community systems such as health, primary production, or transport. This will be addressed to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters, which is specially required on those countries more vulnerable to climate change and among them, older and disabled people that

46 https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

might experience barriers related to mobility, awareness on the risks, or others (Lucas-Darby, 2011).

This topic is organised in two subtopics, and the projects should fulfil one of them, being the subtopic 2 (Support the design, testing and upscale of Innovation Packages- Coordination and Support Action) **where opportunities in the domains of education and training arise, as well as for community living, since it mentions explicitly the engagement of cities through educational and training activities across relevant sectors and involving diverse groups and covering all categories of population.** Moreover, this subtopic is also aimed at the **identification of institutional, regulatory, and financial barriers for the implementation of the packages, which may imply a further opportunity for future innovations**.

Demonstration of systemic solutions for the territorial deployment of the circular economy

(IA) (TOPIC ID: LC-GD-3-2-2020)

It is expected that circular economy will play a key role to address the systemic crisis, also including climate change, pollution, waste generation and biodiversity loss by providing systemic solutions for sustainable growth and economic recovery. On the other hand, circular economy involves the coupling of value chains and therefore the decrease on dependence of critical raw materials and resources[47],[48]. This topic is also directly connected to social justice through the generation of jobs and social inclusion, while its attention should be given to health and safety in these sectors, as well as the energy balances of the recycling of certain materials [49],[50], which are in turn potential challenges for the implementation of circular economy.

This topic is an opportunity, mainly in the domains of **work and employment and education and training,** since the proposals should include "circular territorial clusters" as socioeconomic and environmental systems composed of all relevant actors, including the clusters may involve sectors and value chains **related to care and community living: construction and buildings, electronics, and ICT; plastics, food, etc**.

Building and renovating in an energy and resource efficient way

(IA) (TOPIC ID: LC-GD-4-1-2020)

This topic aims at the design and retrofitting of building as zero-emission/zero-pollution[1], positive energy-houses in sustainable green neighbourhoods. These two components imply opportunities in the social domains due to different aspects:

The topic includes among the building to be designed or retrofitted different **residential and no-residential facilities**. This could imply an opportunity in the care and community living domain, improving the quality of life through the adaptation of the environment (**social housing**). Moreover, increasing the building energy efficiency can reduce demand for heating and cooling. Which implies an opportunity fighting energy poverty but also increases the affordability of social housing[51] . In addition, the integration of smart home services could have a positive impact in older people/people with disabilities, who already needs technological needs.

Other type of buildings that could benefit are schools and other public buildings. On the other hand, the topic includes the promotion of education for sustainability and the acquisition of behaviours and habits for resource efficiency and sustainability.

47 European Commission. Circular Economy action plan. https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf

48 OECD (2018), Global Material Resources Outlook to 2060 https://www.oecd.org/environment/waste/highlights-global-material-resources-outlook-to-2060.pdf

49 van Ewijk, S., Stegemann, J.A. & Ekins, P. Limited climate benefits of global recycling of pulp and paper. *Nat Sustain* (2020). https://doi.org/10.1038/s41893-020-00624-z

50 Heath, G.A., Silverman, T.J., Kempe, M. *et al.* Research and development priorities for silicon photovoltaic module recycling to support a circular economy. *Nat Energy* **5,** 502–510 (2020). https://doi.org/10.1038/s41560-020-0645-2

51 Tetteh, N. ; Amponsah, O. 2020. Sustainable adoption of smart homes from the Sub-Saharan African perspective, Sustainable Cities and Society, Volume 63, 102434, https://doi.org/10.1016/j.scs.2020.102434

In the field of work, it implies the creation of jobs in digitization (energy, ICT) but also in the monitoring the performance of the buildings.

It is also noteworthy that this topic does not mention specifically citizens in vulnerable groups among the relevant players, which would be desirable.

Testing and demonstrating systemic innovations in support of the Farm-to-Fork Strategy

TOPIC ID: LC-GD-6-1-2020

The Covid-19 pandemic has highlighted the importance of robust and resilient EU food systems within a sustainable, circular bioeconomy to respond to global shocks and disruptions in supply chains, and to mitigate socio-economic impacts of crises notably as regards food poverty, which will be exacerbated in the following decades due to climate change.

The topic is closely related to the overall objectives of the Farm-to-Fork strategy, that "*aims to address the challenges and accelerate the transition to sustainable food systems, to ensure that the economic, social and environmental foundations of food and nutrition security are not compromised for current and future generations*" .This has several implications in social care, related to the reduction of social inequalities (in example, for the case of rural work), and the tackling of food poverty that lead to unhealthy diets.

This topic is divided in different subtopics, all of them requiring a multi-actor approach and analysis of the challenges including retailers, NGOs… also paying attention for building awareness, education, and skills relevant to the solutions on a European scale. Specially two of the subtopics could imply an opportunity in the field of social work:

★ **SUBTOPIC E. [2021] Reducing food losses and waste at every stage of the food chain including consumption, while also avoiding unsustainable packaging (IA).**

Regarding this subtopic, there is an opportunity for social care entities that deal with food distribution and/or catering services, collaborating in the search of systemic solutions from production to consumption, fostering the collaboration among all actors of the food chain, and also in the testing and generation of demonstrators. Moreover, the subtopic aims at building awareness, education and skills relevant to the solutions also among citizens, promoting the uptake and behavioural change, which would imply a chance for entities in the domain of training and employment, contributing to **the development of sustainable agri-food chains (**taking into consideration working conditions, integration into the local socioeconomic and cultural environment, and consumer safety and health) as it is already being carried out in some sectors (Martucci et al., 2019).

★ **Subtopic F. [2021] Shifting to sustainable healthy diets, sourced from land, inland water and sea, and accessible to all EU citizens, including the most deprived and vulnerable groups (IA).**

Opportunities in this subtopic are focused on health and sustainability of diets and food. For the sectors aimed in this report, opportunities lie on the development of local and regional initiatives to mitigate distortions in agri-food value chain, prices (Borsellino et al., 2020), creation of jobs by promoting already existing cooperatives in the field of food supply, as well as the training and education in healthy diets in different ages and collectives.

Restoring biodiversity and ecosystem services

(IA) (TOPIC ID: LC-GD-7-1-2020)

This topic addresses the preservation of healthy ecosystems as natural carbon stocks and sinks, contributing to mitigation and adaptation to climate change and disaster risk reduction and providing other ecosystem services (oxygen source, improved health and well-being, recreation, water retention and purification, air quality) as well as resources (food, fibres or fuel provision across the bioeconomy).

The opportunities of this topic are related mainly with the creation of jobs in the field of bioeconomy and the management of ecosystems, such as ecosystem restoration. Indeed, the topic mentions the integration of restoration activities as economically and sociable viable land use practices. Moreover, this will also require the building of skills in wider sectors of society and the empowerment of civil society in land planning and maintenance of the restorations. On the other hand, some of the ecosystem's services provided by healthy ecosystems are closely related to community living (i.e., regeneration of soils can reduce erosion and prevent floods strengthening resilience to climate change). In

this sense, the topic also mentions the deployment of innovative methods, including social and governance for upscaling the restoration. Therefore, the topic is linked with the domain of training and employment, generating sustainable skills and competencies, although it does not mention the particular case of people with disabilities and their role in the mentioned activities.

European capacities for citizen deliberation and participation for the Green Deal

(RIA) (TOPIC ID: LC-GD-10-1-2020)

The active engagement of citizens, and especially vulnerable groups which are often affected by environmental problems, requires the design of participatory processes involving citizens from different cross-sections of society across Europe, in a large spectrum of co-creation activities and events based on dialogue and information exchange, including but not limited to virtual ones. These processes require the education of citizens in the appropriate tools and the management of information and the connection with decision making bodies, to empower changes at a systemic level.

This topic represents an opportunity mainly in the field of training and education but also in community living. The topic mentions explicitly the inclusion of vulnerable and marginalised categories of the population, minorities and various age groups, including both youth and the elder generation, as well as urban, peri-urban and rural area, in analysis and deliberations.

Behavioural, social and cultural change for the Green Deal

(TOPIC ID: LC-GD-10-2-2020)

Although the topic refers to individual challenges, there are arrangements that may require to broader measures to support the affected groups and further research, through adequate evaluation methods that make possible to take accounts of possible trade-offs and impacts. Thus, the collective level must also be addressed including public and private organizations and social practices, such as changes in the workplace, future of work, sustainable business models, and public services.

This topic also represents an opportunity for disadvantaged and vulnerable social groups and communities that need special attention during the transition to a greener economy, since it addresses the challenging dilemmas that society will have to face, regarding mobility and travel behaviour, dietary choices, and the use and disposing of goods and materials.

This topic may imply an opportunity in the domain of care and community living, contributing to a greater societal resilience against climate change and environmental crises, and also for the education and training and the creation (or at least, the improvement) of job positions, thus contributing to several of the SDG.

2.2 Cohesion policy

For the next long-term EU budget 2021-2027, the Commission proposes to modernise Cohesion Policy, the EU's main investment policy and one of its most concrete expressions of solidarity.

FIGURE 5 | Cohesion policy and investments

European Regional Development Fund

The European Regional Development Fund (ERDF)[52] aims to strengthen economic and social cohesion in Europe by alleviating imbalances between regions. Among their priorities, there is a **thematic concentration on low-carbon economy** and specific assignation towards this priority according to the category of the region: 20% in more developed regions, 15% transition regions and 12% less developed regions. In their regulation, persons with disabilities and their specific needs in relation to social inclusion are mentioned. Activities addressed to this thematic concentration in social services sector, that is, promoting low-carbon economy (i.e., using renewable energy, recycling), can receive funding support in this fund.

European Social Fund +

The European Social Fund + (ESF+)[53] invest in people, improving their employment and training opportunities across Europe. It is the main European instrument to invest in people and implement the European Pillar on Social Rights. In this sense, ESF+ promotes equal opportunities for all and contributes to the implementation of the United Nations Convention on the Rights of Persons with Disabilities. Activities addressed to increase the **employment opportunities and training in green** subjects (i.e., energy efficiency, management of solar panels) of people with disabilities and workers of the social service sector can be susceptible to be funded with this programme.

Cohesion Fund

The Cohesion Fund (CF)[54] aims to reduce economic and social disparities in Europe and promote sustainable development. In this sense, its investment priorities are in line with the Green Deal approach: supporting shift towards a low-carbon economy in all sectors, promoting climate change adaptation, risk prevention and management, among other. Thus, and despite of there is no reference to persons with disabilities and related services, the social services providers are likely to be supported by this fund in the extent they contribute to its priorities.

The ERDF, the ESF+, the CF, and the EMFF will support five policy objectives: green and digital transition, more connected, inclusive, and social Europe, and a Europe that is closer to its citizens. Specific climate targets are established for the ERDF (30%) and the Cohesion Fund (37%), accompanied by a special adjustment mechanism that will help in monitoring and achieving them. Additionally, the JTF will support the adjustment to the transition to a climate-neutral economy by 2050, including the 55% GHG reduction by 2030, as established in the European Green Deal.

European Agricultural Fund for Rural Development

The European Agricultural Fund for Rural Development (EAFRD) is the funding instrument of the second pillar of the Common Agriculture Policy (CAP), which supports rural development strategies and projects, and it is one of the European Structural and Investment Funds (ESIF). It is allocated according 6 different priorities related to the knowledge transfer and innovation in the bioeconomy sector, enhancing the viability and competitiveness of agriculture and promoting sustainable management, promoting food chain organisation and resource efficiency, and supporting the shift toward a low carbon and climate resilient economy, restoring, and enhancing ecosystems. It must be also highlighted that one of the priorities of this Fund is **to promote social inclusion, poverty reduction and economic development in rural areas**.

Each EU country implement Rural Development Programmes (RDPs) adapted to their needs and capabilities on a national or regional basis. These programmes must address at least four of the six priorities of the EAFRD and set targets according to specific focus areas (related to the mentioned priorities). In the case of social inclusion, the focus areas are: facilitating diversification, creation and development of small enterprises, as well as job creation (FA6A); fostering local development in rural areas (FA6B); and enhancing accessibility, use, and quality of Information

52 https://ec.europa.eu/regional_policy/en/funding/erdf/

53 https://ec.europa.eu/regional_policy/en/funding/social-fund/

54 https://ec.europa.eu/regional_policy/en/funding/cohesion-fund/

and Communication Technologies (ICT) in rural areas (FA6C). Moreover, the countries must identify the measures to be used and the funding that will be required to achieve these targets.

Among the conditions for the RDPs, it must be mentioned that at least 30% of funding must be dedicated to measures relevant to the environment and climate change, through grants and annual payments. In addition, at least 5% of the RDP funding must go to actions based on the LEADER method, which brings together different stakeholders (farmers, rural businesses, local organizations, public authorities) in the so-called Local Action Groups.

The EAFRD is based on different financial instruments:

- ★ Loans, available where none others exist commercially, or offering better terms (lower interest rates, longer repayment periods), i.e., to diversify income sources, investment support to increase farm sustainability; microcredits, which are smaller loans, for people excluded from access to finance;
- ★ Guarantees, providing assurance that a capital will be repaid; and
- ★ Equity, where capital is invested in return for total or partial ownership of a firm, being this instrument more likely to be relevant for SMEs operating in the agri-food sector investing in new technologies (i.e to save water in irrigation, precision agriculture, modified crops to adapt to climate change).

These financial instruments may also be offered in combination with grants. In addition, advisory and other support types can also be grant-aided through the EAFRD.

The European Network for Rural Development (ENRD)[55] is a hub of information on rural development policies, programmes and initiatives, that supports the effective implementation of EU countries' RDPs generating and sharing knowledge and facilitating cooperation. It also includes a project database[56], which includes relevant examples in the field of greening social services for people with disabilities, promoting the work of WISEs.

2.3 Funding opportunities in other programmes

On 10 November 2020, the European Parliament and EU member States in the Council, with the support of the European Commission reached an agreement on the largest package ever financed through the EU budget to **rebuild a greener, more digital, and more resilient Europe**. Long-term budget 2021-2027 is combined with the temporary recovery instrument NextGenerationEU to achieve these goals.

The following table (Table 2) presents an overview of the funding programmes from the NextGenerationEU & Multiannual Financial Framework (European Commission, 2020a) where authors have highlighted the funds susceptible to finance the investment needs of social services to be greener:

55 https://enrd.ec.europa.eu/

56 https://enrd.ec.europa.eu/projects-practice_en

TABLE 2 | NextGenerationEU & Multiannual Financial Framework

NextGenerationEU
Horizon Europe
InvestEU
Recovery and Resilience Facility (grants & loans)
REACT-EU
Rural development
Just Transition Fund
rescEU
Multiannual Financial Framework
Horizon Europe
InvestEU
EU4health
Erasmus+
Creative Europe
Rights and Values
Integration Border Management Funds
European Border and Coast Guard
Neighbourhood, Development and International Cooperation Instrument
Humanitarian Aid

The funding programmes highlighted in the table above are briefly presented in the following sub-sections together with other interesting funding programmes:

Horizon Europe

Based on the political agreement reached by the EU institution, the Commission began to define the strategic planning process of the Horizon Europe programme. This will focus on three main pillars:

- ★ Pillar 1: Excellent science.
- ★ Pillar 2: Global challenges and European industrial competitiveness
- ★ Pillar 3: Innovative Europe

Among the pillar 2, social services can find opportunities to fund their activities to became greener. Although the definitive versions of the work programmes under this pillar are not published, some opportunities can be expected in the following clusters to contribute to the delivery of green social services (Table 3)

TABLE 3 | Horizon Europe clusters overview and potential funding opportunities for a greener Social Services Sector

Cluster	Cluster overview	Funding opportunities
1 **'Health'**	It is aimed to promote and protect human health and well-being, prevent diseases, and decrease the burden of diseases and disabilities on people and communities, support the transformation of health care systems in their efforts towards fair access to innovative, sustainable and high-quality health care for everyone, and foster an innovative, sustainable and globally competitive European health industry.	Social services providers can, under this cluster, implement research and innovation actions to address their users' health-related challenges related to climate change and understanding the health-related consequences of the climate change to adapt their services to the upcoming needs.
2 **'Culture, Creativity and Inclusive Society'**	It is aimed to meet EU goals and priorities on enhancing democratic governance and citizens participation, safeguarding and promotion of cultural heritage, and to respond to multifaceted social, economic, technological, and cultural transformations.	Activities in this cluster may contribute to expanding civic engagement, boosting transparency, accountability, inclusiveness, and legitimacy of governance, improving levels of trust, also for social service users. Activities within this cluster will also promote better access and engagement with cultural heritage, that can be considered social activities and tools for inclusion. Thus, actions will help tackle social and economic inequalities, support human capital development, and contribute to a comprehensive European strategy for inclusive growth. This also entails economic interconnectedness with a view to social resilience.
3 **'Civil security for Society**	It contributes to protecting the EU and its citizens from the threats posed by crime and terrorism and from the impacts of natural and man-made disasters.	Security research provides the needed resources to be prepared to face current and future threats, also in the social service sector. Actions will contribute to assess vulnerability, develop concepts and instruments for the anticipation of risks and enhance preparedness and social resilience against risks such as the produced by climate change (extreme events, resource depletion, migrations)
4 **'Digital, Industry and Space'**	It will advance key enabling, digital and space technologies, underpinning the transformation of European economy and society.	Activities within this cluster will contribute to a low-carbon, circular and clean industry and to fostering inclusiveness in the form of high-quality jobs and societal engagement in the use of technologies, also in the social service sector and among their users.

Cluster	Cluster overview	Funding opportunities
5 **'Climate, Energy and Mobility',**	It aims to fight climate change while improving the competitiveness of the energy and transport industries as well as the quality of the services that these sectors bring to society.	Actions of this Cluster will contribute to the technological, economic, and societal transformations required to achieve climate neutrality, adapt to the locked-in changes that are coming to our climate, and to ensure a socially fair transition, as outlined in the Commission's long-term strategy (adopted in November 2018).
6 **'Food, Bioeconomy, Natural Resources, Agriculture and Environment'**	It will advance knowledge, expand capacities and deliver innovative solutions to accelerate the transition towards the sustainable management of natural resources (such as biodiversity, water and soils).	Activities in this cluster will include measures for value chains, food systems, etc. that had a direct impact in the social services provision. In fact, activities will benefit people and society by promoting safe and healthy food as well as human well-being, including through a better understanding of consumer behaviour.

Erasmus+

Erasmus+
Enriching lives, opening minds.

Erasmus+ is the EU programme especially focused on the fields of education, training, youth, and sport, relying upon the idea that these action in these domains can make a major contribution to tackle socio-economic changes and alleviate inequalities. Therefore, it supports the implementation of European policy agendas for growth, jobs, equity, and social inclusion, addressing high levels of unemployment, premature school leave and social marginalisation, that affect also adult people with low skills.[57]

Erasmus+ promotes the collaboration among the different stakeholders in the Programme Countries, involved in education, training and social systems, strengthening the cooperation of policymakers, educational centres (higher education, VET, primary and secondary schools), enterprises and civil society organisations, supporting formal, non-formal and informal learning and providing opportunities for the exchange and transfer of knowledge in different areas. The recognition and promotion of tools for skills and qualifications, such as Europass, Youthpass, the European Qualification Framework (EQF), the European Credit Transfer and Accumulation System (ECTS), the European Credit system for Vocational Education and Training (ECVET), ensure that these skills and qualifications acquired during formal education or other experiences (i.e. work experience, volunteering) are easily recognised within and across borders, contributing to the labour market integration and mobility aligned with the objectives of smart, sustainable and inclusive growth. This investment in knowledge, skills and competences will benefit individuals, institutions, organisations, and society as a whole by contributing to growth and ensuring equity, prosperity and social inclusion in Europe and beyond.

It must be highlighted that social inclusion is an overarching priority across all sections of the programme, giving priority to projects that support approaches to reducing disparities in accessing and engaging with education and projects that tackle discrimination, supporting the integration of people with disabilities and encouraging sustainable cooperation between organizations at different levels. In addition, the programme aims to support awareness-raising on environmental and

57 REGULATION (EU) No 1288/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 establishing 'Erasmus+': the Union programme for education, training, youth and sport (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:347:0050:0073:EN:PDF)

climate-change issues, giving priority to projects aimed at developing competences in several sustainability-relevant sectors, developing green skills and methodologies as well as curricula that meet the needs of individuals in these topics. The programme also supports practices that prepare learners, staff, and workers to become agents of changes in resource saving, reducing energy use and waste, compensating carbon footprint emissions, opt for sustainable food and mobility choices, among others, enabling behavioural changes for individual preferences, consumption habits and lifestyles.

The programme is structured in different Actions, being the most noteworthy for this research the following:

- ★ **Key Action 1 - Mobility of individuals**. This action provides opportunities for students, trainees, professors, teachers, trainers, staff, education institutions and civil society organizations to undertake learning and/or professional experiences in another countries.
- ★ **Key Action 2- Cooperation for innovation and Exchange of good practices**. This action supports the establishment of Strategic Partnerships, Knowledge Alliances, and Sector Skills alliances, funding projects and initiatives that support cooperation and address one of more fields of education and training, designing, and delivering curricula and methodologies, promoting innovation and exchange of experiences and multidisciplinary teaching and learning.
- ★ **Key Action 3 – Support for policy reform**. This action supports the knowledge in the fields of education for evidence-based policy making and monitoring, and initiatives for policy innovations, through innovative evaluation methodologies.

Just Transition Fund

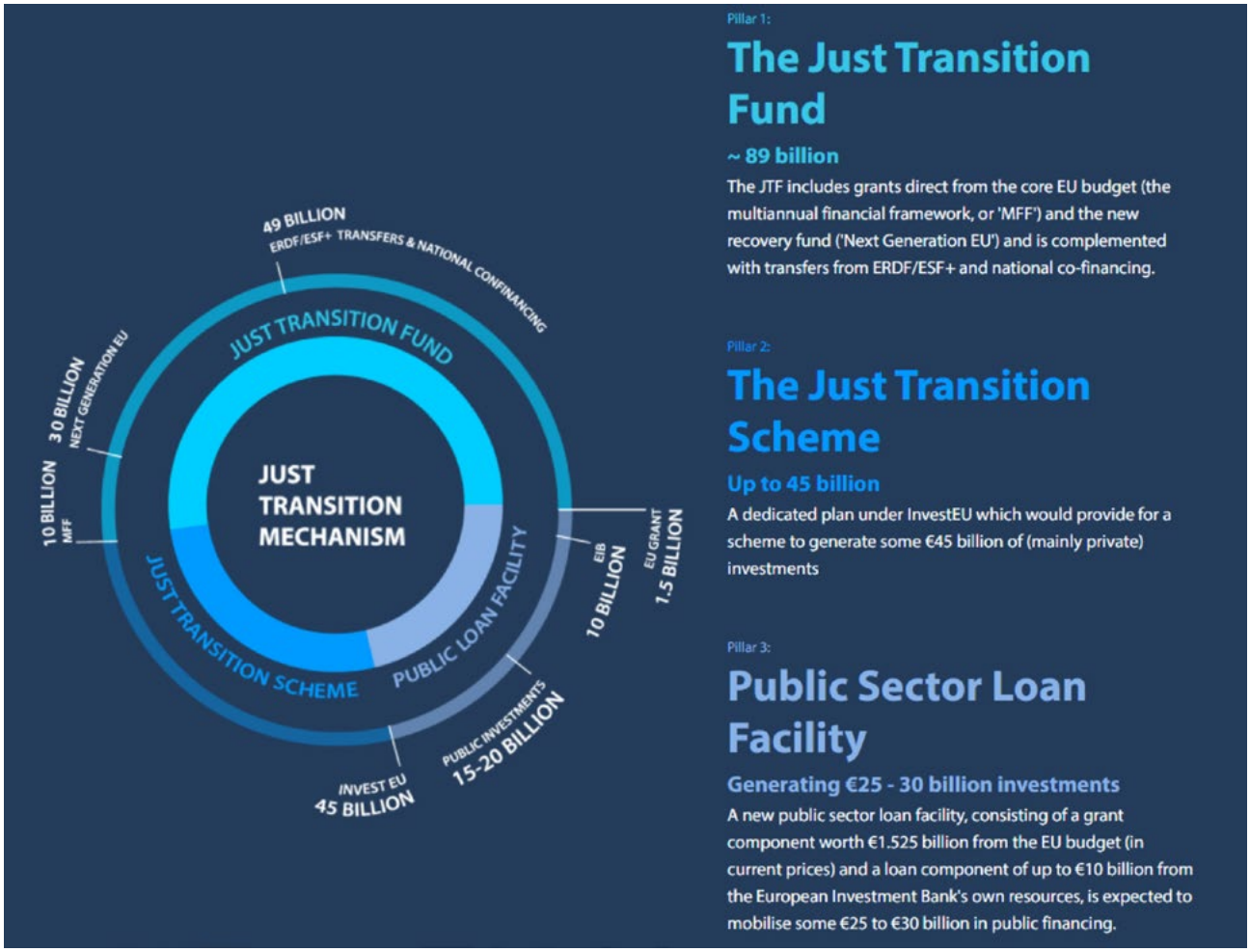
The Just Transition Fund (JTF) [58] is the first pillar of the **Just Transition Mechanism**. The fund will be equipped with 40 billion of euros made available to support EU countries in their transition, out of which €10 billion should come from budget appropriations, while the remaining additional resources of €40 billion, covering the period from 2021 to 2024, will constitute external assigned revenue stemming from the European Recovery Instrument.

In order to unlock funding from the JTF, EU countries will have to match each euro received from this Fund, for the share financed from the Union budget (€10 billion) with €1.5 to €3 from their resources of the European Regional Development Fund (ERDF) and the European Social Fund + (ESF+). This spending from the EU budget will be supplemented by national co-financing according to cohesion policy. This way, the JTF overall financing capacity exceeds €89 billion and may reach €107 billion.

The fund will support the economic diversification and reconversion of the territories concerned. This means backing productive investments in SMEs, creation of new firms, research and innovation, environmental rehabilitation, clean energy, up- and reskilling of workers, job-search assistance, and active inclusion of jobseekers programmes, as well as the transformation of existing carbon-intensive installations when these investments lead to substantial emission cuts and job protection.

58 https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism/just-transition-funding-sources_en

FIGURE 6 | Just Transition Fund mechanisms.



Source: europarl.europa.eu/thinktank/infographics/JTF/index.html

In the territorial Plans, member states should identify the territories and sectors eligible for funding under the JTF, based on the Commission recommendations. In the countries of this study, and in relation to people with disabilities, the country reports highlight de following challenges:

- ★ Belgium[59]: compared to other countries, people with disabilities are more at risk of poverty or social exclusion. In particular, the employment rate of some groups such as people with disabilities is particularly low. In this sense, the report stressed the limited progress reducing financial disincentives to work, implementing labour market reforms regarding disadvantaged groups, and addressing skills mismatches.
- ★ Spain[60]: the employment rate of people with disabilities is low, although around the half of hiring incentives are addressed to them. Also, the rate of early leavers from education and training is especially high for students with disabilities.
- ★ Romania[61]: early school leaving is very high, in particular for children with disabilities. Although the employment rate for people with disabilities is below the EU average, the legal framework does not effectively incentivise their employability and the public employment support services are limited. Despite of social conditions are improving, one in three Romanians is still at risk of poverty or social exclusion, and people with disabilities are one of the most exposed groups.

59 https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1584543810241&uri=CELEX%3A52020SC0500
60 https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1584543810241&uri=CELEX%3A52020SC0508
61 https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1584543810241&uri=CELEX%3A52020SC0522

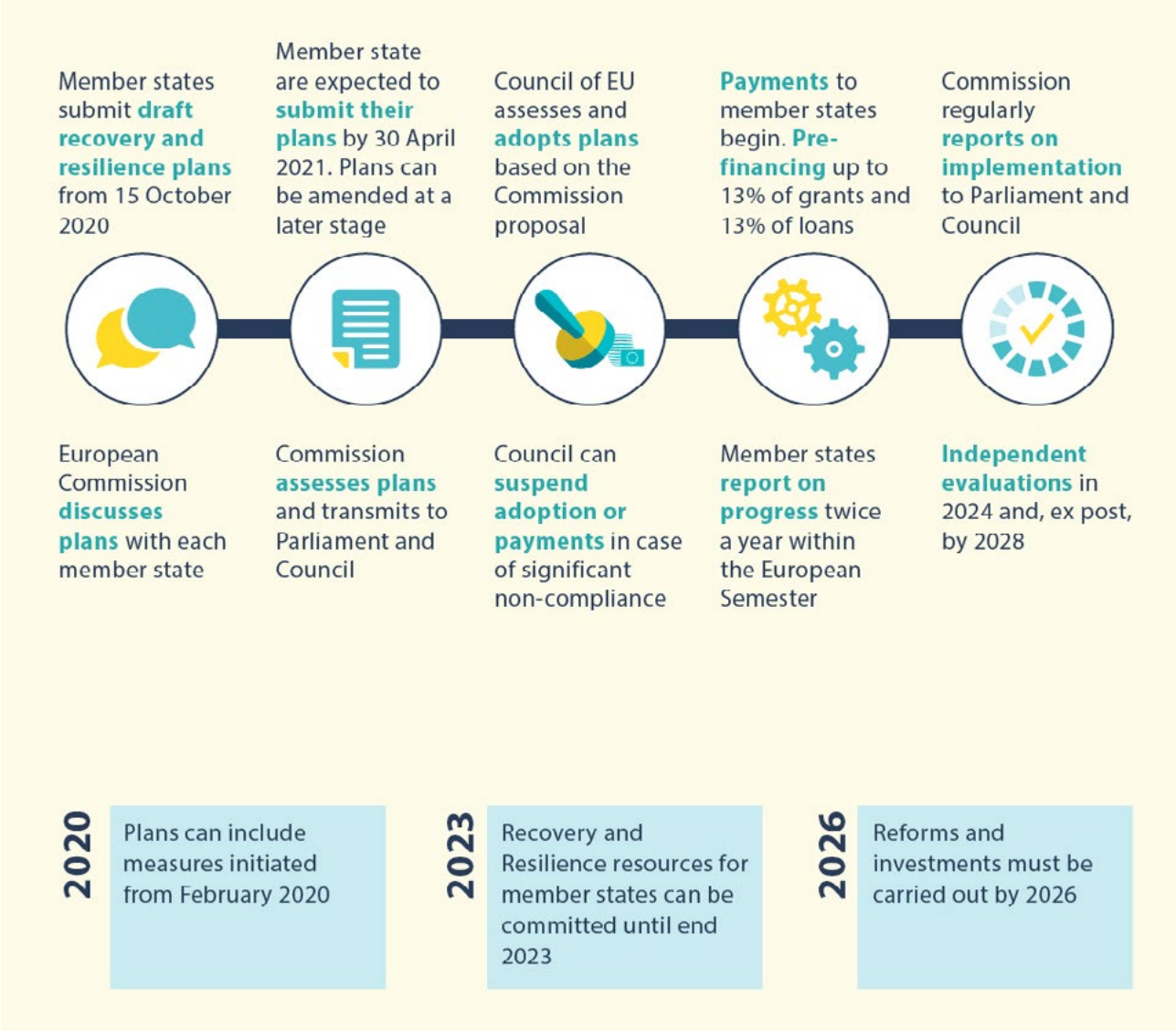
- ★ Finland[62]: the education system fares relatively well in terms of inclusiveness, although challenges remain for some groups. For example, choosing a certain type of secondary education may depend on the physical accessibility of a school building rather than on genuine interests of pupils with disabilities. However, the early school leavers' gap between pupils with disabilities and other pupils is higher than the EU average. A legislative work on a reform of the disability pension started to incentivise people on part-time disability pensions to come back to the labour market.
- ★ UK[63]: people with disabilities are at a higher risk of poverty and exclusion, the related gap between people with and without disabilities is wider than the EU average. The UK also has a much wider employment rate gap between people with and without disabilities than the EU although the good progress achieved in recent years. Consequently, the Disability Employment Strategy targets to include a million more people with disabilities in work by 2027 and providing a more comprehensive offering encompassing welfare, health, local authority, and employer initiatives.

Recovery and Resilience Facility

The Recovery and Resilience Facility[64] will make €672.5 billion in **loans and grants available to support reforms and investments undertaken by EU countries**. Its aim is to mitigate the economic and social impact of the Covid-19 pandemic and make European economies and societies more sustainable, resilient, **and better prepared for the challenges and opportunities of the green and digital transitions.** Thus, Member States will prepare their own plans with comprehensive reforms and public investment, also for the social services sector. Those plans should address the specific challenges and recommendations identified by the European Commission and detailed previously for the JTF (employment, education, etc.). How this programme work is detailed in the following figure (Figure 7. How does the Recovery and Resilience Facility Work (Council of the European Union, 2020)

62 https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1584543810241&uri=CELEX%3A52020SC0525
63 https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1584543810241&uri=CELEX%3A52020SC0527
64 https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

FIGURE 7 | How does the Recovery and Resilience Facility Work (Council of the European Union, 2020)



LIFE

LIFE projects have opportunities for NGOs, that normally are accompanied by education and training activities in different sectors related with sustainability and ecosystem management and jobs in these sectors[65]. There are many LIFE projects that have already demonstrated solutions and deployed activities aimed a capacity building, both for unemployed people and employees at different education levels (from manual workers to higher education), mainly in the bioeconomy sector such as the greening of agriculture and other primary activities (fisheries, forest management), which has wide implications in terms of jobs and capacity building, in order to acquire new techniques for mitigation and adaptation to climate change or to reduce the impacts in Natura 2000 network sites and the application of labelling schemes and certifications[66]. Nevertheless, and although these training and capacity building activities are aimed to a wide range of stakeholders, in most cases

65 https://ec.europa.eu/easme/en/section/life/pre-information-life-2020-call-proposals-ngos-european-green-deal

66 European Commission. Directorate General for the Environment. (2013). LIFE creating great jobs and skills. Publications Office. https://data.europa.eu/doi/10.2779/33031

there are not specific mention to the needs of people with disabilities.

Although conservation projects such as those funded by LIFE programme are mainly aimed at the environmental benefits, combined policies for natural conservation and sustainability (specially for the achievement of SDG8 – Decent Work and Economic Growth - and SDG9 – Industry, innovation and infrastructure) are highly required. In this sense, there are different studies showing that conservation projects have a socioeconomic impact (Royuela et al., 2019). Nevertheless, although LIFE initiatives are not conceived as tool for improving economic development of localities, they may have impacts at the short and long term, due to the creation of infrastructures (i.e., green and blue infrastructures) important for community living due to the ecosystem services they provide, as well as training and creation of jobs.

LIFE projects can also fund innovative solutions for the adaptation and mitigation of climate change in communities. An example is MyBuildingIsGreen[67], in which the climatic resilience of educative and social service building was improved using Nature Based Solutions, with social and economic impacts.

Interreg Europe[68]

Interreg Europe is part of the interregional cooperation strand of **European Territorial Cooperation (ETC)**, that supports interregional cooperation to reinforce the effectiveness of cohesion policy. The ETC regulation[69] states that the aim of the Interreg Europe programme is **to promote the exchange of experiences, innovative approaches and capacity building focusing on policy objectives, in relation to the identification, dissemination and transfer of good practices into regional development policies including Investment for jobs and growth goal programmes**. This rationale is a continuation of the approach implemented by the Interreg Europe programme in the period 2014-2020, that emphasises the importance of cooperation to become more effective and successful in the implementation of regional development policies, which in turn will increase the territorial impact of these policies.

Based on the previous objective, the overall objective of the Interreg Europe for the next period 2021 – 2027 is **to improve the implementation of regional development policies, including investment for jobs and growth goal programmes, by promoting the exchange of experiences, innovative approaches, and capacity building in relation to the identification, dissemination, and transfer of good practices among regional policy actors.** As consequence, the single and overarching goal of the programme is defined as **"a better cooperation governance".** To achieve its objectives, Interreg Europe supports the following two complementary types of action:

- ★ Interregional cooperation projects between regional policy actors. The objective of the projects is to improve the implementation of regional development policies of participating regions, including Investment for jobs and growth goal programmes – in line with the programme mission as described in the ETC regulation (Article 3.4.a). The projects are implemented in 2 phases, the core phase lasts in principle a maximum of three years dedicated to achieving policy improvement through learning (exchange of experiences, capacity building, transfer of good practices, etc.).
- ★ The Policy Learning Platform will facilitate the policy learning and capitalisation of regional policy good practices on an ongoing basis.

The programme will concentrate the largest share of the programme budget (80%) on a selection of 12 specific objectives (still susceptible to some changes during the programming period). Among them, the policy objective 2 is dedicated to the Green Deal:

67 https://life-mybuildingisgreen.eu

68 The information included in this section is extracted from the Draft version 2 of the programme published the 25th November 2020.

69 Draft ETC regulation, Art.3.3.a

POLICY OBJECTIVE 2: GREENER EUROPE

- ★ promoting energy efficiency measures;
- ★ promoting renewable energy;
- ★ developing smart energy systems, grids and storage at local level;
- ★ promoting climate change adaptation, risk prevention and disaster resilience;
- ★ promoting sustainable water management;
- ★ promoting the transition to a circular economy;
- ★ enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution;

As a general rule the **beneficiaries** of the programme are public bodies and bodies governed by public law. Private non-profit bodies may also be beneficiaries under certain conditions. Private companies, especially SMEs, are an important target group in the context of several supported specific objectives and when relevant they are encouraged to participate in the activities of Interreg Europe actions and benefit from the exchange of experience, although they cannot directly receive EU funding as a beneficiary.

In this sense, to analyse in-depth the opportunities of social services providers in the green deal policy objective of this programme we should wait to a more detailed description of this objective. During January-March 2021 a public consultation will be organised before the programme approval by partners in April. It is recommended to participate in this public consultation to try to influence in the programme objectives and funding opportunities with the incorporation of social services needs to be greener. The final programme will be ready in July for the Commission approval in December.

In Table 4 below a brief overview of each of the programmes is presented to provide practical information to social services providers looking for opportunities to became greener

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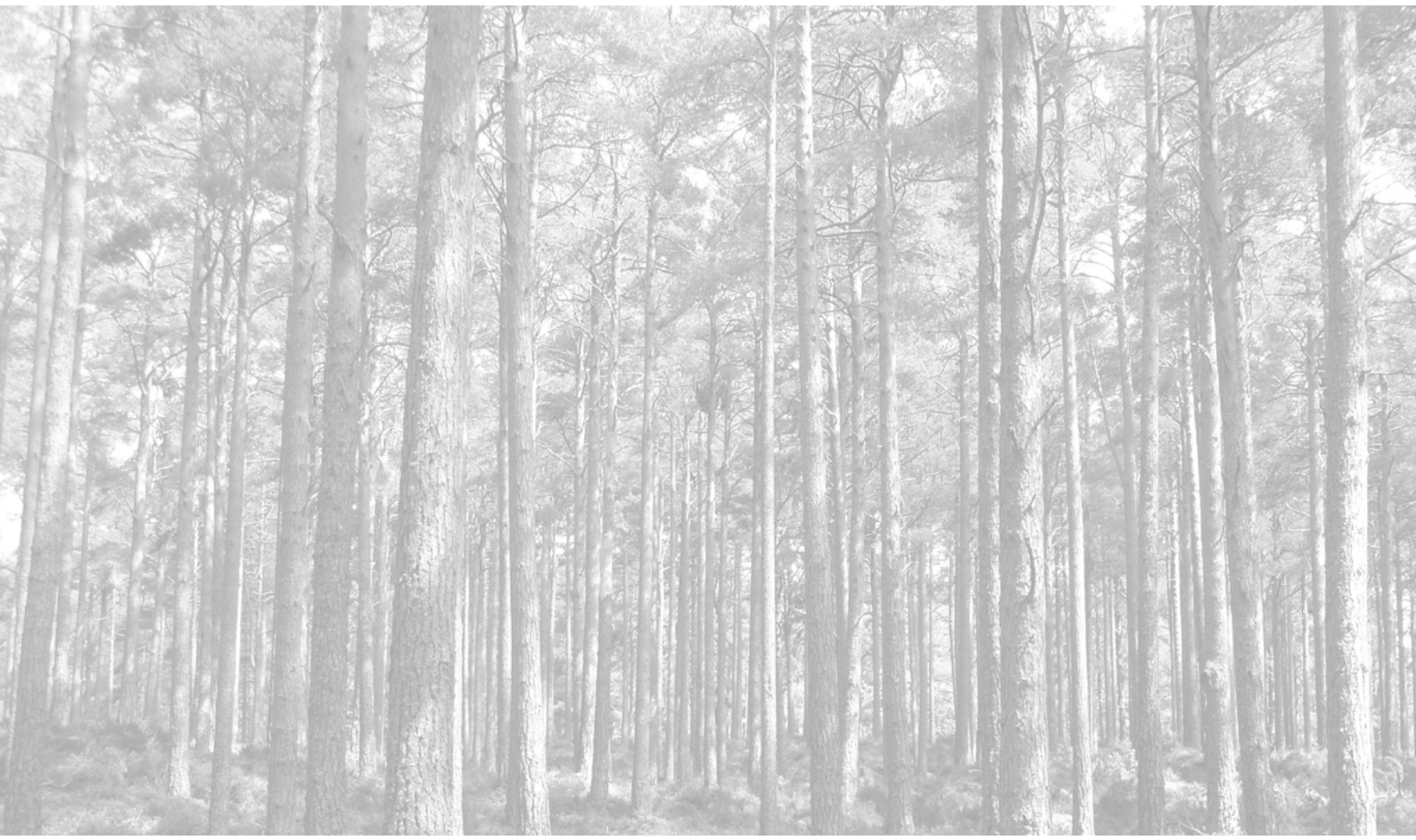


TABLE 4 | Brief overview of funding programmes

Programme	What are the objectives?	What kind of activities can be implemented?	What opportunities does it offer to social services providers to be greener?
European Regional Development Fund	To strengthen economic and social cohesion in the EU by correcting imbalances between its regions. Thematic concentration on low-carbon economy	★ Strengthening research, technological development and innovation ★ Enhancing use, access, and quality of ICT ★ Enhancing competitiveness of ICT ★ Supporting the shit to a low-carbon economy ★ Promoting climate change adaptation, risk prevention and management ★ Preserving and protecting the environment and resource efficiency ★ Promoting sustainable transport ★ Promoting education and quality and sustainable employment ★ Promoting social inclusion	★ Local supply chain promotion ★ Green Care initiatives ★ Accessible and integrated transport ★ Simplification of procedures: integration and digitalisation ★ New educational pathways and methodologies
European Social Fund	To improve employment and education opportunities across EU. To improve the situation of the most vulnerable people at risk of poverty.	★ Promoting employment and supporting labour mobility ★ Promoting social inclusion and combating poverty ★ Investing in education, skills and lifelong learning ★ Enhancing institutional capacity and an efficient public administration	★ New educational pathways and methodologies ★ Capacity building of the social services staff
Cohesion Fund	To reduce economic and social disparities To promote sustainable development	★ Trans-European transport networks, notably priority projects of European interest as identified by the EU. ★ Environment: here, the fund can also support projects related to energy or transport, as long as they clearly benefit the environment in terms of energy efficiency, use of renewable energy, developing rail transport, supporting intermodality, strengthening public transport, etc.	★ Rehabilitation in green infrastructures ★ Clean energy consumption ★ Implementation of green and renewable technologies ★ Energy efficiency in buildings ★ Sustainable transport
European Agricultural Fund for Rural Development	Funding instrument of the second pillar of the Common Agriculture Policy (CAP). Supports rural development strategies and projects	Projects that aim at the economic diversification in rural environments (to non-agricultural activities); greening of agricultural activities (investment in machinery, facilities); investment support (basic services, village renewal) and training for rural businesses can be funded. Projects can obtain: ★ Loans ★ Microcredits ★ Guarantees ★ Direct grants	6 priorities: ★ Knowledge transfer and innovation in Economy sector ★ Sustainable management in rural environments ★ Resource efficiency ★ Restoring, preserving and enhancing ecosystems ★ Diversification, creation and development of SMEs and job creation ★ Inclusion and poverty reduction in rural environments

Who can apply?	Who is the funding entity?	Who can I contact?
Public bodies, some private sector organisations (especially small businesses), universities, associations, NGOs and voluntary organisations. Foreign firms with a base in the region covered by the relevant operational programme can also apply, provided they meet European public procurement rules.	Although the Structural Funds are part of the EU budget, the way they are spent is based on a system of shared responsibility between the European Commission and national authorities: ★ the Commission negotiates and approves programmes proposed by EU countries and allocates resources. ★ the EU countries / regions manage the programmes, implement them by selecting projects, control and assess them. ★ the Commission is involved in programme monitoring, commits and pays out approved expenditure and verifies the control systems.	Managing authorities can be consulted in the following link: https://ec.europa.eu/regional_policy/en/atlas/managing-authorities/
Public bodies, some private sector organisations (especially small businesses), universities, associations, NGOs and voluntary organisations. Foreign firms with a base in the region covered by the relevant operational programme can also apply, provided they meet European public procurement rules.	For each operational programme, the national authority appoints: ★ a managing authority (national, regional or local public authority or public/ private body to manage the operational programme)	National contact points can be consulted in the following link: https://ec.europa.eu/esf/main.jsp?catId=45&langId=en
Public bodies, some private sector organisations (especially small businesses), universities, associations, NGOs and voluntary organisations. Foreign firms with a base in the region covered by the relevant operational programme can also apply, provided they meet European public procurement rules.		Managing authorities can be consulted in the following link: https://ec.europa.eu/regional_policy/en/atlas/managing-authorities/
All potential recipients in agriculture, forestry and in the rural areas.		National contact points can be consulted in the following link: https://enrd.ec.europa.eu/contact/country-data_en

Programme	What are the objectives?	What kind of activities can be implemented?	What opportunities does it offer to social services providers to be greener?
Horizon Europe	To strengthen Europe scientific and technological base, develop solutions for healthier living, drive digital transformation and fight climate change, for collective resilience.	★ Research and Innovation Actions ★ Coordination and support Actions ★ Science Career Development	★ Circular economy ★ Energy self-production and consumption ★ Local supply chain promotion ★ Green Care initiatives ★ Accessible and integrated transport ★ Simplification of procedures: integration and digitalisation ★ New educational pathways and methodologies
Erasmus +	EU programme especially focused on the fields of education, training, youth, and sport, to tackle socio-economic changes and alleviate inequalities	Different Key Actions: ★ KA1 Mobility of individuals ★ KA2 Cooperation of innovation and exchange of good practices ★ KA3 Support for policy reform	★ Provision of skills and qualifications ★ Innovative methodologies ★ Recognition and validation of competences ★ Inclusion opportunities and employability
Just Transition Fund	To support the economic diversification and reconversion of the territories concerned	Backing productive investments in SMEs, creation of new firms, research and innovation, environmental rehabilitation, clean energy, up- and reskilling of workers, job-search assistance and active inclusion of jobseekers programmes, as well as the transformation of existing carbon-intensive installations when these investments lead to substantial emission cuts and job protection.	★ Circular economy ★ Energy self-production and consumption ★ New jobs opportunities because the climate change ★ Rehabilitation in green infrastructures ★ Clean energy consumption
Recovery and Resilience Facility	To mitigate the economic and social impact of the coronavirus pandemic and make EU economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions.		★ New jobs opportunities because the climate change ★ Implementation of green and renewable technologies ★ Energy efficiency in buildings ★ Sustainable transport ★ Digitalisation of public services

Who can apply?	Who is the funding entity?	Who can I contact?
European private and public entities (see specific criteria to involve partners outside Europe)	European Commission	National contact points can be consulted per topic in the following link: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/ncp
Depending on action type: ★ Higher Education Institutions ★ Adult Education Institutions ★ VET Institutions ★ Primary and secondary schools ★ NGOs ★ Enterprises ★ Public bodies	The Education, Audiovisual, and Culture Executive Agency (EACEA) Centralized actions are managed by EACEA: Erasmus Mundus, Jean Monnet, Capacity Building (Higher Education, Youth), youth mobility) Decentralized actions) are managed by National Agencies.	National Erasmus+ Agencies can be consulted per topic in the following link: https://ec.europa.eu/programmes/erasmus-plus/contact/national-offices_en
EU countries need to identify the territories and sectors eligible for funding under the JTF through a dialogue with the European Commission. Eligible regions included in this report: https://ec.europa.eu/info/sites/info/files/annex_d_crs_2020_en.pdf	Just Transition Mechanism Funding coming from the Multiannual Financial Framework and NextGeneration EU	Just Transition Platform Contact through online questionnaire: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism/just-transition-platform-contact-page_en
Member States should prepare recovery and resilience plans that set out a coherent package of reforms and public investment projects. To benefit from the support of the Facility, these reforms and investments should be implemented by 2026.	It is the key instrument at the heart of NextGenerationEU	Recovery and Resilience Task Force (RECOVER) https://ec.europa.eu/info/departments/recovery-and-resilience-task-force_en#contact

Programme	What are the objectives?	What kind of activities can be implemented?	What opportunities does it offer to social services providers to be greener?
LIFE	Environmental benefits: climate change mitigation and adaptation, conservation of resources, habitats and biodiversity, environmental governance, and information	★ Traditional projects (best practices, pilot and demonstration projects) ★ Integration projects ★ Preparation projects ★ Technical assistance ★ LIFE close-to market projects ★ Operating grants for NGOs	★ Creation of blue and green infrastructures ★ Creation of jobs in green sectors ★ Information and communication, awareness raising.
Interreg Europe	To support European regional and local governments to develop and deliver better policy through sharing solutions and policy learning.	2 types of action: ★ Interregional cooperation projects (3-5 years): to share experiences and improve the implementation of regional sustainable development oriented policies and programmes ★ Policy Learning Platform: space for continuous learning, to solutions and request expert support.	4 policy topics, related to regional development: 1. Research, technological development and innovation 2. Competitiveness of SMEs 3. Low-carbon economy 4. Environment and resource efficiency

Who can apply?	Who is the funding entity?	Who can I contact?
European private and public entities: ★ public bodies ★ private commercial organizations ★ private non-commercial organisations (NGOs etc.)	Executive Agency for SMEs (EASME)	LIFE national contact points per sub-programme can be contacted in the following links: Nature and biodiversity; https://ec.europa.eu/easme/en/section/life/life-national-contact-points-nature-biodiversity Environment and resource efficiency https://ec.europa.eu/easme/en/section/life/life-national-contact-points-environment-policy-governance Climate action https://ec.europa.eu/easme/en/section/life/life-national-contact-points-climate-action Environmental governance and information https://ec.europa.eu/easme/en/section/life/life-national-contact-points-information-communication
★ Public authorities (local, regional, and national) ★ Managing authorities/ intermediate bodies in charge of the Investment for Growth and Jobs programmes or European Territorial Cooperation ★ Agencies, research institutes, thematic and non-profit organisations From Europe, Norway, Switzerland and UK.	European Regional Development Fund	National contact points can be consulted in the following link: https://www.interregeurope.eu/in-my-country/

3. The Impacts of Climate Change in social services and vice versa: Policy recommendations

Based on previous sections, the impacts that climate change have for the social services in the forthcoming years and vice versa are summarised in form of conclusions. The purpose is to define a prospective map of the challenges and difficulties that will have to be adressed in the social services sector. This section also includes policy recommendations to help the different agents and stakeholders to be aware on the actions to deploy, and particulary to policy makers.

Impacts of climate change in social services and vice versa: In general terms, all the interviewed recognised the impact of the provision of social services in climate change and vice versa, and also the literature evidences those impacts and connection between both dimensions.

Impacts of climate change in social services:

- ★ Climate change is a worldwide citizens threat and even more for persons with disabilities (European Disability Forum, 2019). Thus, people with disabilities and children may be more vulnerable to extreme weather episodes (cold waves, heat waves, floods, hurricanes, disease propagation) that impact on their health (mental health, depression, etc.) and their daily life (transportation, energy consumption, education, etc.). Moreover, climate change can impede the evacuation or migration of people with disabilities, as well as their access to health and LTC services and community support.
- ★ The risks associated to climate change are often high in areas with poverty and low access to essential services (i.e., flood and drought zones); consequently, the climate change will not impact equally all. That is, children and families who are already among the socially vulnerable groups are likely to face some of the most immediate dangers (Unicef, 2015).
- ★ Economic crisis led by climate change may imply worse working conditions for people with disabilities (more discrimination, intensify exclusion, poor working conditions or reduced working opportunities) (IFO, 2019)
- ★ Climate change will increase the number of households facing "Energy poverty" because the high costs of energy (BEIS, 2020; Escandón et al., 2019) and the conditions of the social housing (Brandão & Lanzinha, 2020; Pierangioli & Cellai, 2016). In addition, climate change may impact economically people with disabilities who use electronic devices.
- ★ Food uncertainty and malnutrition could increase due to harvest losses produced by droughts, floods, heatwaves and cold waves, as well as the propagation of pests (FAO, 2008).

Impacts of social services in climate change:

- ★ Related to the infrastructures used to provide the social services (education, LTC, etc.) that entail resource consumption, procurement methods and waste management, but also their construction or maintaining with sustainable materials and planning. Sometimes the installation of renewable energy infrastructures is not possible because structural limitations.
- ★ The energy consumption requirements of people with disabilities may be higher (electrical devices, charging of electric wheelchairs and vehicles, extra laundry costs, etc.).
- ★ Since public social housing and many LTC facilities are often located in suburban and exurban land, the transport requirements of those living in these areas is high.
- ★ Social services generate different waste streams that must be managed separately, such as plastics of diapers, batteries for devices, but also hazardous waste such as medicines, sharps, etc.

Climate change also poses some opportunities for the social services sector. Those opportunities and challenges to became greener are described below in form of **Policy recommendations:**

Thematical recommendations on social services domains:

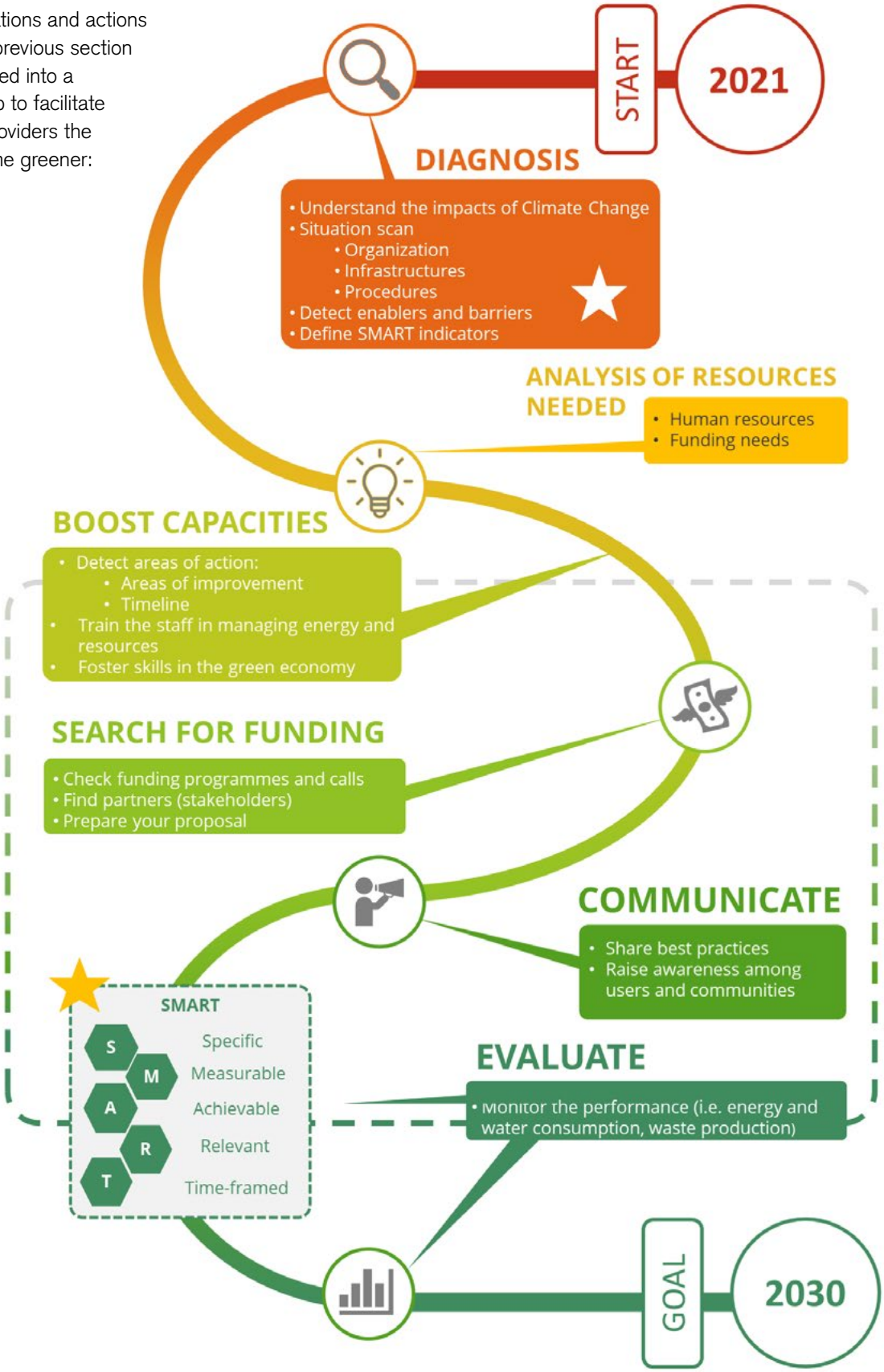
1. **Training and employment services** can foster opportunities in bioeconomy (green care and green services), developing and adapting sustainable curricula to increase accessibility. In the same line, reinforcing the training, information and capacities of people with disabilities and those working in social services to respond to climate change. Additionally, raising awareness of social services' users.
2. **LTC and social housing** can explore the following:
   - Ensuring accessibility in the smart and sustainable mobility and renovated buildings (European Disability Forum, 2019, 2020)
   - Promoting self-production and consumption of energy from renewable sources.
   - Adoption of water management plans aimed at staff and end-users, including smart metering and renovation of sanitaries.
   - Promoting the use of local value chains in food supply, instead of precooked menus from external kitchens, to avoid food and water waste.
   - Analysing opportunities arised from the circular economy, using recycled materials for building and preserving existing buildings with sustainable strategies and solutions.
   - Climate change education should be considered in the provision of **childcare** as it increases the children adaptive capacity and among their communities (Unicef, 2015).
3. **Social assistance services** can take the most of the circular economy in food supply and apply some recommendations provided to other domains in the legal provision (i.e. efficiency of buildings, reduction of paper)

Horizontal recommendations in the promotion and provision of social services:

- ★ Integration of green and sustainable approaches in the focus of the social services provision, whithout reducing the quality of the service provided.
- ★ Include green and sustainable clausules in tenders and regulations related to the provision of social services.
- ★ Guarantee that all legislation and initiatives around EU Green Deal are in line with the UN convention on the Rights of People with disabilities (EDF, 2019, 2020) and the quality of the service provided.
- ★ The Green Deal should not make the daily lives of persons with disabilities and people working with them harder and suppose an additional burden (EDF, 2020), considering costs and administrative issues. Reducing bureaucratic issues will allow professionals focus on the service provision.
- ★ Digitalise those services that do not require in-person treatment to contribute to green services and to speed up those services, avoiding duplicated procedures.
- ★ Increase the understanding of the impacts of climate change on the rights of persons with disabilities and their families.
- ★ Raising the awareness of EU institutions about the importance to include social services as one of the sections inside their Recovery Plan to foster investment at national level.
- ★ Promoting and recognising those entities certified at environmental level and aligned with the SDG, i.e. considering this certification as a selection criterium for contracting
- ★ Good practices sharing (packages with information about the project, comunication, type of contract, stakeholders involved)
- ★ Financial support to implement green strategies and solutions in social services provision in order to alleviate one of the most common barrier that is the lack of financial resources to respond to this challenge.

4. Roadmap

The recommendations and actions described in the previous section had been translated into a concrete roadmap to facilitate social services providers the process to became greener:



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Annexes

Annex I: Concept note and topics shared with the stakeholders before the interview

Aim of the research

As part of its "Commit!" Work Programme 2020, EASPD is carrying out research on how the European Green Deal could support the ecological transition of Social Services and vice versa. The study tries to identify the opportunities that the European Green Deal (and related funding opportunities) can provide for social service providers, especially those active in the field of work and employment, education and training, and care and community living (and vice versa).

The study should help identify the **"ecological" dimension and investment needs of social services**, such as their infrastructure needs (renovation, energy processes, etc.), the purchasing of products and services (catering, cleaning, maintenance, etc), the service provision itself (transport, etc.), the type of area where services are provided (rural development, industrial transition, etc) and the impact on employment opportunities (social economy enterprises, inclusive farms, etc). Thus, the research team is identifying **possible areas for ecological/green improvement and the barriers to such improvements.**

The result of the research will be summarised in a roadmap and recommendations to support policymakers and services providers on how to support the ecological transition of social services through the EU Green Deal and other EU related initiatives.

Research methods

The research is being implemented in different phases, which include a qualitative research to identify the ecological dimension and investment needs of social services. In particular, opportunities and barriers for social services ecological/green improvement and vice versa.

The following questions are part of the above-mentioned qualitative research. The questions are divided in 3 sections, with an introductory part with some introduction to the topic. Firstly, we will ask you some demographic and background related questions to help us describe the sample of stakeholders interviewed. Secondly, we will ask you a couple of general questions related to the ecological dimension of the social services you provide or are involved in, areas for ecological green improvement, the potential barriers and enablers for their implementation, and about the investment needs on social services to be greener. Finally, we will ask you for existing good practices and the needed support at EU political level to move to greener social services.

Thank you for accepting to participate in this study. Your personal data will be anonymised and only used for the purpose of the mentioned research, following EU regulation for personal data protection. In order to facilitate the transcriptions, interviews will be recorded. Should you not wish your interview to be recorded, please let us know. You will have the opportunity to revise your answers at any time and/or give up the study by asking mferri@kveloce.com to do so.

If interested, you will be informed about the updates and key results within this study. In this case, please select this box:

I would like to be informed about the research results.

If interested in being included in the acknowledge section of the report, please select this box:

I would like to be mentioned in the acknowledge section of the final report.

Brief introduction to the ecological dimension of the social services

Climate change and environmental degradation are worldwide current threats[70]. The atmosphere is warming, and the climate is changing every year. One of the eight million species on the planet are at risk of being lost. Forests and oceans are being polluted and destroyed[71].

To overcome these challenges, Europe lunched the **European Green Deal**, a new growth strategy that will transform the Union into a modern, resource-efficient and competitive economy, where:

- ★ there are no net emissions of greenhouse gases by 2050.
- ★ economic growth is decoupled from resource use.
- ★ no person and no place are left behind.

Reaching this target will require **action by all sectors of our economy**, including:

- ★ investing in environmentally-friendly technologies
- ★ supporting industry to innovate
- ★ rolling out cleaner, cheaper and healthier forms of private and public transport
- ★ decarbonising the energy sector
- ★ ensuring buildings are more energy efficient.
- ★ working with international partners to improve global environmental standards.

How social services can contribute to the Green Deal goals and benefit from the related actions (funding opportunities, technical assistance, etc.) to became greener?

Like for every sector, social services contribute to and is affected by climate change. For example, the contribution of long-term care infrastructure, that is, large residential care homes, day care and respite care centres, supported living housing, transport vehicles and much more. Such infrastructure relies on energy sources to heat, light, cater, drive, and digitalise these services. Similarly, many services are needed to ensure the quality of care provided including catering, medical equipment, toiletries and much more. The human side to long-term care is also huge, with over 11 million staff in Europe who provide care and support to many millions more; the significant majority of which have not received training on climate mitigation measures in their work and lives. The individuals using long-term care services are amongst the groups who have least access to knowledge about climate change and how it affects them. Indeed, climate change is rarely just a one-way direction, with long term care providers impacting the climate but not suffering from its consequences. The increase in natural disasters such as heat waves and summer floods all impact the provision of long-term care in the areas concerned. Climate change will affect people's health, the communities they live in and the sustainability of the long-term care services themselves as public money is drained elsewhere.

70 European Commission (2020). A European Green Deal. Striving to be the first climate-neutral continent. Available: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

71 Sources: (i) Intergovernmental Panel on Climate Change (IPCC): Special Report on the impacts of global warming of 1.5°C; (ii) Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services: 2019 Global assessment report on biodiversity and ecosystem services; (iii) The International Resource Panel: Global Resources Outlook 2019: Natural Resources for the Future We Want; (iv) European Environment Agency: the European environment — state and outlook 2020: knowledge for transition to a sustainable Europe

Semi-structured interview on Green Social Services

Section 1. Sociodemographic data of the interviewee:

These data will be used in aggregated manner for statistical purposes, your name and contact details will be not public.

1.0 Code of the interviewee

1.1 Gender

☐ Women ☐ Men ☐ Not answer

1.2 Could you please let me know your region, country?

1.3 What is your affiliation? (entity where you work)

1.4 What is your area of work/position?

1.5 How old are you?

1.6 Which is your professional and/or education background?

Section 2a. Ecological dimension

2.1 In what type of social services are you involved? (answer yes or no)

(i) Employment & training services (Yes/No)

- Social housing (Yes/No)
- Childcare (Yes/No)
- Long-term care (Yes/No)
- Social assistance services (Yes/No)
- Others, please specify (Yes/No)

2.2 Do you think that the provision of those services along the whole delivery chain have an environmental impact?

☐ No

☐ Yes > Please explain what type of impact do you think they have (pollution, waste, etc.)?

2.3 And in the other way, do you think that the climate change will impact on the provision of social care?

☐ No

☐ Yes > If yes, could you provide some examples?

Section 2b. Social services areas for ecological/ green improvement

2.4 How the social services can be provided in a greener way? Can you select 2 or 3 of the following services that you consider with more need of ecological improvement?

☐ Employment & training services

☐ Social housing

☐ Childcare

☐ Long-term care

☐ Social assistance services

☐ Others, please specify: _____

2.5 For the social services you selected, how can be provided in a greener way? Can you identify potential barriers and enablers to became greener? And the investment needs in each of them?

Social service	How can be provided in a greener way?	Barriers to be provided in a greener way	Enablers to be provided in a greener way	Can you list some of the investment needs to provide greener social services? Can you prioritise them (1 most important)

2.6 In the provision of greener services, what role can perform each of the actors involved in providing those services along the whole supply chain (national government, region, municipality, private sector, NGOs, etc.)?

2.7 Can you assume previous investments, or do you need extra funding? Please detail which kind of support do you need to respond to previous investment needs.

Section 3. EU policies and lessons learnt.

3.1 Do you have implemented or are you aware about an initiative implemented to make greener the social services? If yes, can you summarise the initiative? Where can we find more information about this initiative?

3.2 Which kind of support do you need at European political level to deliver greener social services?

Section 4. Do you know any expert who will be of interest for our research study?

Please provide us his/her contact. We will just use it to inform him/her about the research and their willingness to contribute to the study, respecting EU data protection regulation.

Thank- you for your collaboration!

EASPD is the European Association of Service providers for Persons with Disabilities. We are a European not-for-profit organisation representing over 17,000 social services and disability organisations across Europe. The main objective of EASPD is to promote equal opportunities for people with disabilities through effective and high-quality service systems.

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