



AFE^{cc}o

EMPOWERING OLDER ADULTS TO APPLY AFFORDABLE
ECO- AND AGE-FRIENDLY SOLUTIONS TO AGE IN PLACE

AFECO – Comparative analysis of barriers and facilitators



WROCLAW UNIVERSITY
OF ENVIRONMENTAL
AND LIFE SCIENCES



Co-funded by
the European Union

The AFECO project is co-funded by the European Union's Erasmus + KA220-ADU – Cooperation partnerships in adult education programme under grant agreement no. 2022-1-NL01-KA220-ADU-000086242. The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

About this publication

This report summarises the results of the research activities carried out in Greece, The Netherlands, Portugal, Germany, Italy and Poland within the Erasmus+ project AFECO – Empowering older adults to apply affordable eco- and age-friendly solutions to age in place (cooperation partnership in adult education, project number: 2022-1-NL01-KA220-ADU-000086242). More information is available at <https://afeco.eu/>.

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1 Introduction

This report aims to compare the affordable age- and eco-friendly solutions in the partner countries. This report consists of the findings from the partners in Greece, the Netherlands, Germany, Portugal, Italy and Poland.

The structure of this report is based on the reference and inclusion of all national parameters and the description of the context that shapes the progress and adaptation of age-friendly principles (and when applicable eco-friendly principles) in the domain of care for older adults among the project's partner countries.

It starts by displaying the current demographic situation in the countries of the project's partners since this is an important factor that urges towards the adaptation of such initiatives, and in continuation, describes the formal and informal care in these countries and the homeownership data.

In the following chapters comes the comparative analysis and compilation of valuable conclusions and remarks on age- and eco-friendly policies with the scope of deriving clear and specific guidelines that could help project partners to stipulate the needs and requirements in policy (national, regional, local) and individual (older people and their caregivers) context.

2 Demographic situation

2.1 Demographic change

Data delivered from all countries of the project's partners verify the worldwide continuous demographic increase of the part of the population aged 65+. In all these countries the percentage of people over 65 varies between 20 and 23.5%, and all countries' projections foresee a further increase. Due to this demographic change, age-friendly physical and social environments should be designed to encourage and support active ageing by enhancing opportunities for health, participation and security so as to improve the quality of life of the older population. It is one of the main scopes of the AFECO project to highlight age- and eco-friendly environments as an extremely important parameter that defines the quality of ageing.

2.2 Formal and informal care

As reported on the Eurocarers website (see eurocarers.org/about-carers), generally in Europe, 80% of older adults' care is provided by informal carers – i.e. people who provide unpaid care to someone with a chronic illness, disability or other long-lasting health or care need outside of a professional or formal framework. Most people in need of care are cared for at home by family members or by outpatient care and nursing services. Available data from the European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2018), estimate that the number of informal caregivers ranges from 10% up to 25% of the total population in Europe. Additionally, the national reports from the AFECO project's partner countries state that care for older adults may be operationalised by public, private and associative entities, either in-home or in institutional settings, nevertheless:

- Home is the main setting where care occurs (The Netherlands 95%, Greece 98% and Germany 84%). Many European countries rely heavily on homecare or informal methods to care for older people. In 2020, more than three million (3.2) Italian older people potentially received informal care, in comparison to 0.75 million received home care, and

0.35 million were formally cared for by an institution. Likewise, in Poland, informal care is almost the exclusive way of care provision as reported in the Statista website (see <https://www.statista.com/statistics/1237241/elderly-care-recipients-and-potential-informal-recipients-in-europe/>). Based on the study “Challenges in long-term care in Europe: A study of national policies” (Spasova et al., 2018) home care – which is a priority of national and European policies aiming to provide further opportunities for older people to age in place, is not fully developed among all project countries in terms of prevention and rehabilitation strategies.

- The number of informal caregivers is difficult to be defined, since in many European countries informal care is not officially registered.
- Regarding the provision of formal care for older adults, there is a clear tendency for deinstitutionalisation, transferring the provision of care to the homes of older adults in need. AFECO project’s partner countries, such as the Netherlands, Germany and Portugal still have a higher percentage of institutionalised care, in comparison to the other project countries.

One important factor is connected to the financial capacity of older people to stay in residential settings. Such a factor also relies on the social-prone and subsidising policy of each project’s partner country. For Portugal, Greece, Poland, and Italy, and due to lower pensions and lack of governmental financial funding, many (some in the case of Portugal) older adults resort either to unlicensed or not official homes with very poor conditions. For Greece, Italy, Poland and Germany, others hire undeclared informal caregivers.

2.3 Homeownership

Homeownership is important in older people’s lives, providing stability, security, and a sense of belonging. According to data from Landgeist (see <https://landgeist.com/2023/04/15/homeownership-in-europe-2/>), in Europe, the homeownership rate varies considerably between countries, with some nations having a high proportion of homeowners. In contrast, others have a higher proportion of renters. Among AFECO project’s partner countries, homeownership status is fairly high (70% and more) with only Germany having a remarkably lower ownership rate (49.1%). Nevertheless, the ownership rate in the German housing market has risen steadily in recent years, with almost as many people now living in owner-occupied housing as in rented accommodation. One important factor that directly impacts homeownership rates in Europe is the availability of affordable housing. In some countries, such as Germany and the Netherlands, the cost of housing is relatively high, making it more difficult for people to purchase a home. Allowing older people to age in place is directly connected with the preparedness and efficiency of the national social and health care structure and policies to promote active ageing and age-friendly solutions through community or institutional care.

2.4 Overview of data from the partner countries

During an online partner meeting, partners exchanged the data they found in their countries. Regarding the percentage of population over 65 out of the total population, partners used the Eurostat data “Population age structure by major age groups, 2012, 2021 and 2022 (% of the total population)”, (see https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population_structure_and_ageing) selecting the year 2022.

In some cases, these numbers were extracted from the available information and may not be fully comparable or entirely precise. Anyhow, from this information, the following table has been made:

	Portugal	Netherlands	Poland	Italy	Germany	Greece
65+ population	23.7%	20.0%	19.1%	23.8%	22.1%	22.7%
Informal / formal caregivers	~13% informal caregivers	35% informal caregivers 14% formal caregivers	93% informal caregivers	2.1 million informal caregivers 450.000 formal caregivers	63% informal caregivers 37% formal caregivers	34% informal caregivers 2.5% formal caregivers (250.000)
Home care, residential care	103.000 vacancies in residential homes	95% home care 5% Institutionalised	Informal care is mainly reliant on family commitment	Not found	84% at home 16% institutionalised	98% home care 1.5% Institutionalized care
Home owners	78.3%	70.1%	86.8%	73.7%	49.1%	73.3%
Rural - Urban	Not found	50% / 50%	Not found	Not found	23% / 77%	31% / 45%

Table 1: Overview data AFECO partner countries

3 Age-friendly principles in project countries

3.1 Introduction

There is a variety in actions and approaches of the AFECO project countries on how they support age-friendly principles in the care of older adults.

The concept of age-friendly principles is relatively new in the project countries' political agenda and debate. Age-friendly interventions in-home and community settings are either not yet sufficiently implemented or not existent, and any relevant plan targeting the promotion of age-friendly principles constitutes part of more general plans usually targeting active ageing, inclusion of older people, and ageing well policy actions. This depicts the necessity for highlighting the role and impact of age-friendliness as a self-standing concept in health and social care national policies, which, especially if combined with other beneficial contexts as it is active ageing and eco-friendliness, may provide huge advantages in many aspects, for example, safety, wellbeing, and independent living for older adults.

Project's partner countries reported on a number of examples of age-friendly initiatives (please refer to each project's partner country's national report) that can be divided into the following

categories: policy planning, information provision and awareness, funding, and research and training.

3.2 Policy planning

This section gives an overview of the main conclusions about policymaking on age-friendly principles in the project's partner countries.

It mainly refers to implementation of activities for older adults in the area of shaping a positive perception of old age in society, participation in social life, and supporting all forms of civic, social, cultural, artistic, sports and religious activities. Its key areas for action in the senior policy are: health and independence; economic activity; educational activity, social and cultural activities; silver economy and intergenerational relations, programs for supporting ageing at home.

National Strategies for Active Ageing and Action Plans for Active and Healthy Ageing are available in Italy (see <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8744907/>), Portugal (see <https://www.sns.gov.pt/wp-content/uploads/2017/07/ENEAS.pdf>), and under progress in Greece.

Communities and municipalities mainly implement local-level initiatives following the guidelines and framework of the WHO policies for Age-friendly Cities.

Greece: The Hellenic Intermunicipal Network of Healthy Cities, by the constitution and by its statutes, among others, has as its purpose the adoption and implementation of the WHO policies for Healthy Cities.

Portugal: Some Portuguese strategies focus on active and healthy ageing and on sustainable urban and rural planning. 65 Portuguese municipalities belong to Health Cities Networks. The national plan for active ageing, developed by the Portuguese Network for Active and Healthy Ageing (*Rede Portuguesa de Envelhecimento Ativo e Saudável* - RePEEnSA) is expected to be presented by the end of June 2023 and should be implemented by the second semester of 2023 until 2030, focusing on people rather than services.

Italy: In Italy, as in Portugal, there is an indirect reference to the theme of Age-Friendly Environments in a major policy that has been implemented in recent years, which is the National Recovery and Resilience Plan – NRRP (<https://www.governo.it/sites/governo.it/files/PNRR.pdf>). The NRRP, in fact, allocates 300 million Euros to converting nursing homes into co-housings in order to foster the autonomy and independence of older people (NRRP, 2021).

Germany: It is noticeable that Germany is still in the early stages of politically driven large-scale implementation of age-friendly structures in the core areas of housing, social participation and transport. Despite Germany's high population density, only three cities are currently part of the network of Age-Friendly Cities (WHO 2023).

The Netherlands: The Dutch *Social Support Act* (known in Dutch as the WMO 2015) obliges municipalities to help people to live at home for as long as possible, offering coaching/companionship, temporary respite for informal carers, and under certain conditions the municipality may award a personal budget (PGB) which older adults can use to arrange and pay for their own support services.

Poland: Finally in Poland, several policy actions aim to improve the quality of life of older adults in their communities through active participation of older adults to senior clubs and universities of

third age. Indicatively, in the field of social policy level, the “Social Policy for Older Persons 2030. Safety – Participation – Solidarity” (SPOP), aims to the implementation of a number of activities for older adults in the area of shaping a positive perception of old age in society, participation in social life, and supporting all forms of civic, social, cultural, artistic, sports and religious activities.

3.3 Information provision and raising awareness

Housing counselling by welfare and social policy organisations. In the case of Germany, these welfare organizations are available in most German regions. Within the framework of these counselling services, advice can be obtained on redesigning or converting a home, e.g., if the aim is to achieve greater independence and safety. Furthermore, there is a huge bulk of information delivered in various forms including: online information through dedicated websites, various publications and policy papers from organisations or ministries on the topic of good housing in old age, most of which are available online – Germany; recommendations from research studies – the Netherlands; interaction through workshops and lifelong learning programs – Italy, Poland and Greece; provision of training services on active ageing - Portugal.

3.4 Funding

Funding for age-friendly solutions has different outcomes in the project’s partner countries.

Greece: In Greece any age (empowerment of older people) and eco (green transition) friendly action is connected with the National Recovery and Resilience Plan, funded by the EU through the Next Generation stand.

Portugal: Portugal is investing €400 million in healthy and active ageing policies under the Portuguese Recovery and Resilience Plan (RRP) (see <https://recuperarportugal.gov.pt/?lang=en>).

Italy: The Italian National Recovery and Resilience Plan – NRRP, in fact allocates €300 million to converting nursing homes into co-housings in order to foster the autonomy and independence of older people.

Germany: In Germany, financial factors also play a role in making the home environment age-friendly. Nevertheless, the fact that older retired people were excluded from the federal government's energy flat rate of €300 in 2022 and that a relief package for them was only put together as a result of public pressure (Gottschalk 2023) also shows that too little attention is currently paid to the needs and problems of this target group. According to the Berlin Institute for Population and Development (BifBE 2021: 2), the responsibility for creating an age-friendly environment lies primarily with the municipalities, yet municipalities find themselves underfunded and insufficiently supported in the task of age-appropriate and at the same time climate-conscious urban planning (BTU Cottbus 2021: 18).

The Netherlands: The “Longer at Home” program focuses, among other things, on improving home care, supporting informal carers and making the current housing stock lifelong proof. To implement this program, the central government made over 340 million euros available in the period 2018-2021 (The Netherlands). Since 2022, each Dutch municipality needs to develop its own policy on housing and care. Under certain conditions, the municipality may award a personal budget (PGB) which can be used to arrange and pay for one’s own support services (Netherlands).

Poland: The Polish “Care 75+” program addressed to local authorities of up to 60 thousand residents, which receive financial support of up to 50% of the expected costs of providing care

services. Also, the provision of funding for research projects aims to four priority areas: education, social activity promoting intra- and inter-generational integration, social participation, and social services for older adults (Poland).

3.5 Research and training

An overview of research and training findings in the project countries shows the following outcomes.

Greece: The development of a network by a group of professionals in the older adult care field through the Municipalities themselves to study the policy of the WHO and the European Union and to proceed to one overall proposal for people of the 3rd Age, adapted to the data and the possibilities of Greek municipalities.

Portugal: Centre of Competencies for Active Ageing aims to promote training in older population care, value human resources, invest in reskilling and capacity building, and provide innovative training services for effective responses to the needs of active ageing in Portuguese society.

Italy: Projects that aim to help people in later life inside their home (e.g., providing home services, new technologies and home automation, removal of architectural barriers); projects that provide support for people in later life in the outside environment (e.g., services for fostering participation in the social community, projects of urban redevelopment) and policies focused on education and research.

Germany: In Germany age-friendly structures have not yet been sufficiently implemented and this gap in knowledge widens even more with regard to new types of AAL solutions that could be implemented in the home, for example. In this context, the so-called "innovation-needs paradox" is also mentioned. This suggests that older people in our society could benefit the most from new technologies but are the least likely to use them. At the same time, even promoters and mediators do not have a sufficiently comprehensive knowledge of new AAL technologies.

The Netherlands: Since 2020, The Hague has performed a two-year check on the perceived age-friendliness (or senior-friendliness) of The Hague by people aged 65 and over. The *Knowledge Platform Monitoring Age-friendly The Hague*, chaired by The Hague University of Applied Sciences and its Research Group on Urban Ageing, in cooperation with other organisations, sends out an online survey, organises offline questionnaires with older people who are illiterate, and enables qualitative research in focus groups with older people. Based on certain backgrounds of older people, the research team found that those with fewer financial possibilities and those who suffer from impairments or mobility issues perceive the city as less age-friendly than their fellow citizens. The team performed a cluster analysis that led to a clustering of older people in four groups:

- Poor older people,
- Older people with impairments or mobility issues,
- Older people that are happy in general and
- Higher echelon.

Based on this clustering, policymakers and care providers can define personalised policies to meet the needs of each group.

Poland: The constitution of the Senior Policy Council as a consultative body of the Minister of Family, Labour, and Social Policy.

3.6 Age-friendly solutions summarised

According to the National reports from all project countries, the conclusion that may be drawn is that while top-down plans are still in the phase of development or lag implementation, bottom-up initiatives need to be adapted in order to speed things up and make them happen. Such initiatives are mainly based on both a) municipalities, and b) various kinds of social welfare organisations and institutions.

Apparently, such an argument is based on the low maturity of central strategy plans and of coordination and homogeneity of initiatives at the national level, as for example, in Italy, which impedes the implementation of policies and best practices and urges for interventions from regional and local institutions to assume their own set of initiatives. Here, it is important to notice how the implementation of age-friendly practices is developing at a different speed on these three main levels: national policies, regional policies and local plans.

At the level of municipalities (and cities), it is noticeable that in the Netherlands, especially the municipality of The Hague is advancing well in the field of age-friendly policymaking. Germany, Italy, Poland, Portugal, and Greece are at the early stages of politically driven large-scale implementation of age-friendly initiatives in the core areas of housing, social participation and transportation. While the responsibility for creating an age-friendly environment lies primarily on municipalities, they are often underfunded and insufficiently supported in the task of age-appropriate and, at the same time, climate-conscious planning.

In the Netherlands, the *Social Support Act* (known in Dutch as the WMO 2015) obliges municipalities to help people to live at home for as long as possible. They are responsible for assisting people who are unable to independently arrange the care and support they need.

What seems to be similar in Germany and the Netherlands is a kind of personal mentoring on the adaptation and use of age-friendly principles. In Germany, there are already some possibilities and sources of information for older people to influence their living environment in the sense of an age-friendly environment. For example, in many places, it is possible to take advantage of housing counselling by welfare organisations such as the German Red Cross (DRK 2023). Welfare organisations and other providers offer this service, and it is already available in most German regions. Likewise, in the Netherlands, the role of a housing coach is worth highlighting (VWS, 2018). The housing coach is someone who is well acquainted with the range of housing and care. Together with the older person, the housing coach maps out the housing and care needs and looks for solutions. The help varies from an exploratory meeting to guidance in finding another home and options for installing facilities in the own home. The service is free and without any obligation.

Regarding the community sector, many project countries refer to the WHO's Age-Friendly Cities model as the main guide and strategy model for developing age-friendly cities and communities (AFCC). Van Hoof et al. (2021, p. 2) discussed this model, first presented in the *Global Age-Friendly Cities - A Guide* document. The model starts from the principle that older people can stay independent and healthy for as long as possible if support is offered in several domains that pertain to every aspect of daily living. One of the main scopes of the WHO model concerns all the factors affecting older people and their quality of life in a city, as well as the actions and programs that the municipalities could adopt to promote health and equality in the health of this age group, as well as in shaping more friendly cities towards the third age.

4 Eco-friendly principles in project's partner countries

Regarding the application of eco-friendly principles in home and community environments, research conducted by project partners brought to the surface valuable following conclusions.

Eco-friendly solutions must count on the personal responsibility and awareness of older adults and their caregivers. Especially since the vast majority of older adults want to continue living in their own home environment, it is important to raise the awareness and motivation of these people to adopt an eco-friendly way of living that complies with their care needs and boosts their environmental sensitivity.

A research-based study (van der Grient et al., 2019) showed that in the Netherlands, around one-third of citizens (34%) are (highly) motivated to make choices within their capabilities that help combat climate change. In comparison, in Germany (BMU 2021b), 56% of respondents over 65 agreed with the statements: "It is a human being's duty to protect nature" and "We may only use nature in such a way that this is also possible for future generations to /enjoy to the same extent". These numbers show that many older people are highly aware of the problem of climate change as a social task; however, additional conclusions of the partners' research indicate that further awareness and motivation are needed.

To spread eco-friendly principles at the personal level and enhance personal responsibility, one relevant way is through employing behaviour change interventions and developing the right habits that favour an eco-friendly way of living. To this end, relevant studies investigate the significance of motivation and intentions for enhancing the ability of older adults to make choices that help them combating climate change.

This aim is further enhanced by the fact that, in the area of climate-friendly structures, there are various possibilities for citizens to act, at least at the level of their own homes and private consumption decisions. For example, people can save energy by equipping their homes with intelligent heating and energy meters or reducing their meat consumption.

Many AFECO project's partner countries report that governmental authorities are the main source of information for raising awareness on eco-friendly ways of living.

Portugal: Especially in the field of funding, the EU is trying to help by providing funds used within national programs and specific energy efficiency goals leading to the development of National Plans as it is the Portuguese National Energy and Climate Plan 2030 (PNECP).

Italy: For example, in Italy, there is a wide range of publications and sources of information on how consumers can influence environmental performance from political institutions at the state and federal levels. In general, people need to be responsible and to:

- Be informed about climate change and search for information and.
- Apply this information according to their physical, social, and financial capacity.

Germany: As for Germany, information can be found in various guides from governmental institutions such as the Federal Environment Agency or the Federal Ministry for the Environment (BMU, 2023). There is also a wide range of publications and sources of information on how consumers can influence environmental performance from political institutions at the state and federal level, as well as from universities.

While education and behaviour change through motivation are prerequisites for enhancing the personal role and the personal responsibility for the adoption of eco-friendly principles, project's partner countries report certain policy objectives implemented by regional and local administrations in order to align their environmental policies with the European Green Deal. Nevertheless, AFECO project countries report that many structural problems (construction rules, funding programs, digital literacy, lack of awareness, lack of financial incentives) still make it difficult to implement climate/eco-friendly principles on a broad scale at the local level.

The Netherlands: Nevertheless, at this point, a crucial barrier that must be considered deriving from the literature search from project countries is the insufficient knowledge among older adults about which measures they can take themselves to make their neighbourhood or homes greener and/or eco-friendly and the necessity and effectiveness of these measures in their community. Moreover, they do not always feel personally responsible for the environment around them. Furthermore, for most people, it seems that the environment is often not the most important motivation to live more sustainably. Instead, financial motives and comfort often play the biggest role as either a motivating factor or a barrier to implementing eco-friendly principles.

Poland: It is worth mentioning, though, that in Poland, despite any economic difficulties, under the “State Environmental Policy 2030”, approximately PLN 72 billion (16.8 billion EUR) was spent in the years 2018-2020 for the implementation of environmental protection projects, and PLN 146 billion will be spent in the years 2021-2025.

5 Analysis of age- and eco-friendly principles

Different factors affect the implementation of age- and eco-friendly principles in the domain of care for older adults. What comes out from the results of the national reports is that there is no remarkable combinational initiative entailing those two domains, rather any actions, at least up to now, deal with either the age- or the eco-friendly domain in a separate mode.

Important barriers reported by the project partners that affect the implementation of age- or eco-friendly principles are:

- Renovation or refurbishment can be a sustainable practice to introduce age- and eco-friendly principles, giving a new meaning to the place where people are ageing, making it more comfortable and accessible. However, renovation and the appliance of innovative concepts to foster age and eco-friendly interventions in buildings and houses should combat the lack of required workmanship construction techniques.
- Portugal reported that public policies and incentives are very strict regarding sustainable construction, with indicators and techniques that need to be proven which may impede less literate citizens or individual contractors from accessing the incentives.
- Without proper education, formal caregivers may face difficulties implementing age-friendly principles.
- In Italy, a very important factor is the presence of architectural barriers inside and outside the houses of people over 65, representing a strong limit for participation in social and community life, as they prevent the emergence of more accessible and inclusive spaces.
- Another factor in Italy that complicates the implementation of an organic intervention in age-friendly environments is the presence of a fragmented context in the Italian regions.

The quality of houses in southern regions is lower than the ones in central and northern regions, with around 11% of southern householders reporting problems with damaged buildings, humidity and lack of proper lighting. Another difference in the housing context can be found in the access to outdoor spaces such as gardens or terraces. A 2020 ISTAT report shows that 58,4% of the population in the north-east of Italy has a garden, with this percentage reducing to 29,2% in the south of Italy.

- Another important parameter is the lack of awareness and misinformation regarding eco-friendly principles. For example, in Italy and Greece, most householders are not conscious of the energetic class of their home or are convinced of wrong information. Furthermore, it could be helpful to generate topics based on the areas that most directly affect the population of older adults on how to save energy, how to finance and carry out insulation in one's own home, what subsidies are available for heating and home adaptations, or how to reduce CO2 emissions in our daily routines,
- In Germany, the presence of technological and digital literacy impacts the adoption of age-friendly solutions in the home. To the point that smart home and ambient assisted living (AAL) applications contribute to a more age-friendly environment, the fear of hacking, fear for misuse of personal data, and fear of privacy breaches make the implementation and operation of smart home or AAL solutions more difficult and on the other hand fuels reservations and fears regarding the use of these technologies (ifib 2022: 8).
- Besides digital assistive systems in the home, financial factors also make the home environment age-friendly. For example, the German Federal Ministry of Housing states that only 1.5% of German homes have barrier-free access, resulting in a "supply gap of more than 2 million homes for people with mobility impairments" (Federal Ministry of Housing 2023).
- In Greece, a multi-pronged approach is necessary to address the challenges in implementing age- and eco-friendly principles in physical environments. This includes addressing cost and infrastructure barriers, increasing awareness and education, improving policy and regulation, and addressing the digital divide.
- In Poland, a survey conducted by Zalega (2018a) showed that the environmental awareness of seniors is unsatisfactory, and their responses were often inconsistent. The senior respondents believed in individual responsibility for protecting the environment. It should be noted that almost every second respondent does not feel the need to look for information about the natural environment and its protection on their own.
- Also, older citizens often mention financial problems as the key barrier to developing renewable energy projects. The primary reason is high investment expenditure. Seniors' households that benefit from energy from renewable sources are generally those that are wealthy and that report higher or secondary education (Zalega, 2018b).

6 Gaps and challenges

This chapter focuses on the gaps and challenges found and discussed to apply age- and eco-friendly principles and measures in older people's living environments. The gaps and challenges will be taken into account while developing the curriculum.

Policy

- As it comes out from the national reports, eco- and age-friendly principles are not specifically launched for older people. Issues connected with ageing are part of more general legislation addressing the whole community, therefore, in project countries, there is a need for the development or further implementation of a law/specific policy framework targeting older adults as a separate category. In Portugal, the creation of physical and social environments that foster the integration and participation of older people is still under process. In Germany, a real problem is the level of digital literacy as an important factor in facilitating the goals of age-friendly planning in cities as well as in the homes of older adults. The lack of tested and adequately progressed practices that promote age- and eco-friendly principles is obvious in Greece. In Poland, most of the policies and programs are in the areas of social services, health, and community support. There is a lack of a comprehensive ageing policy because of diverse policies addressed to older adults in certain areas, but not holistically. Finally in the Netherlands, while it seems that a structure based on community initiatives focusing on the provision of various types of housing is progressing, nevertheless, both age- and eco-friendly principles or solutions often focus on homeowners.
- One important problem is translating age-friendly planning goals from the municipal perspective into implementation. Here the problem relates to the regional and local resources and policies, and it gets even more highlighted in countries with federal structures like Germany and Italy. This problem is the result of two interconnected factors: the different social and economic backgrounds of each region (in Italy, for example, a significant factor that complicates the implementation of organic interventions in an age-friendly environment is the presence of a fragmented context in its regions) and the absence of a national policy that regulates the interventions to be made, leaving each region the possibility to dictate their own set of actions.
- It is not always clear, in the case of people who rent their homes, who is responsible for materializing the interventions. Subsidies are available for solar panels, but only for homeowners. This may lead to age- and eco-friendly solutions focusing on the more privileged part of the population, such as homeowners, and not being inclusive or accessible to all.
- Furthermore, there is a need for more collaboration between the government, community organisations, and older adults to ensure that age-friendly initiatives are tailored to the needs and preferences of older adults and promoted in practice.
- According to OECD (2015), while emphasising the need for educational initiatives for older adults, there is a need to consider the terms that define access to education as it often does not reach older adults equally, due to the significant feminisation among older participants in educational activities and the disproportion of access to educational activities between urban and rural areas.
- In Germany, although the federal government has set clear targets, many cities and municipalities are unable to meet them because they lack the financial, technical and human resources to do so. In addition, the housing market in German urban centres is very tight and the supply of affordable housing is therefore rather low. The construction

industry and trades in Germany currently have very limited capacity, making a rapid and comprehensive renovation of the building stock even more unlikely. There is also a high demand for new construction due to climate policy building targets, which is why policy interventions in the market run the risk of having a counterproductive effect on existing climate protection targets (cf. BMF 2021: 50-51).

- In Germany, climate protection laws are not sufficiently translated into specific laws, so the implementation of climate goals and projects at the municipal level is mostly based on voluntary action (Umweltbundesamt 2023b). Moreover, in many places, there is a lack of extended powers and responsibilities, so the potential for savings at the municipal level is not fully exploited. Furthermore, in many places, there is simply a lack of technical know-how to implement project plans with legal certainty.

Research

- From a research perspective, according to Emily A. Greenfield & Tine Buffel (2022), there is a gap in the literature with regard to behavioural changes or incentives that are addressed to older adults actually in order to be able to use or apply the available solutions. While existing research has explored the benefits of home modifications and the factors that influence older adults' behavioural intentions, the extent to which social, policy, market, and technological environmental factors influence behavioural intentions remains low.
- According to Wang et al. (2015), more research on age-friendly design and policies is needed. Entering the new millennium, the age-friendly movement, from a global perspective, aspires to make environments and systems within communities and individual homes more supportive of long and healthy lives. Despite the significant growth in the social movement over the past decades, there is a need for research on speeding up community change, especially in systematic and comprehensive ways that could facilitate the advance of age-friendliness as well.

Education and Information

- It is important to register and analyse the reported problems and complaints from the older beneficiaries. Furthermore, a simplification of what older adults need to apply, i.e., simple but effective age- and eco-friendly principles such as ventilating, sun-blocking measures, making the neighbourhood greener, using simple water-saving measures, or applying other cost-saving principles in their home, is needed.
- Most of the information around age- and eco-friendly solutions for older adults is accessible through the internet and online sites. Nevertheless, online platforms often miss the hands-on approach vital for older people, while still, even if the number decreases, digital illiteracy among older adults can be an impeding factor. The advance of new technologies as well as the use of home technology systems, may be seen as an opportunity for the introduction and education of older adults to age- and eco-friendly principles as well. An example of a hands-on approach that has adopted a user-centred approach is Hands-on SHAFE (see hands-on-shafe.eu). It has involved older people, also with less digital literacy, in the process of analysing, designing, and developing the provided tool and informal training experiences to create digital and healthy living

environments, including a section for those who want to start a business in this area. As a result, this project provides real-life case-based stories and learning pathways to support learning and to make it accessible to even more people, it is available in different European languages (English, Dutch, French, German, Polish and Portuguese).

- As summarised by Van Hoof et al. (2021, p. 18), the barriers, challenges and obstacles to implementing age-friendly cities and community programs include: first, the impact of financial cuts on social programs; second, the shift towards the privatisation of urban space; third, political barriers; and fourth, the prevalence of implicit and explicit ageist attitudes and stereotypes in the design of age-friendly cities.
- We also miss a comprehensive discussion or calculation tools regarding the costs involved to make the individual homes age- and eco-friendly and the support for older adults to make such calculations and a financial plan.
- A related point is about how to become eligible for new forms of housing for the older population and how to make an informed decision – we could not find much concrete information about this either.

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ANNEX List of definitions

Definition of age-friendly principles

Any practical solutions linked to one or more of the eight domains of the age-friendly cities framework that older adults themselves or with support of others can implement in their own home or community. Any practical solutions linked to one or more of the eight domains of the age-friendly cities framework that older adults can implement themselves or with the support of others in their own home or community. The World Health Organization (WHO, 2007, 2016, 2023) developed the age-friendly cities framework to encourage and support active and healthy living by enhancing opportunities for health, participation and security to improve the quality of life of the ageing population. The eight domains of the framework are as follows: outdoor spaces and buildings; transportation; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; and community support and health services.

According to Menec et al (2017), age-friendly principles “(...) support and enable people to age actively (...) with the notion of “active aging” broadly defined in terms of health, participation, and security.”

Definition of eco-friendly principles

Any practical solution that older adults themselves or with support of others can implement in their own home or community to act more sustainably or environmentally friendly. At its core, environmentally friendly, also referred to as eco-friendly, means that any given thing does not harm or affect the planet in a negative way (see https://en.wikipedia.org/wiki/Environmentally_friendly). According to Teorra (see <https://www.teorra.info/blog/what-is-the-difference-between-sustainable-and-eco-friendly>), the concept of sustainability, in essence, covers the long-term benefits of a product for either social, environmental, or economic purposes; however, in the context of green living, sustainable means that an action will have positive benefits on the environment.

According to Ragheb et. al (2016), a building to be considered “green” or “eco-friendly” needs to have:

- Ventilation systems designed for efficient heating and cooling
- Energy-efficient lightning and appliances
- Adaptive reuse of older buildings
- Water-saving plumbing fixtures
- Landscapes planned to maximize passive solar energy
- Minimal harm to the natural habitat
- Alternate power sources such as solar power or wind power
- Non-synthetic, non-toxic materials
- Locally obtained woods and stone
- Responsibly harvested woods
- Use of recycled architectural salvage
- Efficient use of space

