

**Grand
challenge 5:
Climate action,
environment,
resource
efficiency and
raw materials**

At one with nature

GRAND CHALLENGES :

C1. Health, demographic change and wellbeing

C5. Climate action, environment, resource efficiency and raw materials

C6. Europe in a Changing World – inclusive, innovative and reflective societies

CHALLENGE



Humans are part of nature, and ecology has an enormous influence of our lives. In light of growing urbanisation, it becomes increasingly important for research to be directed towards understanding how the carrying capacity of our environmental resource base interacts with our social and economic systems. It is important to change behaviour and attitudes in order to live in harmony with nature. The challenge is to counteract the current trends in development practices that distance humans from a relationship with nature that promotes psychological and physical well-being and health. An approach of stewardship is vital to guarantee a liveable environment for future generations. As citizens expressed,

“we do not inherit the world from our ancestors, we only borrowed the world from our descendants”. In Europe consumerism is now part of culture, identity, values, and considered part of economic and national progress. We also live in a “post-fact” society where faith in scientific methods and results is dwindling. In order to change perspectives towards ecological futures, sustainability must become easily understandable, desirable and accessible.

SCOPE

Research should explore how to make a system of policy and planning frameworks, with legal structures and institutions that promote more affordable and accessible sustainability lifestyles. In forming smart consumer habits, while continuing to improve quality of life and sustainable development across the social spectrum, a specific focus could be on forms of integrating natural environments and contacts with nature into land use planning. Relevant research aspects may be:

- Exploring how attitudes and behaviors have an influence on consumer patterns and societal relationships with the natural environment
- Researching the possibilities for establishing legal rights for ecological entities and systems (trees, water ways, fauna, etc..) as a way to help support behavioral and attitude change
- Targeting social innovation programs, education, incentive schema and awareness raising campaigns to explore and disseminate good practices for individuals, communities and cities
- Studying the economic, social governance and legal environments underpinning the good practices and methods to remove barriers to an accessible, sustainable lifestyle

EXPECTED IMPACT

Online
consultation
rating 

- Positive ecological prospects for future generations and integration with the UN Sustainable Development Goals
- Reconciling urbanisation processes with sustainable development actions
- Steps towards a regulative or legal framework for “the rights for nature”, working towards reduced pollution, restoration of biodiversity, and legal recognition of natural entities
- Better physical and mental health ; better quality of life and happiness

SUSTAINABLE CONSUMPTION

11 At one with nature

Research topic :
At one with nature

8.a

Grand Challenges:

5:Climate action, environment, resource efficiency and raw materials

6:Europe in a changing world - inclusive, innovative and reflective societies

1: Health, demographic change and wellbeing

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Online consultation rating: average importance: 4,
Countries prioritizing this research topic : Malta, Hungary, Czech Republic

CITIZENS' VISIONS

[LIT] Vision 3: Harmony between Human and Nature
“Restored forest, fresh water available for everyone, stabilized climate change problem, suspended biological extinction; green energy (renewable sources). Nature friendly technology.”

[IRE] Vision 4: Decision-making for a Sustainable Future
“We live in a world where cultivation is 100% sustainable. Our laws ensure that we reserve and protect our environment.”

[CHE] Vision 6: Social living space:
“...a new form of equitable coexistence of people between age 0-100, animals and plants.”

[SWE] Vision 4: A healthier Europe
“We have fewer dioxins and less pollution. For instance there are alternatives to plastics and new substances and products are launched only after they are made safe for the environment and health.”

[LIT] Vision 2: Human and Environment
“Pure barter; generation of non-consumerism...”

[HRV] Vision 3: The preservation of human health and nature for the generation XYZ
“We imagine year 2050 as a year in which people live happily in pleasant communities, as a part of nature. These communities will be examples of sustainable oasis based on truth and acceptance of the people's diversity. The development of new technologies, in accordance with the laws of nature, will lead to the improved quality of life. People will grow healthy food for themselves, with minimal or no ecological footprint.”

Consume smarter, increase well-being

GRAND CHALLENGES :

C5. Climate action, environment, resource efficiency and raw materials

C6. Europe in a Changing World – inclusive, innovative and reflective societies



CHALLENGE

Today conspicuous consumption is the norm and goods are used and thrown away with a very short life cycle. There are good examples of responsible consumerism but only limited adoption on a larger scale. We want to support citizens to become more responsible consumers by making information about the product and services lifecycles more transparent and available than it is today. Behavioural economics shows that consumers do not always act rationally and increased information does not always mean more responsible decisions. Therefore the insights of behavioural economics and psychology (ie consumer behaviour patterns) should be used to inform market policies and regulations

for both consumers and producers. Innovative methods and actions are needed to enable policy makers, regulators, corporations and citizens to create a market place in which more responsible decisions are made easily. We expect these to (positively) affect work-life balance and personal well-being.

SCOPE

To shift our long-term thinking, re-evaluate our consumption and shift the emphasis from material wealth to healthy wellbeing are all essential for the development of proper values which are necessary for sustaining our social, economic and natural environments.

To explore policy with explicit goals for conducting market and behaviour research in line with alternative economies (for example the service society, the sharing economy). Additional research can be directed to developing experiments with the contract terms, legal frameworks and consumer protection policies to explore and disseminate responsible consumption patterns.

To gain knowledge on more responsible handling of the resources and co-responsibility of corporations, public actors and citizens, with a focus on promoting the circular economy. Examples of this include subsidies for recycling and renewable energies, technologies and applications for supporting responsible consumption, legislation and incentives for long-life goods and products, and resource recovery.

To explore how to pilot experimental communities with legal frameworks and incentives that might promote good practices (i.e. through educational curricula, information campaigns).

EXPECTED IMPACT

- Smarter consumption patterns and lifestyle changes impacting the use of resources (including time resources)
- The first step in co-creation of policy initiatives with the inclusion of citizens and public interest groups
- Input into new standards and regulations concerning sustainable products and services with responsibility of all the stakeholders to be accountable - companies and policies – and proper contract terms, legal framework & consumer protection
- Generation of new sustainable business models, products and services
- The development of robust legal and governance frameworks that support co-responsibility for the promotion of sustainable consumption patterns
- Greater movement towards a circular economy, with the preservation of resources and materials and higher quality of life
- Increased well-being, in terms of physical and psychological health, including new strategies for personal life management

Online
consultation
rating



12 Consume smarter, increase well being

Research topic :

Consume smarter, increase well-being

#11.c

Grand Challenges :

5: Climate action, environment, resource efficiency and raw material

6: Europe in a changing world - inclusive, innovative and reflective societies

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Generation of new sustainable business models, products and services

The development of robust legal and governance frameworks that support co-responsibility for the promotion of sustainable consumption patterns

Greater movement towards a circular economy, with the preservation of resources and materials and higher quality of life

Increased well-being, in terms of physical and psychological health, including new strategies for personal life management

Online consultation rating: average importance: 4.05/5

Countries prioritizing this research area: Austria, Denmark, Bulgaria, Hungary

CITIZENS' VISIONS

[FR] Vision 2: Collective project

"Society in general will exit from overproduction and thus from overconsumption."

[CZE] Vision 1: Society without plastics

"In 2050, children will be educated at school as well as at home in ecological behaviour."

[FIN] Vision 1: VALUES – immateriality and minimalism

"Social value is not based on consumption. [...]Information belongs to all: data communications are a basic right and data/interfaces open to citizens. [...]Co-owning of products is commonplace."

[FIN] Vision 4: The future of responsible consumption

"Citizens no longer value throwaway culture, unethical production nor low quality. Hence children and citizens are educated in a long term to become responsible consumers. As a result, less waste is produced and it is more efficiently processed to energy, for instance. [...] Responsible consumption also boosts business and the economy as well as creates new businesses and jobs. Information on responsible consumption and innovations developed based on them could be a new Finnish export product. Responsible consumption comes forth especially in the cities of the future, where people live densely and in harmony with nature. Responsible consumption extends from choices in transport to choices in foodstuffs and commodities such as textiles and home electronics."

[DE] Vision 1: Sustainability implemented

"Economy serves the people, not people serving the economy

- Growth is not the main motivation/indicator for economic success (post-growth society)
- Orientation towards common good (community economy)
- Technological progress does not automatically result in more production, but the time obtained can also be used elsewhere (8 hour day may no longer be necessary)"

[BEL] Vision 5: Moving sustainably

"I'm a fair consumer: I know my coffee, tea, milk producer. "

[CHE] Vision 1: Conscious Consumption

"We know the impact of our actions. We are informed about the origin and the composition of what we consume." [WP2]

Urban-rural symbiosis

GRAND CHALLENGES :

C1. Health, demographic change and wellbeing

C2. Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy

C3. Secure, clean and efficient energy

C4. Smart, green and integrated transport

C5. Climate action, environment, resource efficiency and raw materials

C6. Europe in a Changing World – inclusive, innovative and reflective societies

C7. Secure societies - protecting freedom and security of Europe and its citizens

CHALLENGE



A better-balanced urban rural integration - considering the diversity of rural areas (i.e. suburb, outer periphery, deep rural) - is seen as vital for the quality of life for both urban and rural citizens. There is widespread concern in different countries about a declining quality of life in rural areas and migration from the countryside to urban areas. They point to the need for integration of spatial planning of cities and rural areas to improve social, ecological and economic sustainability while preserving the distinctiveness of each space. Participatory governance is currently largely missing. As a basis for solutions, a deeper understanding of the diversity of situations is needed. Also we need more differentiated notions than the simple rural/urban dichotomy - city and countryside do not really stop at the border, the mayor's responsibility stops there, but we should consider the functional urban area.

SCOPE

Research should investigate one or several of the following aspects:

- Differentiated notions of diverse types of spatial development patterns based on empirical studies of concrete cases across Europe
- Ways to establish cultural and physical linkages across diverse types of spaces
- Solutions for sustainable urban/rural environmental resource flows, identification of asset bases and means of co-governing in order to share them
- Ways to improve the quality of life and attractiveness of countryside in deprived rural areas,
- Integrating urban rural planning approaches
- Participatory governance of spatial planning, shared urban-rural participative governance structures to be explored
- Exploring the drivers of migration both from rural to urban and urban to rural areas
- Collecting, analysing and disseminating case studies of good practice of urban-rural symbiosis from different parts of the world

EXPECTED IMPACT

- The tendency to focus on the differences between the city and the countryside has been minimized and there is a mutual understanding between the two
- Ways to develop rural areas to preserve their identities, and to retain their human and social capital
- Solutions developed for rural areas to attract more inhabitants
- A differentiated view on diverse conditions in different areas
- More locally integrated value chains, reduced environmental footprint
- Increased resilience of cities

URBAN AND RURAL DEVELOPMENT

13 Urban-rural Symbiosis

Research topic :
Urban-rural symbiosis

8.b

Grand Challenges:

ALL

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Ways to establish cultural and physical linkages across diverse types of spaces.

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Ways to improve the quality of life and attractiveness of countryside in deprived rural areas,

Integrating urban rural planning approaches,

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Solutions developed for rural areas to attract more inhabitants.

A differentiated view on diverse conditions in different areas

More locally integrated value chains, reduced environmental footprint

Increased resilience of cities.

Online consultation rating: average importance: 3,82/5

Countries prioritizing this research area: Romania, Sweden Slovakia, Austria (experts, stakeholders), Austria (citizens), Denmark

CITIZENS' VISIONS

[HRV] Vision 4: Erasing the borders

“• A balanced urban and rural development

• EU Member states are self-sustaining in terms of food production

and use of renewable energy sources, demographic representation will be equal in the city and in the countryside. The racial, economic, ethnic, gender and political equality is present in the societies

• Planet Earth is a desirable place to live in. By taking care of the Earth - we take care of ourselves”

Making dense and growing urban areas more sustainable and liveable

GRAND CHALLENGES :

C4. Smart, green and integrated transport

C5. Climate action, environment, resource efficiency and raw materials



CHALLENGE

Highly dense and growing big cities, which have more cultural services, better health care, more education possibilities, should become more liveable for everybody. This can happen through different actions, implemented not only within the city but also across the whole Functional Urban Area (FUA). Actions include: making big parks from urban neglected areas; architecturally integrate more green in buildings and interstitial public/private shared

spaces; reactivating public spaces and inventing new use of urban infrastructures; renovating public/private housing and encouraging environmentally positive externalities; creating traffic limited zones and cycling mobility. The city should not really stop at the border - the mayor's responsibility stops there, but we know otherwise the city does not stop there - so, think in the functional urban area.

SCOPE

Research should answer to the challenges of density, diversity, ecology, populations development, and financial sustainability of dense and growing cities, by addressing the following areas in combination, not on their own, using different forms of citizen consultation in every area:

- The mixed/integrated urban fabric: distribute common services in time and space in order to avoid centralization and crowding and reduce tension between centres and suburbs
- Facilitating the adoption of new efficient sustainable practices (i.e. behaviour change; sustainable lifestyles)
- Identification of innovative practices and social innovation, including from outside Europe, that can be scaled up
- The diffusion/dissemination of "promising/good" practices (i.e. advanced urban sustainability; urban agriculture; urban regeneration...)
- The creation of an integrated system of public (macro) and private (micro) transportation

EXPECTED IMPACT

- Land and people flows analysed and mapped
- A strategy to identify places and services to integrate with view to governance solutions for the FUA, including citizen participation
- Increased sustainability, e.g., by reducing the need for cars. This will foster vibrant cities both in terms of economic and cultural activities
- Links with local SMEs and the development of potential business plans (that can be picked up and adopted once projects finish)
- Citizens' increased understanding of science/policy interface as well as science.
- More empowered citizens

14 Making dense and growing urban areas more sustainable and liveable

Research Topic:

Making dense and growing urban areas more sustainable and liveable #10c.

Grand Challenges:

4 : Smart, green and integrated transport

5 : Climate action, environment, resource efficiency and raw materials

CHALLENGE

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Links with local SMEs and the development of potential business plans (that can be picked up and adopted once projects finish).

Citizens' increased understanding of science/policy interface as well as science.

More empowered citizens.

Online consultation rating: average importance: 3,6/5

Countries prioritising this research area: France, Italy

CITIZENS' VISIONS

[FR] **Vision 5:** Living in a balanced society

"Proximity businesses are developed and offer essentially local products. Spaces dedicated to goods and services exchange and sharing do also exist, along with collective cultural spaces self-managed."

[DK] **Vision 4:** The nature city of the future

"The city is car-free: the transportation system should completely replace the use of private cars. The system could be electrical, magnetic highspeed trains. The city is green."

[ITA] **Vision 2:** A simply special city

"The places thus become sharing spaces that encourage the development of active and participating citizens."

[NOR] **Vision 4:** The environmental citizen in a "short travelled" and "mega local" city in 2040

"Good collective solutions, a strong multi-use mode of thought and high population density will contribute to a lower aggregated environmental burden and higher well-being."

Policy recommendations on sustainable consumption, urban and rural development

1. The European Commission, for example DG Regio, should consider **making accessibility and affordability of green spaces in urban development a stronger and more explicit priority in the Structural Funds programmes** for the 2021-2028 period.

This policy recommendation could also be coordinated together with other EU policy instruments more specifically the LIFE programmes, the climate KIC programmes for climate change mitigation and adaptation objectives, and the rural development programmes. Current and planned research activities with regard to sustainable energy, manufacturing practices, sustainable planning and building, and resource efficiency could also be integrated.

2. When **communicating information to change consumption behaviour, psychological and social effects need to be studied** in addition to the dominant economic factors.

3. When making research, legislation and policy recommendations, the EU should also consider the **responsibilities and resources of industry, government and other public interests in addition to disseminating information to citizens.**

This responds to current changes in society and research where the paradigm has switched from thinking of consumers and citizens as rational actors and integrating emotional and affective factors that influence the market place and consumer behaviour.

National consumer protection agencies should be very interested in this research and policy recommendation in developing their own frameworks.