



Enabling Sustainable Consumption

Making Better Use of Research Evidence in Policy-Making

Policy Brief | February 2013

Imprint

Published by the CORPUS consortium



Institute for Ecological Economy Research (IÖW)
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The research leading to these results has received
funding from the European Community's Seventh
Framework Programme (FP7/2007-2013) under
grant agreement n° 244103 (CORPUS)

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Executive summary



Enabling sustainable consumption requires overcoming a variety of obstacles. Among them are behavioural barriers as well as culturally engrained consumption routines. Policy-makers advancing the required transition must therefore build reliable evidence for employing an intelligent mix of different policies.

Evidence-based policy-making on sustainable consumption encounters its own impediment: many policy-makers regard the research on sustainable consumption too complex and wide-ranging to process.

Knowledge brokerage enhances the use of scientific evidence and thereby helps reduce uncertainties of policy decisions. It makes evidence more easily available so that policy-makers save time preparing consumption-related policies, and it supports researchers in better “packaging” their results.

The CORPUS project developed novel **innovative ways of knowledge brokerage** between policy-making and research on sustainable consumption. CORPUS advocates the PAM principles:

- a **participatory** approach to knowledge brokerage ensures collective ownership of topical issues,

enhances commitment of stakeholders and fosters a collaborative attitude;

- an **activating** approach encourages audiences to share their knowledge and expertise with others;
- a **modular** approach draws from a variety of tools for knowledge brokerage and facilitates customized brokerage formats.

Different **methods** are promoted – from buzz session, over poster walk and cognitive mapping to collaborative scenario building – that put these knowledge brokerage principles into practice.

In addition, **online tools** are increasingly used to support knowledge sharing among professionals. The CORPUS web platform (www.scp-knowledge.eu) is an example. It counts a consistently growing base of over 850 members who visit the site over 1500 times every month. Expert users continuously feed new knowledge items into the **online library** already comprised of almost 600 documents. To maximize the benefits for the users, the stored knowledge should be made available in certain ways: good organization and intuitive navigation, effective means to search information, proper packaging of information, e.g. as “knowledge units”; and rating of individual units of knowledge.



1. Barriers to sustainable consumption

Consumption and production patterns in developed countries (and increasingly developing countries) are key drivers of global environmental impacts. Consumption has some direct environmental impacts, e.g. European consumption in the form of household heating and cooking and the use of private cars caused 10–30% of CO₂-emissions. But the majority of impacts are emitted during the production and supply of the goods and services we consume, inside and outside of Europe.

The structures of society promote consumption patterns that Europeans think of as normal, but which are unsustainable. Consequently, sustainable lifestyles tend to be both impractical and undesirable for most people in developed societies. Hence, the promotion of such lifestyles faces a variety of obstacles:

- The prevailing **economic paradigm** of growth often implies increasing levels of material consumption. Many **business models** aim to sell more physical products rather than services, loans or repairs, necessitating increasing material resource use.
- **Technological innovation** can raise material living standards but also increase consumption of goods. Gains from more efficient products are sometimes offset by increasing consumption levels: the rebound effect.
- **Public policy** sets the framework for consumption through product regulation and shapes lifestyles through other policies related to working hours, taxation, and transport. European consumer policy has been criticised for lacking ambition regarding reducing levels of consumption.
- **Infrastructure** can lock people into unsustainable behaviours. For example, the current preference for single-family houses in some countries facilitates urban sprawl and promotes reliance on private cars.
- Culturally “normal” levels of consumption are rising, facilitated by a **marketing** industry that creates “needs” and desires for an increasing range of goods.
- Those trying to live a more sustainable lifestyle often hit a “glass floor”, an invisible **socio-cultural barrier** to reducing consumption levels. Individuals may find it difficult and unpleasant to live in opposition to mainstream values and practices.
- Sustainable living requires learning **new practices**. Some of the barriers to change are habits, objection to change, lack of time and lack of knowledge.



2. Policies promoting more sustainable consumption

The policy-maker's toolkit

A range of tools enables policy-makers to push behaviour through coercive measures including laws, pricing, and infrastructure, and to pull consumers through non-coercive instruments such as information campaigns and social marketing.

- **Regulatory instruments** include bans, standards, and permit requirements enforced by governments or other authorities. These effective policy tools are rarely used to promote sustainable consumption, except for improving products and production processes.
- **Economic instruments** include fees, taxes, subsidies, and cap and trade schemes. They influence consumption by changing supply and demand for specific goods and technologies.
- **Investments in sustainable infrastructure** can facilitate more sustainable consumption, such as improved public transport, recycling schemes, and district heating.
- **Informational instruments** include labelling, consumer guidelines, campaigns and educational programmes. They raise awareness and promote more sustainable choices and products.
- **Behavioural approaches** use better choice architecture to “nudge” consumer choices, e.g. placing ecological products at a shop entrance or next to the cashier increases visibility and sales.
- **Voluntary agreements** are often partnerships between government and business, e.g. setting voluntary targets for emissions reductions.
- **Green Public Procurement** means that public authorities take account of environmental factors when procuring products, services or works.

Using a mix of coercive and non-coercive instruments strengthens the effectiveness of policies. For instance, awareness campaigns can enhance future public acceptance of regulations.

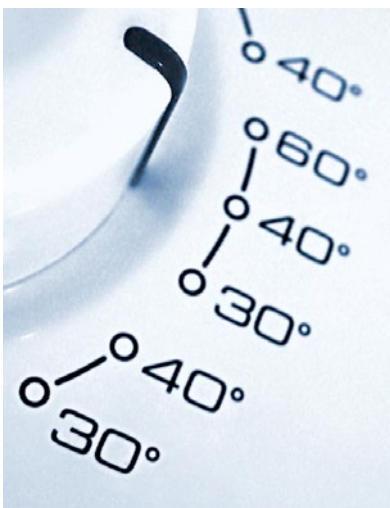
The role of scientific evidence

The following examples show how the development and implementation of policies fostering sustainable consumption can benefit from the use of scientific evidence.



In the **transport** sector, public policy has developed innovative approaches to mobility management. A good example is a dialogue marketing campaign for new citizens in Munich, Germany. The idea came from scientific evidence revealing that life events such as a residential move have the potential to break mobility habits. The marketing department of the Munich public transport company and the local authorities developed a pilot social marketing campaign targeting new residents, who then received an information package and were offered a one-week free public transport ticket on demand. The effects of the pilot project were evaluated: the share of daily trips by public transport increased by 7.6%, whereas car use decreased by 3.3%; the environmental benefit is an estimated reduction of 12,000 tons of CO₂/year. Moreover, the project paid off as costs of the campaign were exceeded by additional ticket sales. Based on these results, the city council decided to continue this measure.

In the case of **food**, consuming more sustainably also means considering the environmental impacts emanating from the transportation of produce and foodstuffs. Policy-making can provide guidance for consumers, e.g. through labels or guidelines, on the basis of proper assessments of the different options. Life cycle assessment (LCA), for instance, is a valuable tool in this respect as it discloses the environmental impacts along the entire supply chain. LCAs have been applied to a wide variety of food products, sometimes yielding surprising results. For example, while locally produced apples are more climate-friendly – despite the indispensable cold storage – than apples imported from New Zealand, lettuce imported from Spain during the winter months is more environmentally friendly than regional lettuce grown in heated greenhouses. Against this background, the popular concept of minimizing food miles turns out to be an inadequate basis for policy-making.



Household electricity consumption is one of the major sustainability challenges in the **housing** sector. Smart meters, which enable two-way communication between the household meter and the electricity supplier, provide potential for detailed customer feedback and advanced demand management. Therefore, their roll-out is pushed by policy, such as through the EU directive on the internal electricity market that calls on member states to develop plans for the implementation of smart meters within the following decade. However, scientific evidence has shown that the underlying assumption – that consumers who receive detailed information about their electricity consumption are motivated to save energy by changing their behaviour or by purchasing more energy-efficient appliances – overestimates the role of information. Trials reveal that due to consumption habits, energy savings are moderate and strongly dependent on the specific feedback setup.

3. Why take efforts to bridge the gap?

Sustainable consumption has become an increasingly important topic on the European political agenda. However, the huge body of existing research on the topic that has evolved over the last 10–15 years has up until now been underutilised. The reasons for this gap between policy and science are manifold (see box).

Policy-making on sustainable consumption in the Nordic countries

Research on sustainable consumption in the Nordic countries suggests that key barriers to evidence-based policy making are the persistence of myths about consumer behaviour and political reluctance. Research on consumer behaviour is regarded too complex and wide-ranging to process. Moreover, there is a reluctance to use social sciences research, and a tendency to rely on own beliefs about human behaviour. Hence, Nordic policymakers on sustainable consumption suggest that better knowledge brokerage could overcome the political and practical barriers to sustainable consumption policy implementation.

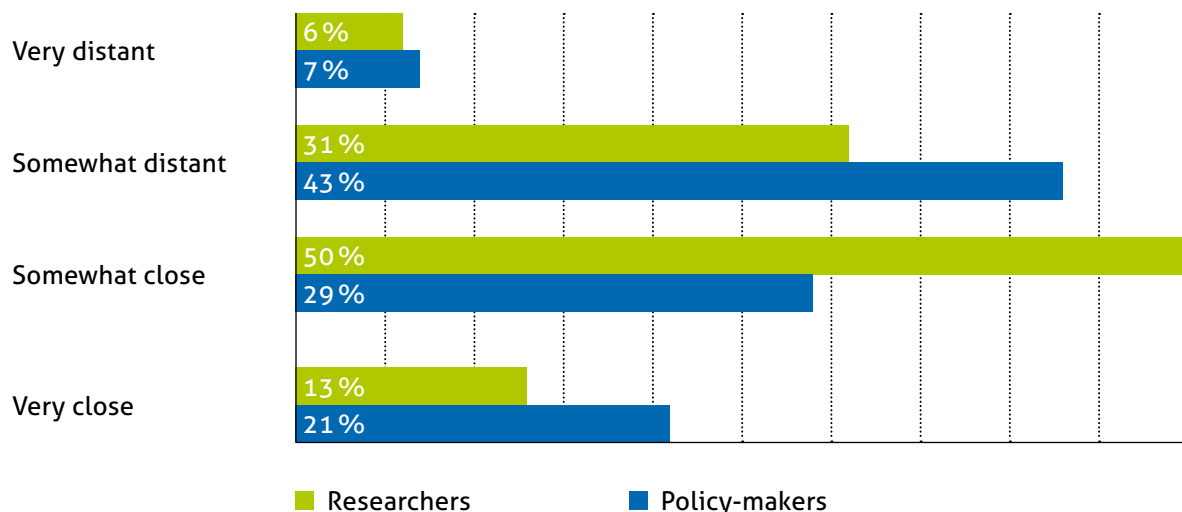
See <http://sustainabilitymyths.blogspot.se/>

The **CORPUS project** was a three-year pilot project (2010-2012) exploring innovative ways to bridge this gap. The project revealed that in the area of sustainable consumption, policy-makers and researchers are connected and yet separated (see figure). They are accustomed to knowledge exchange, but still operate in different professional environments.

Hence, a proper exchange of knowledge will not exist without an active **knowledge brokerage** to help overcome the existing barriers. The benefits are obvious:

- Brokerage enhances the use of scientific evidence and thereby helps reduce uncertainties of policy decisions.
- Brokerage makes evidence more easily available, so that policy-makers save time in the preparation of consumption-related policies.
- Brokerage supports researchers in better “packaging” their results and communicating more effectively with their target group.

How close do you consider yourself to the other community (research/policy)?

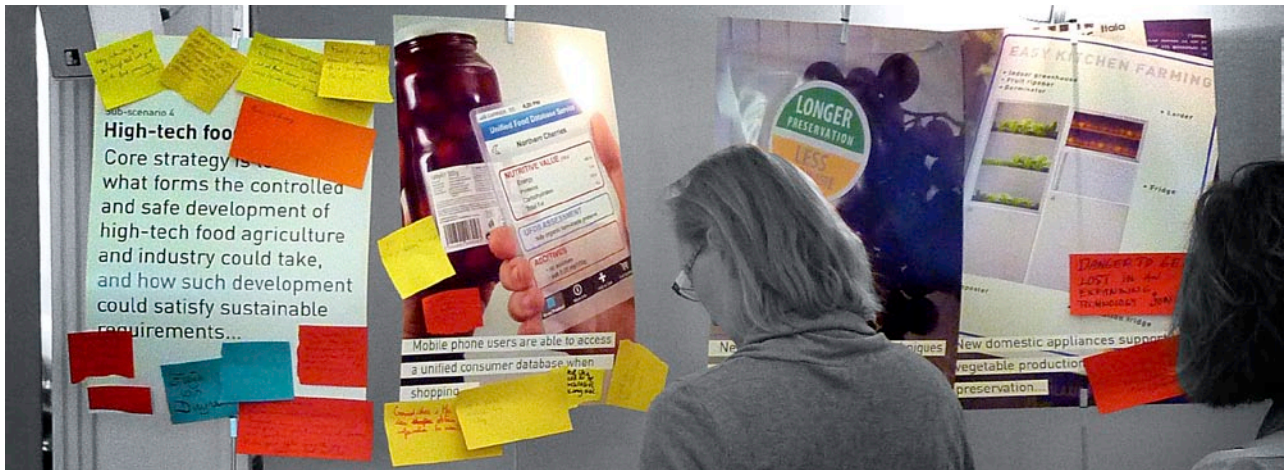


4. Why broker knowledge on SCP at European level?

Major consumption-related policy initiatives are put forward at the European level, such as the flagship initiative “A resource-efficient Europe” and the forthcoming Communication on “Unlocking the Single Market for Green Products”. Also, the work on specific policy instruments, such as the European ecolabel scheme or the eco-design of energy-related products, deserves close cooperation between science and policy. Moreover, the upcoming op-

erationalization 10-Year Framework of Programs on Sustainable Consumption and Production (SCP) adopted at Rio+20 calls for joint action of European policy-makers and researchers. Last but not least, as SCP develops at a different pace in member states, an exchange of good policy practice between them, enriched by related evidence from science, can contribute to more sustainable consumption patterns all over Europe.

5. Design principles for knowledge brokerage



Successful knowledge brokerage, whether through events, workshops and seminars or online resources, relies on three design principles:

A **participatory** approach to knowledge brokerage ensures collective ownership of the topical issues, enhances commitment of stakeholders and fosters a collaborative attitude. A good example of this approach is the “Policy Meets Research Workshops” organized in the CORPUS project. Through offline and online polls, participants articulated their personal interests and influenced the workshop agendas. Methods, such as collaborative scenario-building or the co-development of a research agenda, were further means of strengthening participation.

In an **activating** approach people are encouraged to share their knowledge and expertise with others. Activating calls for a moderation that employs and effectively combines a variety of techniques to stimulate

dialogue. In an offline event this can be buzz sessions or a poster walk; online means of activation include Q&As and discussion forums.

A **modular** approach draws from a variety of tools for knowledge brokerage. It helps develop customized brokerage formats that serve different purposes. In CORPUS, three main purposes of knowledge brokerage have been distinguished:

- A. translating information into knowledge through active deliberation;
- B. creating a common understanding through conversation and collaboration;
- C. connecting experts across communities.

The following table shows diverse tools, both very classic and cutting-edge ones, which when employed in innovative and tailor-made combinations can serve these purposes.

| TOOL | DESCRIPTION | PURPOSE | RESOURCES |
|--|--|----------------|---|
| Flashlight | <p>Short oral presentation on a specific topic to kick-start a group discussion.</p> <p>A flashlight can be employed to introduce a policy case or a summary of scientific evidence on a specific issue. The provision of concise information by one individual helps overcome reticence within a group constellation.</p> | A, C | Presentation of 5-10 minutes as introduction to a working group session |
| Buzz session | <p>Division of an audience into small groups to discuss an issue or carry out a task. The groups work simultaneously in the same room ("buzz" comes from the resulting noise).</p> <p>This method can easily be employed, e.g., as a warm-up after a plenary input and before the plenary discussion. The buzz session helps break the ice and gets more people to participate in the forum.</p> | A, C | Small groups of 4-6 people, e.g. around one table, for 5-10 minutes |
| Poster session | <p>Exhibition of a limited number of posters on selected topical issues. Participants travel in intervals along these "knowledge islands" and discuss the different topics in small groups. Discussions are summarised by a host/facilitator. Thus, every new conversation can build on the preceding ones.</p> <p>The poster session resembles the "World Café" method.</p> | A, B, C | <p>A minimum of 20 people in a plenary session of 60-90 minutes</p> <p>Prepared posters</p> |
| Cognitive mapping | <p>A cognitive map is a schematic representation of how an individual sees the causal relationships among the factors of a given system.</p> <p>Cognitive mapping can be used to examine and compare how policy-makers and researchers perceive a specific policy domain, e.g. sustainable housing. Applied in a participatory fashion mapping can help create a common understanding of a domain among individuals with different backgrounds.</p> | B, C | <p>Working groups of 8-12 people in a facilitated session of 60-90 minutes</p> <p>Optional: draft of (partial) maps</p> |
| Collaborative scenario building | <p>Collaborative scenario building, as it was conducted in CORPUS, starts from a visioning exercise: an exhibition of possible visions/ images of the future in the respective domain ("Snapshots of the Future") that triggers forward looking and creative thinking of attendees. The participants are invited to comment on the different images (e.g. by tagging).</p> <p>The scenario building is then organised in small groups that enrich selected visions (sub-scenarios) along certain guiding questions and thereby create a shared vision of a sustainable future.</p> | B, C | <p>Exhibition of future visions (e.g. images) in a plenary format where visitors walk around and can provide comments (ca. 30 min.)</p> <p>Facilitated working group sessions of 60-90 minutes; prefabricated templates (poster, cards, etc.)</p> |
| Scenario back-casting | <p>Participants identify policy strategies and research actions that may facilitate the desired transitions. Milestones help attendees organise their ideas along a predefined timeline. Group discussions provide opportunities for confrontation and recognition of mutual concerns between policy-makers and researchers.</p> | B, C | Facilitated working group session of 60-90 minutes; prefabricated templates (poster, cards, etc.) |
| Co-development of a research agenda | <p>Interactive session in which researchers and policy-makers – based on their individual expertise – jointly identify knowledge gaps and formulate research needs.</p> <p>Can be combined with outcomes from expert interviews (preceding and/or follow-up) to trigger and to enrich the on-site deliberations. Requires some post-production of the output.</p> | B, C | <p>E.g., working groups over two events in a 90 minutes session each</p> <p>Optional: expert interviews</p> <p>Post-production (editing)</p> |

A = translating information into knowledge through active deliberation

B = creating a common understanding through conversation and collaboration

C = connecting experts across communities

6. The use of online tools for knowledge brokerage

Knowledge repository or social web

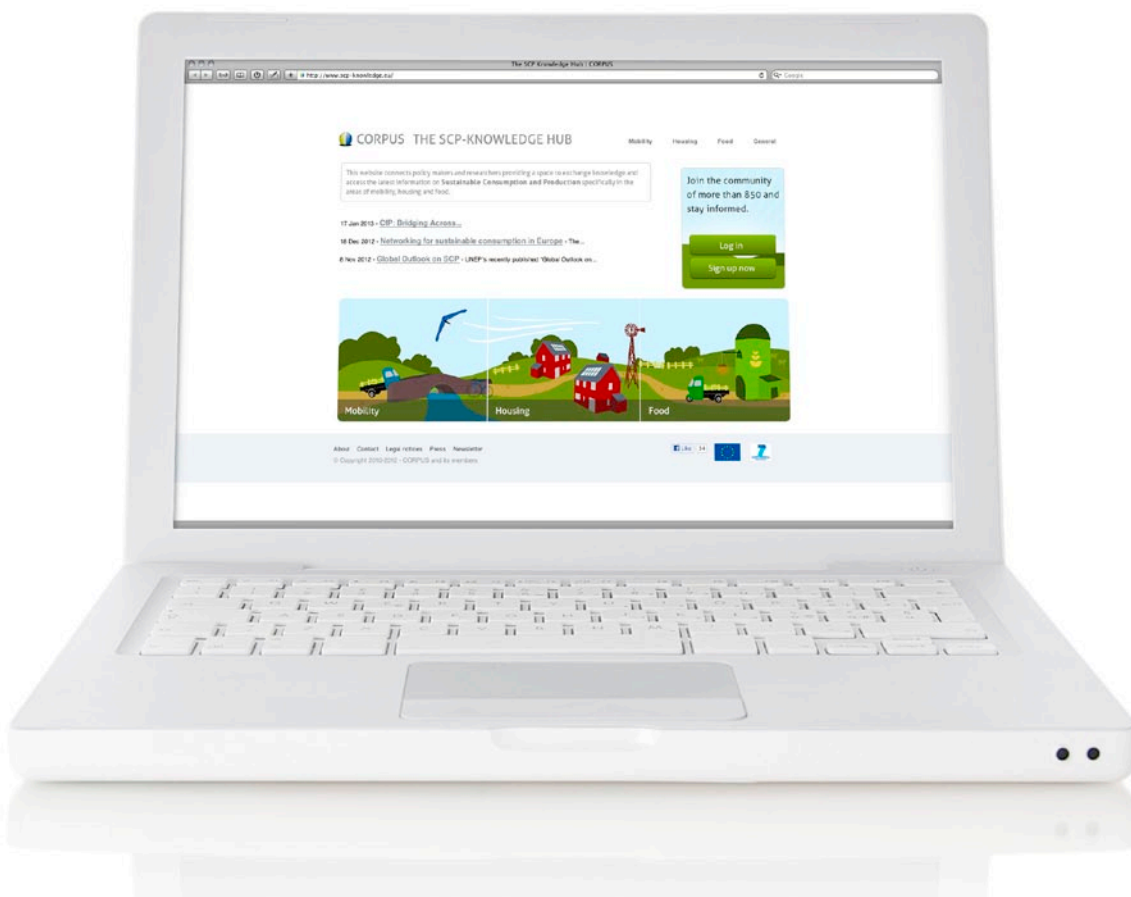
The existing body of scientific knowledge on sustainable consumption policies is huge. Hence, establishing and maintaining an online repository, which not only captures but intelligently organizes the available information, can yield major benefits to professionals working in the field.

The CORPUS web platform – “The SCP Knowledge Hub” – is a good example of such an online resource. It counts a consistently growing base of over 850 members who visit the site over 1500 times every month to access the expertise available. The **online library** is comprised of almost 600 documents, including scientific publications, policy documents, summaries of policy practice and scientific evidence (“knowledge units”). It is continuously fed with new knowledge items by expert users.

An online platform can also have an important function as an **expert database**. The CORPUS SCP Knowledge Hub is a useful example also in this respect: its “Member Search” function allows for “faceted search”

of experts through multiple successive filters such as a specific area of interest in SCP, country, profession, etc. The personal information can be enriched with information such as professional background, expertise or affiliations, so that each member in the community can easily increase the significance and appeal of his or her expert profile.

However, turning a knowledge repository into a **social web** with high interaction among users is very challenging. In the case of CORPUS it led to expanding the SCP specific platform to additional social media platforms such as a LinkedIn group and a Facebook page. Although these social media services have become more commonly used in professional contexts in recent years, they do not yet fully accommodate the knowledge acquisition routines of the majority of policy-makers. The exact preconditions and means for further social media use in strengthening cross-community connectivity for specific professional purposes deserve further investigation.



How to present knowledge online

Providing up-to-date evidence for experts is the groundwork of successful knowledge brokerage. To maximize the benefits for users, the stored knowledge should be made available in an online repository in ways that the CORPUS platform can demonstrate:

- **Good organization and intuitive navigation** of the site is key. The knowledge on the CORPUS website is organized along the three major consumption domains: food, mobility, and housing. The offered information is furthermore divided by type into “knowledge”, “events” and “members”.
- An effective means to **search the information** is important too. The CORPUS website offers a free text search and an advanced faceted search function for finding information, events and contacts through the use of multiple, successive filters. The knowledge broker’s niche expertise in accumulating specialist information and tailoring the search filters in correct ways – e.g. along specific consump-

tion domains – upgrade the functionality beyond mere Google searches.

- A more elaborate means of knowledge brokerage is to properly “package” the information. The so-called **“knowledge units”** in CORPUS were used to fulfil this function. They are either a rapid evidence review (e.g. summary of scientific findings on a certain topical issue) or a good practice case (e.g. example of a successful policy). A knowledge unit should be short, concise and easy to digest. A demand driven selection of topics for knowledge units in line with people’s interests is crucial.
- The CORPUS online library’s functionality to rate individual units of knowledge in accordance with their perceived usefulness (up to five stars) is another means to broker knowledge between users. A **rating system** can provide guidance in the abundance of information. It is however challenging to implement as it requires a critical mass of active users and rated items.

How to promote a brokerage website and how to increase its stickiness

Once a brokerage website is established, it is of paramount importance to actively promote it. This can be achieved through advertising the platform beyond online channels. The CORPUS workshops are an example of a focused channel, while other conferences and seminars where the target groups convene also need to be used. Besides this direct promotion there are other means to increase the visibility and enhance the stickiness of the platform, i.e. encourage visitors to stay longer, return more often and/or interact more actively:

- **Offer up-to-date content.** A crucial element in maintaining a knowledge brokerage platform’s attractiveness is its ability to continuously offer up-to-date information. For example, information on the most appealing upcoming events is a useful

yet simple means to provide fresh content. More elaborate tools include news tickers and newsletters, both of which also have been implemented on the CORPUS website. A quarterly newsletter such as that in CORPUS can be regularly sent to all registered users to create a routine of finding the latest content stored in the online repository.

- **Engage users in interaction.** It is clear that an active, large user-base can reach further than brokers by themselves. In CORPUS, this was pursued through offering users various possibilities such as uploading information themselves, opening discussion forums and online polls. Moreover, regular notifications informing about recent activities on the site incentivize users to actively take part in the platform.

CORPUS was a three-year research project (2010-2012) that explored and tested novel ways of knowledge brokerage between science and policy on sustainable consumption.

An innovative knowledge hub connecting policy makers and researchers was established under

www.scp-knowledge.eu.