

## CASI: Project description

Public Participation in Developing a Common Framework for Assessment and Management of Sustainable Innovation (CASI)

**COORDINATOR:**  
ARC Fund, Bulgaria: Zoya Damianova.

**CONSORTIUM:**  
The CASI consortium consists of 19 partners representing 12 European countries. Country correspondents extend the reach to all EU-28 countries.

**FUNDING SCHEME:**  
Coordination and support action, funded under the 7th Framework Programme of the European Community, SCIENCE-IN-SOCIETY-2013.1.2

## Strengthening sustainable innovation policy with CASI tools

### Insights from and for Germany

#### EXECUTIVE SUMMARY

Sustainable innovation has become a valued activity encompassing multiple stakeholder perspectives and innovation systems (Sarkis, Cordeiro & Brust 2010). Sustainable innovation forms the basis for the new solutions of and opportunities for the future although it has not yet achieved an established programmatic policy position. The CASI project has developed a set of tools, which can strengthen the development of sustainable innovation policy. This set of tools includes a data bank, a citizen engagement methodology, citizen agendas and a framework for sustainable innovation. This policy brief reviews and showcases how these SI tools can be used when strengthening sustainable innovation policy.

The CASI project has engaged policy makers and stakeholders in national-level events to foster dialogue on a wider societal engagement in sustainable innovation. Specific policy needs in sustainable innovation have been identified and formulated in these events, which have been organised in 12 European CASI partner countries. This policy brief describes these policy needs and highlights how CASI tools can support policy on sustainable innovation.

In the upcoming section, the four key policy tools are presented. Then a highlighted SI policy need in Germany is presented, and the following section matches how CASI tools can assist in addressing this policy need.

#### CASI TOOLS FOR STRENGTHENING SUSTAINABLE INNOVATION POLICY

#### APPLICATION OF TOOLS TO IDENTIFIED POLICY ISSUES

#### INSIGHTS HOW CASI TOOLS CAN STRENGTHEN SI POLICY

## Introduction

### Sustainable innovation for new solutions of and opportunities for the future

Sustainable innovation has become an accepted and valued activity that encompasses innovation systems and multiple stakeholder perspectives (Sarkis, Cordeiro & Brust 2010). Innovation then lays ground for the new solutions of and opportunities for the future, and sustainability accounts for economic, environmental and social aspects of these solutions and opportunities.

SUSTAINABLE INNOVATION FOR  
NEW SOLUTIONS OF AND  
OPPORTUNITIES FOR THE FUTURE

It is in the interest of public policy to ensure that innovation is sustainable and that the outcomes it leads to are sustainable. However, sustainable innovation has not yet achieved an established programmatic policy position. Indeed, it can be argued that sustainability is a cross-cutting and emerging feature of established innovation policies and could make sustainability a horizontal cross-policy issue. In the European Union, for instance, policy focus is on design for innovation, the public procurement of and demand-side of innovation, as well as public sector, social and workplace innovation (EC 2017), all embracing sustainable innovation in one way or another.

The CASI project has developed a set of tools, which strengthen the development of sustainable innovation policy. This set of tools includes a data bank, a citizen engagement methodology, citizen agendas and a framework, all associated to sustainable innovation:

TOOLS TO STRENGTHEN THE  
DEVELOPMENT OF SUSTAINABLE  
INNOVATION

- **The CASIPEDIA** bank provides a state of the art of 500 mapped sustainable innovation initiatives
- **Citizen engagement methodology** developed for sustainable innovation
- **Citizen agendas for sustainable innovation**, which challenges expert agendas
- **The CASI-F** common framework for assessment and management of sustainable innovation.

INSIGHTS HOW CASI TOOLS CAN  
STRENGTHEN SI POLICY

This policy brief showcases how the policy tools developed in the CASI project can be applied when developing sustainable innovation policy. The intention of this exercise is to provide policy developers insights in how CASI tools can be used when strengthening sustainable innovation policy. Similar exercises matching SI policy needs and tools in 11 other European countries are summarized in Appendix 1.

## CASI tools for sustainable innovation policy

### FORWARD LOOKING TOOLS FOR POLICY DESIGN

This section describes the four forward-looking tools developed and tested in the CASI project for policy design: a database, a methodology, a prioritisation system, and a framework for management and assessment of sustainable innovations.

### CASIPEDIA: STATE OF THE ART OF SI CASES

**CASIPEDIA** is a database that presents the state of the art of sustainable innovation (SI) initiatives identified in EU-28 countries ([www.casi2020.eu/casipedia/](http://www.casi2020.eu/casipedia/)) encompassing over 200 publically available SI descriptions. Its strength is the focus on sustainable innovations rather than on innovations in general. The CASIPEDIA enables a scanning of SI initiatives. The SI initiatives are categorized according to type, key area corresponding to the sub-challenges of the societal challenge 5, and to success factors. The CASIPEDIA enables the search of initiatives based on their geographical scope (international, national, local) and country, as well as information related to the relevant sector of the SI cases. The CASI project has also identified sustainable innovation priority areas that have been compiled by the developers of the Casipedia databank (Popper, Velasco and Ravetz, 2016) from the European council decision establishing the programme implementation Horizon 2020 Societal Challenge 5 (European Union 2013), according to which each initiative is also categorized.

### CITIZEN ENGAGEMENT METHODOLOGY FOR SI

**Methodology for citizen engagement.** The CASI project has applied and further developed a methodology for citizen engagement for research in sustainable innovation. The methodology focuses on engaging the public in creating visions for sustainable futures, which form the basis for the design of research priorities for sustainable innovation. Its benefit is that it can bring fresh and novel views for decision making. The methodology includes citizen vision creation workshops, an expert workshop for the design of research priorities and a second citizen workshop for the validation of the results. This methodology presents a process of how to engage citizens in research formulation, which helps to increase the acceptability of research and innovation among the general public. It also supports the inclusiveness of the policy process. Through the engagement of the public in defining research policy, it is possible to reach more innovative and creative policy alternatives for research and innovation activities (Bedsted et al. 2016). This methodology is useful for policy makers looking for new alternatives and increased acceptance for policy measures.

### CITIZENS' SI AGENDAS FOR NOVEL IDEAS FOR POLICY DESIGN

**The Citizens' SI agendas** are top-10 listings of research priorities that were produced in each of the 12 CASI partner countries in citizen workshops (Matschoss et al. 2015). The agendas highlight topics that citizens in each country find important. These agendas can be used as check-lists in the design of policy measures to target desired impacts of policy. The utilisation of citizens' SI agendas in the policy cycle enforces the effectiveness of policy because they are specific, forward-looking and detailed. In addition, the agendas are already supported by the citizens, and often challenge the views of experts and thus bring novel insights into policy design.

### CASI-F COMMON FRAMEWORK FOR ASSESSMENT AND MANAGEMENT OF SUSTAINABLE INNOVATION

**CASI-F** is a tested common framework for the assessment and management of sustainable innovation. For policy development, it provides a tool for mapping policies, enabling an analysis of critical issues associated with these policies, and supporting the creation of actions and action roadmaps to address the critical issues (Popper, Velasco and Popper, 2016).



## Matching CASI tools with sustainable innovation policy need in Germany

CREATING DIALOGUE, JOINT SOLUTION DEVELOPMENT AND CITIZEN ENGAGEMENT

In terms of sustainability policies, Germany performs comparatively well. In fact, the German council for sustainable development sees the German sustainability strategy in a pioneering role in the international context, because it applies the universal goals of the Agenda 2030 in a national context for the first time (Umweltdialog 2017). Nevertheless, there are still some aspects to improve in the implementation of sustainable development policies.

The German CASI policy dialogue and a congress 'innovation for society', which took place in Berlin 2016, gave some input to the question, in which ways sustainable – and especially social – innovations can be strengthened. Social innovations benefit from jointly developed problem solutions by civil society, business, science and politics. Therefore, the involvement and empowerment of civil actors and citizens are important issues for the support and implementation of sustainable social innovation. (Howaldt et al. 2017). At the CASI policy dialogue in Dortmund (2016) strengths and weaknesses of existing framework conditions of the participation and involvement practices were worked out and possibilities for a better support of sustainable innovations were derived.

STRENGTHEN DIALOGUE PROCESSES AND PARTICIPATION-CONDUCTIVE INFRASTRUCTURES

One conclusion from the congress 'innovation for society' is that the diffusion and implementation of social innovation needs new dimensions and constellations which help to actively include actors of civil society and support the development of innovative capabilities through empowerment. Therefore it is important to organise dialogue processes and to create participation-conducive infrastructures. In their congress summary, Howaldt et al. (2017) describe initiatives in which actors from different contexts (for example from public administration, charities and the private sector) get together and communicate as highly promising. For the development of an environment which enables sustainable social innovation, the further development of policies at federal, state and municipal level is crucial. (Howaldt et al. 2017).

INSIGHTS FROM THE POLICY DIALOGUE IN GERMANY

At the CASI policy dialogue different stakeholders from the academic community, municipal or regional administration, representatives from NGO's and societal associations together discussed strengths and weaknesses of current conditions and policies of participation practices for sustainable innovation. The majority of the participants had sufficient experiences with engagement processes in their daily work and therefore had an interest to discuss these issues. The results were five interrelated policy recommendations for the improvement of the current German policy framework which also correlate with the above described outcomes of the congress 'innovation for society'.

The development areas are in no particular order:

- 1) Enabling citizens to influence policy-making
  - This includes the challenges of creating open processes and making engagement constructive. Furthermore it addresses the weakness of the policy system in that it is currently insufficiently suited to engage citizens. Indirectly it touches upon the themes of resource availability that should be taken care of and the willingness to take risks in the process and to be open to non-linear processes.
  - o The related policy recommendations involve the establishment of a culture of participation in which there is openness, courage and cooperation and in which participation is facilitated (i.e. with time and other resources). The ideas of citizens should be taken seriously and the participation of a broad section of society should be warranted. Outcomes of the participation processes should be binding (and long-term). Citizens should have enough freedom to initiate participatory activities. Furthermore, this culture should be learned and trained (at young age) and participation guidelines should come into existence. A 'process competence' should be created.
- 2) Support to realize research findings
  - This relates to the challenge that participation processes and their outcomes tend to stay on a niche level and do not find actual application. It also relates to the lacking resources.
  - o In terms of policy recommendations this includes a quicker and more powerful realization of scientific findings. This also means that these should be incorporated at an early stage and that new forms of cooperation between science, industry, politics and civil society should be found. Important therein is that there is room for failure.

3) Removing bureaucracy

- Removing bureaucracy, or at least making participation more easy, relates to many sub-challenges. The idea is for instance that it might enable long-term continuous processes, could take away the fear for open processes and could break the 'kings only speak to kings' barrier that can sometimes still be witnessed in Germany's traditionally hierarchical structures.

o The related policy recommendations involve altered policy frameworks. This includes planning for the long term and addressing sustainability as a cross-sectoral theme and thus enable cooperation (for instance between ministries). Cross-sectoral collaboration should be institutionalized and should cover all political levels and include business and civil society.

4) The theme of sustainability is too far away from the daily business of most people

- It can be hard to engage people, and especially to reach a diverse group of participants.

o One way to deal with this is to focus on locally relevant issues. This is a general policy recommendation in relation to public engagement in sustainable innovation. The themes are often so complex and out of reach, that a local focus might be more successful than national or even European questions.

5) Involving 'all' relevant stakeholders

- It might be hard to reach all layers of society, either because of lack of interest, or because of a lack of incentives to attend participation events. This also relates to the challenge of lacking awareness about the possibilities to engage.

o It is therefore important to find the right format and the right incentives for participation. Both may be costly and relate to the challenge of resources, these should therefore be made available. (CASI national event report from Germany 2016)

Fostering a dialogue between different stakeholder and political levels, and to also involve citizens, are concerns of the German government in relation to the implementation of the national sustainability strategy (Bundesregierung 2016). With the revision of the German sustainability strategy in 2016 this aspect got more attention. Since 2009 many stakeholders spoke for a stronger vertical integration of the national sustainable strategies (Stigson et al. 2009) as they saw a need to anchor the strategy on different levels. Thus, the German government enabled the implementation of four network hubs on the subnational level by the end of 2016 (German Council for Sustainable Development 2017).

The 'Regional Hubs for Sustainable Strategies' named RENN-Projekts have been established across the German federal states to initiate an active networking and information process with which the implementation of the national sustainability strategy and also the UN Sustainable Development Goals (SDGs) would be supported. Target is to get as much social engagement as possible by linking existing sustainable development projects and initiatives. The RENN-projects are subject to the basic idea that a deep transformation for a sustainable development can only succeed by the genesis of new coalitions. That is why the projects aim for a stronger cross-linked networking of all actors of change. (<http://www.lag21.de/projekte/details/renn/>)

With the dependence to the Agenda 2030, the implementation of the German sustainability strategy is related to some challenges for the municipalities and simultaneously offers the possibility to bring global sustainability goals to this level of implementation. In the project 'global sustainable municipality in North-Rhine-Westphalia' (Global Nachhaltige Kommune in NRW - GNK NRW) 15 pilot municipalities work out strategies for a sustainable development with alignment to Agenda 2030 goals. (<http://www.lag21.de/projekte/details/global-nachhaltige-kommune/>) One objective of the project is to anchor integrated thinking and a network approach. (Interview with Dr. Klaus Reuter, LAG21 NRW: <https://www.nachhaltigkeit.nrw.de/akteure/kommunen-nachhaltigkeit-vor-ort-umsetzen/artikel-reuter/>)

THE REVISED GERMAN  
SUSTAINABLE STRATEGY IS  
EMPOWERED BY NEW SOCIAL  
INFRASTRUCTURE -REGIONAL HUBS  
AND PILOT MUNICIPALITIES



The equal participation of administration, politics and civil society is essential to further strategic processes for sustainability goals on the municipal level. In this context solution-oriented working is possible, if decision-makers, administration and representatives of civil society are equally involved in such discussions (Interview with Marie Halbach).

Georg Unger from 'Cluster Energieforschung' (in English 'Cluster for Energy Research'), a network manager with the focus on energy transformation and transition research, has the opinion, that a system change towards sustainable development is accompanied by three fundamental adjustments. First, the whole cultural landscape changes. For example, new wind energy parks arise and other energy producers disappear. Second, a fundamental change of the energy system is needed. Therefore, it is necessary to clarify the system interlinks instead of focusing on single modules. Third, the whole society should be involved in the transition process, because societal changes are an effect and a condition of a system change towards sustainability. New models of wealth need to be discussed, and winners and losers of change should be kept in mind. Dialogue and participation processes at different levels allow involving the whole society in this complex system change. (Interview with Georg Unger).

A co-creative and co-operative problem solution by civil society, business, science and politics and therefore the involvement and empowerment of civil actors and citizens can also help to counter populist arguments. The interviewed experts are of the opinion, that dialogue and participation processes can be an instrument to include all (in sight of a concrete problem solution) relevant stakeholders and societal actors. Furthermore, it should be necessary to establish an understanding for the complexity of themes, various relations and the wider context of own actions, for example in the range of the energy transition.

For a better understanding of the background of our policy advice, we need to make an excursion to the ongoing German debate:

- At the German policy dialogue a discussion arose about problematic aspects of the involvement of citizens, who disseminate populist views and arguments in participation processes. There are different perspectives to the issue of public participation in democratic politics. The different approaches of deliberative or consultative democracy can be understood as supplementary and supportive for representative democracy. Claus Leggewie and Patrizia Nanz (2016) express the opinion that approaches of consultative democracy, like councils from citizens, who discuss solutions for a wide range of problems, are necessary in the actual situation of politic-rejection. They highlight the difference to direct democracy, through which populist groups could get the possibility to exert their influence. As reaction to that, they propose on one hand the protection of representative democracy and on the other hand the further development of it through a 'dare of more democracy' (Leggewie/Nanz 2016: 339). In their view, it is not helpful to do 'business as usual' in the situation of increasing alienation between large parts of society and political representatives. This 'dare of more democracy' can be understood as support for the existing representative democracy, if the public discourse gets moderated suitable and more citizens participate in a constructive way to the creation of a liveable and sustainable future. (Leggewie/Nanz 2016).

- The concept of deliberative democracy is based on discourse theory of Jürgen Habermas and means a type of decision making, which is based on an exchange of arguments between equals. Thereby, essential element of deliberative democracy is the inclusion of public into an exchange about democratic decision making based on information and arguments. With participation of many a common consensus should be created. With that, the level of information of political decisions will be increased and the ability to create common good is adjudged to public communication. The approach of deliberative democracy can be criticised for its high expectations to citizens: The concept requires great engagement, high understanding and eloquence as well as enough time and a competence of listening. With these requirements it can be seen as a selective approach more than as inclusive. (König 2012).

In both approaches the idea of involvement of all members of society is represented, which also means to include populist groups into the discussion. Some argue, that populist arguments fail, when they are discussed in a group out of different people (as representative proportion of society) and as an exchange of information. Others think that benefits arise from the expression and discussion of different values and the conscious resolving of conflicts (Leggewie/Nanz 2016).

The conclusion is that to realize this dialogue tools like the CASI tools must be enabled by moderation capacities and located by an institutionalisation, summarized a social infrastructure.

HOW TO COUNTER POPULISM IN PARTICIPATION PROCESSES



EVALUATION OF CASI TOOLS IN  
RELATION TO SUPPORT DIALOGUE  
AND PARTICIPATION PROCESSES

CASI tools can be useful when addressing this particular policy need in the following ways:

- **Citizen engagement methodology** is a low-threshold approach to support engagement and to empower citizens, where a discussion between different stakeholders and citizens can take place on equal terms. It can be a very constructive way of engagement – even in conflict discussions. For example the discussion about the energy transition, which is a big part of the sustainable transformation, in Germany is characterised by oppositions, different beliefs and levels of information. It can also be said, that there are and will be winners and losers of change (Interview with Georg Unger). The citizen engagement methodology used in the CASI project is an effective tool to involve participants in complex discussions, use their ideas and simultaneously find more acceptances in civil society. The interplay between citizens and experts is an important instrument to start a dialogue and to initiate a flow of knowledge between different stakeholder groups and create an open process. For these reasons, the process could be one part of the establishment of a ‘culture of participation’ (CASI national event report from Germany 2016). Therefore, the citizen engagement methodology can be considered of strategic importance.
- **The CASI-F and the roadmap methodology** can foster new forms of cooperation between different stakeholder groups through raising awareness about the importance of their involvement and shows also possibilities of implementation. Thereby, CASI-F can be considered as an applicable tool in this context.
- **The CASIPEDIA** database shows the wide range of topics related to sustainable innovations and can be useful as orientation of existing initiatives and best practice examples. It can foster a European-wide view on particular examples and exchange between initiatives. That is why it can be considered as applicable.
- **Citizen agendas for sustainable innovation** can support the empowerment of citizens and can be helpful to enable them to influence policy making. The citizen agendas ensure a high appreciation of citizen’s ideas and let them know, that they will be taken seriously. Therewith it is a useful tool to strengthen engagement by generating and illustrating meaning in the participation process. With the citizen agendas for sustainable innovation new forms of joint solution development between citizens, civil society, science and politics for sustainability and transformation problems can be fostered. That is why this tool can be considered of strategic importance for the described policy need of this brief.



## Conclusion

This policy brief has addressed sustainable innovation policy needs in Germany and subsequently reviewed and showcased how CASI tools can be used when strengthening sustainable innovation policy. It is one of a set of 12 policy briefs, which carry out the same exercise and are summarised in Appendix 1.

Although the German sustainability strategy seems to be well on its way to implement global sustainability targets on national-politics level, there are still certain points how framework conditions of a transition to a sustainable future can be strengthened. In this policy brief we focused especially on the need for the creation of new forms of dialogue and a joint solution development between different stakeholder groups under the involvement and empowerment of civil society and citizens. The results of the policy dialogue at the national CASI event and other discussion arenas such as the congress 'innovations for society' and the experience of experts underpin the view, that through dialogue and participation processes, sustainable and social innovation can be brought forward.

Furthermore, the handling of populism, which could pop up in participation processes, can benefit from involvement, the exchange of information and knowledge. Especially, in the context of a system change, like in the energy transition, the support of understanding the complex system interlinks and the broader context of personal or local actions is important.

The citizen engagement methodology and the citizen agendas as tools from the CASI project are very useful to strengthen sustainable and social innovation policies in this context. The citizen engagement methodology used in the CASI project is an effective tool to involve participants in complex discussions, use their ideas and simultaneously find more acceptances in civil society. The interplay between citizens and experts is an important instrument to start a dialogue and flow of knowledge between different stakeholder groups and create an open process. Citizen agendas are a useful tool to strengthen engagement by generating and illustrating meaning in the participation process. With the citizen agendas for sustainable innovation new forms of joint solution development between citizens, civil society, science and politics for sustainability and transformation problems can be fostered.

STRENGTHENING DIALOGUE AND  
PARTICIPATION PROCESSES FOR  
SUSTAINABLE DEVELOPMENT WITH  
CASI TOOLS



## Recommendations

As result we can give the following recommendations for Germany:

- Accelerate exchange between EU-Countries about the implementation of national and/or European and international sustainability strategies on national or municipal level.
- Enable citizens to participate and influence policy-making by establishing a 'culture of participation': Create open processes, remove bureaucracy and take the ideas of citizens seriously. Furthermore it should be possible to initiate participatory activities from citizen's side.
- Make the complex theme of sustainability interesting and comprehensible to citizens. To involve and reach diverse groups of society and get all relevant stakeholders together, the theme of sustainability needs to be understandable at the level of daily business of people and also in the wider context and its interlinking. A focus on the local situation might be helpful.
- Make resources available to support citizen engagement. Engaging citizens costs time and money, not only from the side of the organizers who have to arrange a location for a meeting and who have to prepare the discussion, but also from the participants who have to travel to the venue and perhaps even have to skip a day at work. Sufficient compensation for these costs is needed to enable the process and incentivise participants.
- Support the perspective of overall system interlinkage. It is necessary to see one's own actions, benefits and disadvantages in a wider context. In this perspective a dialogue between winners and losers of sustainable development (also in a global perspective) can be initiated and possible compensations can be discussed.
- Rethinking and behavioural change along with joint solution development are essential to sustainable development. Hence, social innovations play an important role for sustainable system transitions and should be supported



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**Appendix 1 Strengthening sustainable innovation policy with CASI tools in selected countries.**

<b>CASI Tool</b>	<b>Response</b>	<b>Evaluation</b>
<b>AUSTRIA</b>		
Sparkling Innovation’ - Secure confidence in public participation processes and their effectiveness The recommendation is directly targeted at six Austrian ministries and calls for the establishment of a trans-sectorial effort to push both SI and public participation forward.		
CITIZEN ENGAGEMENT	Tools can assist in the engagement of different societal stakeholder groups and foster public interest in participation, especially in SI. Target groups could become a new driving force for SI.	Strategic
CASI-F / Roadmap methodology	It supports the definition of targeted actions and the development of an action roadmap for different stakeholder groups when it comes to the create confidence in public participation processes on various levels, including SI.	Very useful
CASIPEDIA	Offers examples of participation and societal engagement in general and in sustainable actions in particular. These examples include participatory budgeting, environmental education, environmental and energy management processes and many more.	Very useful
CITIZEN SI AGENDAS	Can support the definition and prioritisation of areas of public participation and the collection of ideas.	Applicable
<b>BELGIUM</b>		
To create space for and valorise participation to innovate		
CITIZEN ENGAGEMENT	Engaging community members by using tools of citizen engagement can positively affect skills and attitudes towards being more open to others and other perspectives. The methodology can also be adopted to make participation more visible and recognize the contributions and injected knowledge of citizens.	Strategic
CASI-F / Roadmap methodology	CASI-F allows for ‘space’ for everyone to take part in the exercise of developing a roadmap and the decision about who should carry out which tasks or take up which responsibilities. it can be adopted as a decision-making model that creates ownership.	Very useful
CASIPEDIA	It can be used to benchmark sustainable innovations. It also supports learning from other sustainable innovations’ solutions to the need of valorisation and ensuring shared leadership.	Applicable
CITIZEN SI AGENDAS	It can serve as a point of reference and regarded as an approach to valorise participation.	Applicable

CASI Tool	Response	Evaluation
<b>BULGARIA</b>		
Promote active engagement of citizens, CSOs and other stakeholders in the policy making processes in Bulgaria, in particular those in the field of science, technology and innovation.		
CITIZEN ENGAGEMENT	The methodology can be replicated in the process of developing a platform for societal engagement in the co-creation of programmes and priority setting.	Very useful
CASI-F / Roadmap methodology	CASI-F can help build capacity for designing, implementing and evaluating actions, which take into account citizens' and/or stakeholder' perspectives and integrate these to attain sustainability of the achieved outcomes.	Strategic
CASIPEDIA	CASIPEDIA illustrates the significance of building multi-stakeholder alliances and platforms for incorporating various perspectives in the process of design and implementation of generated innovations.	Applicable
CITIZEN SI AGENDAS	The SI agendas can contribute to strengthening the connection between science and society and demonstrate the value of public engagement in the processes of R&I and sustainability policies.	Strategic
<b>CZECH REPUBLIC</b>		
Reduce fragmentation and improve coordination and collaboration between societal actors to facilitate knowledge co-creation and exchange and more effective and evidence-based decision-making in relation to sustainable bio-fuel and renewable energy solutions.		
CITIZEN ENGAGEMENT METHODOLOGY	Engaging citizens in science and policy-making empowers them and helps them recognise their role, rights and also duties. However, given the level of granularity and specific research areas and topics related to bio-fuel and renewable energy solutions, while the methodology may be useful to raise awareness and understanding amongst citizens, it should be combined with other perspectives and approaches (e.g. critical issue analysis) in order to deliver more robust and legitimate results.	Strategic

CASI Tool	Response	Evaluation
CASI-F	The 5-step approach of CASI-F can be used to improve the assessment of sustainable bio-fuel and renewable energy solutions and support managerial decisions at different levels for the quadruple-helix of SI actors. For policy-makers, the results from the analysis of co-created knowledge and insights can serve to address wider systemic issues through the identification and formulation of SI priorities and R&I Policy Agendas. The quadruple-helix approach to SI agendas can be used to identify the alignment of innovators' goals/objectives with those of policy makers and research community, as well as civil society, in order to improve the coordination of actions targeting societal challenges, break down the barriers of silo mentality and promote collaboration rather than competition between SI actors.	Strategic
CASIPEDIA	Collaboratively assessing the sustainability of solutions to create sustainable bio-fuel and renewable energy through a fully-fledged multi-criteria analysis and assessment of practices, outcomes and key players associated to mapped solutions. The co-creation of knowledge is of particular importance in the context of renewable energies given its wide application across various areas and sectors.	Strategic
CITIZEN SI AGENDAS	The agendas can be a useful input for policy-makers when combined with different perspectives and scientific research on bio-fuel and renewable energy solutions. Mapping CASI citizen priorities against innovators' objectives, Horizon 2020 priorities and policy insights from CASI policy briefs, allowed integrating and reflecting a multi-actor perspective in the formulation and prioritisation of R&I policy agendas for SI. To further increase the usability of citizen priorities for policy-making, a systematic and comprehensive assessment and analysis of critical issues related to citizen visions could be performed using the CASI-F approach.	Strategic
<b>DENMARK</b>		
How to achieve more co-ownership to sustainable innovation?		
CITIZEN ENGAGEMENT	Can help foster co-ownership among citizens by engaging them in setting priorities for sustainable innovation.	Strategic
CASI-F / Roadmap methodology	Can help innovators identify ways to create co-ownership to their innovations.	Applicable
CASIPEDIA	Provides a number of useful examples of how to foster co-ownership through public engagement.	Very useful

CASI Tool	Response	Evaluation
CITIZEN SI AGENDAS	Provide useful evidence for the clear wish among both Danish and other European citizens to be actors in the transition to a more sustainable society.	Very useful
<b>FINLAND</b>		
How to create experimentation where users are engaged and can have an influence? Funding, transparency, engagement, user innovation		
CITIZEN ENGAGEMENT	Tool for citizen engagement that targets priority setting (especially for funding, supports transparency, accomplishes engagement)	Strategic
CASI-F / Roadmap methodology	Can assist in the implementation of targeted experiments (mapping issues, identifying critical issues and creating actions and action roadmaps, support for achieving experimental activities and engaging users)	Very useful
CASIPEDIA	Examples for funding, evaluation of funding schemes, examples of user innovations, look for best practices in SI (especially as benchmark against existing initiatives)	Very useful
CITIZEN SI AGENDAS	Can assist in the definition of the area of experimentation (allocation of research and innovation funding, provide ideas based on what citizens have prioritised)	Applicable
<b>GERMANY</b>		
Creating new forms of dialogue and joint solution development between different stakeholder groups/Involvement and empowerment of civil society and citizens		
CITIZEN ENGAGEMENT	Low-threshold approach to engage and empower citizens; can be a constructive way of engagement (regulatory level); creates an open process and could be one part of the establishment of a 'culture of participation' (see the results from the policy dialogue)	Strategic
CASI-F / Roadmap methodology	Can foster new forms of cooperation between different stakeholder groups through raising awareness about the importance of their involvement; shows possibilities of implementation	Strategic
CASIPEDIA	The database can be useful as orientation of existing initiatives and best practice example	Applicable
CITIZEN SI AGENDAS	Empowerment of citizens, support the enabling of citizens to influence policy making and that their ideas will be taken seriously; new form of joint solution development (between citizens, civil society, science and politics)	Strategic
<b>ITALY</b>		

CASI Tool	Response	Evaluation
Bridging the gap in between citizens and policy makers leading towards increasing populism (in negative terms). Need for developing bottom up policy approach and measures.		
CITIZEN ENGAGEMENT	CASI citizen engagement methodology could be used as pre-prepared tool for the planned activities that would be including public engagement, as well as a base for the training activities on the topic, including raising of awareness and promotion.	Strategic
CASI-F / Roadmap methodology	CASI-F was recognised by Italian stakeholders as an innovative sharing tool aimed at supporting the innovation processes through sharing of new experiences with different actors and assessing the state of advancement of projects and contributes to the design of the new ones.	Applicable
CASIPEDIA	Found as an inspiration for further improvement of the policy structures/tools and measures.	Very useful
CITIZEN SI AGENDAS	Can be used as a benchmark in the design of the future policy measures and tools in order to align the planned developments and measures with the expectation of citizens.	Applicable
<b>POLAND</b>		
Efficient tools assisting wide public participation in policy-making		
CITIZEN ENGAGEMENT	Citizen engagement methodology addresses the key need and challenges identified by the stakeholders in Poland in most comprehensive and exhaustive way. It is a practically ready for adoption complete methodology focused on involving both non-professionals and experts into the process of setting-up strategic priorities. This participative methodology, being far different from what is commonly used in Poland as public consultations, empowers the participants and creates the ownership of the results (policy priorities, objectives) through the collaborative process. It addresses raised issues of reaching different social milieus and adjusting the information to the target groups. Also the Citizens Panels as an inclusive exercise have potential to convince people that they have a real influence on policy-making process.	Strategic
CASI-F / Roadmap methodology	The framework for assessment and management of sustainable innovation (CASI-F) build on CASIPEDIA cases from different countries has a potential of analyzing specific area of policy-making process in Poland in a larger context of international activities on strategic and operational levels. Mapping process and identification of critical issues can be an inspiring exercise and fuel the discussion with an external perspective.	Very useful

CASI Tool	Response	Evaluation
CASIPEDIA	The framework for assessment and management of sustainable innovation (CASI-F) build on CASIPEDIA cases from different countries has a potential of analyzing specific area of policy-making process in Poland in a larger context of international activities on strategic and operational levels. Mapping process and identification of critical issues can be an inspiring exercise and fuel the discussion with an external perspective.	Very useful
CITIZEN SI AGENDAS	Citizen agendas for sustainable innovation seem to respond to the issue of providing attractive information and education activities with engagement of citizens and can be treated as applicable in terms of addressing policy need. The top-10 research priorities elaborated by experts following the citizens' visions of the future and validated by Citizens' Panels are tangible illustration of how the wide public participation in policy-making delivers specific results and therefore can serve as a good practice mobilizing groups of people from different backgrounds.	Applicable
<b>PORTUGAL</b>		
Identified policy need is a suitable communication that could be used to promote societal engagement activities on sustainable innovation with a large coverage and to reach the target audience, enabling policymakers to tackle this barrier more easily, consisting : (1) Low visibility for target audience; (2) Unclear language in communications (often too formal and complex); (3) Limited audiences that are reached via some channels, but reluctance to try new approaches that might attract new stakeholders; (4) Giving value to the public opinion by taking the outputs of societal engagement into account in decision-making (Based on 'Listen, reply, act' model). The citizen engagement methodology promoted within CASI, as well as the CASI-F framework may provide key guidance throughout the process of reaching the correct audience and communicating to them in an appealing manner.		
CITIZEN ENGAGEMENT	Is the most useful CASI result for setting priorities related with societal engagement and influence in the domain of sustainable innovation management. This methodology can also support transparency in policy development and lead to further engagement of users, as innovators. Making use of citizen engagement methodology can be considered of strategic importance for these reasons.	Strategic and very useful
CASI-F / Roadmap methodology	Is an excellent methodology for building an Action Roadmap. With this model, the innovator will be creating a detailed plan focusing on the implementation of one or several actions from a management perspective considering four key dimensions (context, people, process and impact), thus guaranteeing the successful management of a given sustainable innovation. It is the way to plan the needed steps for the future, helping the innovator focusing on building strong and justified practices (involving other stakeholders) and measuring its success.	Very useful

<b>CASI Tool</b>	<b>Response</b>	<b>Evaluation</b>
CASIPEDIA	Is a database of initiatives and examples of sustainable innovation, which collects more than 500 entries at EU-level and serves as a source of inspiration for many other innovations and/or projects. May be particularly useful as a starting point for setting up the motto for societal engagement activities.	Very useful
CITIZEN SI AGENDAS		Not mentioned in the policy brief
<b>SLOVENIA</b>		
Holistic approach towards public consultation		
CITIZEN ENGAGEMENT	This tool is considered applicable for development of unified methodology for organisation of public consultations. A systematic approach towards citizen engagement could be obtained.	Strategic
CASI-F / Roadmap methodology	Useful tool which could be used for strategical planning, assessment and future management and development of the public consultations.	Very useful
CASIPEDIA	Applicable for planning public consultations as well as for the assessment of results of public consultation.	Applicable
CITIZEN SI AGENDAS	The tool is considered applicable in planning and evaluation	Applicable
<b>UNITED KINGDOM</b>		
To ensure the 'Brexit' process pays attention to globally impactful environmental issues and the need to promote a more inclusive, innovative and reflective society in the UK.		
CITIZEN ENGAGEMENT METHODOLOGY	Achieving a better understanding of strategies and mechanisms that would maintain people engaged and committed to citizens' science despite the sense of detachment that abandoning European science policies and funds may create in many of them.	Strategic
CASI-F	CASI-F could help identifying what sort of initiatives may be implemented by the quadruple helix of SI actors i.e. government, business, civil society, and research & education, to strengthen the UK society in this unpredictable political and social context. The multiple-stakeholder dimension of CASI-F enables not only the identification of these initiatives but also the elaboration of short-medium-to-long-term action plans.	Strategic

<b>CASI Tool</b>	<b>Response</b>	<b>Evaluation</b>
CASIPEDIA	Scanning, mapping and recording in the CASIPEDIA database sustainable innovation activities (practices, players and outcomes) enable the framework to assist UK policy makers in the formulation of more efficient and evidence-based policies.	Strategic
CITIZEN SI AGENDAS	Making more dynamic and open the participation of citizens in social groups and communities serves to guarantee that a wider variety of people's expectations and concerns are heard.	Strategic

Appendix 1 summarises relevant and representative policies and initiatives in selected countries participating in the CASI project. Each of these summaries is presented in greater detail in respective national level policy briefs available on the CASI website at [www.CASI2020.eu](http://www.CASI2020.eu). A more in-depth European level policy brief is also available on the site.