



## Report on second set of stakeholder workshops

### Deliverable D6A.3

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## Preface

This Deliverable Report has been written for the project “Impacts and Risks from High-end Scenarios: Strategies for Innovative Solutions” (IMPRESSIONS) and describes the second set of IMPRESSIONS stakeholder workshops, including a summary of the outcomes. It also provides a short summary of the overall stakeholder engagement process in the project following the first and second sets of stakeholder workshops which took place in 2015 and 2016, respectively. It is mainly directed at project partners of the IMPRESSIONS consortium and is therefore restricted in its dissemination level. In describing the second set of stakeholder workshops, it will inform any future stakeholder engagement activity in the project’s lifetime. This report should therefore be regarded as an important stepping-stone for the further implementation of the IMPRESSIONS project.

## Summary

The second set of IMPRESSIONS stakeholder workshops took place in 2016 in the five project case studies. In addition, stakeholder engagement activities took place in-between workshop set 1 and 2. The specific objectives for the second set of workshops were to:

- Introduce and explore final draft storylines for the case study<sup>1</sup>
- Develop a vision for the case study;
- Explore modelling for the set of scenarios;
- Review existing policies with the scenarios<sup>2</sup>;
- Identify responses in view of the scenarios;
- Form first sets of strategies/pathways.

Stakeholder engagement activities were undertaken in-between the first and second set of workshops. Online questionnaires (EU-external, Scotland and Iberia) and meetings (Hungary) were used to get feedback on the prepared case study specific storylines under different scenarios and visions. The results of these were presented back to stakeholders at the second set of workshops.

The outputs generated from the second set of workshops in each case study have been reported in individual detailed reports. These reports were sent to the respective stakeholders and to all concerned IMPRESSIONS partners as key input for tasks under WP2 (Development of multi-scale integrated scenarios), WP3 (Advancement of CCI/AV methods and models) and WP4 (Development of adaptation and mitigation pathways).

Evaluation of the second set of workshops by stakeholders indicates a high approval rating for all the workshops and the team roles in general. Only the usefulness of modelling results and the review of existing policies gave divergent ratings. All evaluation comments are being used to improve the workshop process and inputs for the third set of workshops.

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<sup>1</sup> This point is applied differently in the case studies depending on whether or not a first workshop took place in the particular case study.

<sup>2</sup> This point is not applicable to the EU external case study, where it is replaced by a comparison of strategies and approaches from within Central Asia and China/Russia in line with the objectives of the case study.

## 1 Background to the stakeholder workshops in IMPRESSIONS

The FP7 project IMPRESSIONS (“Impacts and Risks from High-end Scenarios: Strategies for Innovative Solutions”) aims to provide empirically grounded, transformative science that quantifies and explains the consequences of high-end climate scenarios for both decision-makers and society. The project will do so by developing and applying a novel participatory methodology that explicitly deals with uncertainties and strong non-linear changes focussing on high-end climate change. Details of the methodology and its implementation can be found in the project’s Description of Work and on its website ([www.impressions-project.eu](http://www.impressions-project.eu)) and will therefore not be the focus of this deliverable. However, an integral part of the approach is the close interaction and direct engagement of stakeholders in the research process. This is being achieved through a series of in-depth professionally facilitated workshops that aim at maximising active stakeholder participation in defining high-end scenarios, adaptation and mitigation pathways, as well as analysing the inherent risks and opportunities of new policy strategies.

Within IMPRESSIONS, stakeholders are being engaged in all five linked multi-sectoral case studies at the global, European and regional/local scales (Scotland, Iberia and Hungary). The engagement includes two components: (i) direct stakeholder engagement; and (ii) complementary online engagement. The direct engagement was planned to be implemented with the help of a decision-maker survey and a series of three workshops in each of the five case studies (15 workshops in total), with each series focusing on:

- The development of integrated scenarios (workshop set I)
- The development of adaptation and mitigation pathways (workshop set II)
- The development of risks/opportunities and exploration of new strategies/policies (workshop set III).

Although the overall set-up of this engagement remains as described in the project’s Description of Work, the project team jointly decided that three adaptations would be beneficial to the overall outcome of the stakeholder engagement process and the project in general:

- Workshop set I: It was decided to replace the workshops for the Scottish and European case studies, as scenarios have been developed for those case studies as part of a previous project (CLIMSAVE). Both case studies fully stepped into the engagement process during workshop set II.
- New: Extension of EU workshop (in workshop set 2) and holding a 1-day mini-workshop for the Scottish case study. The 1-day mini-workshop enabled the validation of the merging of storylines done by the IMPRESSIONS team after the CLIMSAVE project, and to work out an additional scenario where storylines could not be merged (see D2.2 on the socio-economic scenarios for details). The extension of the EU workshop in workshop set 2 was necessary in order to enable stakeholders to explore the storylines more extensively, as contrary to the other cases, these have not been developed by them.
- New: Organisation of a final cross-scale workshop. Though not envisioned in the original planning, the project team has decided to bring stakeholders from all five case studies together in a final cross-scale workshop at the end of the project. This workshop will compare

and analyse results across the case studies, thereby truly aiming for cross-scale interaction and comparability. This is possible due to the savings made by no longer needing Workshops I for the Scottish and European case studies.

- Global case study: The global case study consists of two parts: (i) global modelling to provide boundary conditions for the European and regional/local case studies; and (ii) an assessment of indirect effects from outside of Europe on the EU. The project decided to focus the latter part of the global case study around the Central Asian region (comprising Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan); this decision was taken by the Case Study Leader after consultations with key stakeholders in Brussels, more specifically from various parts of DG CLIMA and the European External Action Service. The impacts of climate change in this region are of strategic importance for Europe because of the region's strong ties to Russia and (increasingly) China. Stakeholder engagement for the global case study therefore focuses on this Central Asian region and, thus, the case study is called "EU External", addressing external indirect effects on the EU. This shift in focus necessitates a different approach to the workshop series, where the focus will lie less on pathway development and more on policy implication analysis of the scenarios.

## 2 Stakeholder-integrated research

An ambitious project such as IMPRESSIONS - 15 workshops in 5 different case studies, nevertheless allowing comparability - can only achieve real stakeholder-science integration, when all consortium partners pay special attention to the development of methodologies that integrate stakeholders in systemic and integral way. This is reflected in the many internal discussions and the decision-making on methodologies within the project.

Furthermore, Prospex and other WP6A partners heavily invest in developing a tailor-made process for each of the workshops and engagement activities, in co-creation with the other work packages. This ultimately enables a real integration of stakeholders into the research (see also Gramberger et al. 2015).

## 3 Short review of the first set of workshops

The main building blocks of the first set of IMPRESSIONS stakeholder workshops were 1) an introduction to the project, 2) identification of driving forces and uncertainties, 3) development of scenario storylines, 4) exploration of high-end climate change effects on scenarios, and 5) quantification of storylines. These resulted in four distinct scenario storylines per case study, short narratives on how high-end climate change affects the scenario storylines, and quantifiable statements to support the quantification of model variables (see Deliverable 2.2 – Kok and Pedde, 2016 – for further information).

The workshops of the first set took place between February and September 2015 in four out of the five case studies. On average the workshops were attended by 25 participants (see Table 3) and the evaluation forms, which are completed at the end of the each workshop, indicated a very high approval rating for all the workshops.

The outputs generated from the first workshop for each case study vis-à-vis the workshop objectives have been aggregated into respective individual reports, further incorporating notes from other

IMPRESSIONS partners present at these workshops. A more comprehensive overview of these stakeholder workshops can be found in Deliverable D6A.2 ‘Report on first set of stakeholder workshops’, which was submitted in February 2016.

## 4 In-between engagement

Given the many elements to cover with stakeholders and the limited available workshop time, the project also decided to engage stakeholders in-between workshops. In order not to overload stakeholders and not to induce stakeholder fatigue, the engagement between workshops was well focused.

The engagement between workshop 1 and 2 consisted of two components as detailed in the following two sections.

### 4.1 Specification of case study specific storylines prepared in workshop set 1

Considering the specificities of each case study, it was decided to use an online questionnaire for the Scottish, Iberian and EU external case study. For the Hungarian case study two small meetings – one for each community – were organised by the Case Study Leader, in which storylines were further specified; the result of these meetings was reviewed in the second Hungarian workshop. Since no workshop was organised in the EU case study during the first set, no in-between engagement activity was conducted. Table 1 summarises the engagement in the four case studies.

**Table 1: Overview of IMPRESSIONS in-between engagement on scenario storylines.**

Case study	EU external	Scotland	Hungary	Iberia
Type of engagement	Online questionnaire	Online questionnaire	2 meetings (one per community)	Online questionnaire
Timing	03/2016	12/2015 - 01/2016	02 & 03/2016	06/2016 – 07/2016
Results per scenario*				
SSP1 – Sustainability	14/3/3	17/7/4	22***	9/2/1
SSP3 – Regional Rivalry	14/6/3	17/5/3	22***	8/3/4
SSP4 – Riders on the Storm	13/3/1	19/5/2	26***	9/2/3
SSP5 – Fossil-fueled development	12/4/3	22**	23***	9/3/5

\* Values presented in the order of: number of questions/number of participants invited to respond/number of responses

\*\* Scotland SSP5 was treated by all participants and combined with each of the other SSPs.

\*\*\* Due to the set up in the form of two workshops, all Hungarian participants invited to work on the scenarios responded. The format was more open without a strict question/answer format.

The engagement also resulted in the suggestions for specifying the names of the scenarios in order to make them more scenario-specific (see Deliverable 2.2 – Kok and Pedde, 2016 – for further information). The results of the surveys were presented to the participants during the second set of workshops.

## 4.2 Survey among participant on visions elements

A one-question survey was sent to all stakeholders to ask for their input to the vision for each case study. The purpose of a vision is to generate a long-term guiding perspective for the development of climate adaptation and mitigation pathways, strategies and actions, and to enable the assessment of their effectiveness. In this respect the following question was asked to the stakeholders: What elements would you include for your vision of <CASE STUDY> in 2100? Table 2 below summarises the engagement on vision elements in the four case studies. Given the differing process of the EU external case study, the vision element was incorporated into workshop 2 and hence no such survey was conducted.

**Table 2: Overview of IMPRESSIONS in-between engagement on visions.**

Case study	EU	Scotland	Hungary	Iberia
Type of engagement	Email questionnaire	Session during the first workshop	2 meetings (one per community)	Email questionnaire
Timing	January 2016	September 2015	Feb/March 2016	July/August 2016
Number of invited stakeholders	21	17	45	23
Responses	19	17	45	16

## 5 Objectives and design of the second set of workshops

Within the overall research and application process and the stakeholder engagement process, each workshop set focuses on the work in a specific WP. In combination, the overall IMPRESSIONS engagement process structure guides the more specific definition of each workshop, which equally considers the specific setting and needs of each case study.

The second workshop set had the following building blocks:

- Introduce and review final draft storylines for the case study - CASE STUDIES EUROPE AND SCOTLAND ONLY (as these case studies did not have a full first workshop);
- Develop vision for the case study (based on the vision survey, where applicable);
- Review modelling for the set of scenarios;
- Present and discuss stress-testing of existing policies in the scenarios;
- Identify priority areas for action on the basis of impact analysis;
- Identify scalable actions (as elements for adaptation and mitigation pathways), also informed by examples of good practice;
- Grouping of actions into strategies, towards pathways (if possible);
- Address “sufficiency” of existing policies and identified pathway elements to address the challenges - first introduction to transformative solutions.

The five workshops took place throughout 2016 as shown in Table 3. Each workshop had between 22 and 34 participants.



**Table 3: Overview of IMPRESSIONS workshops as part of workshop set 2.**

Case study	EU	Scotland	EU external	Hungary	Iberia
Location	Venice, Italy	Stirling, Scotland	Baku, Azerbaijan	Veszprém, Hungary	Toledo, Spain
Date	17-19 Feb 2016	11-12 April 2016	23-24 May 2016	27-28 June 2016	29-30 Sept 2016
Number of participants	22	22	26	34	23

A team of IMPRESSIONS representatives were present at each workshop, each with one of the following specific roles:

1. Project leadership
2. Case study leaders and supporters
3. Representatives of work package 2, 3, 4 and 5
4. Resource persons
5. Note takers
6. Facilitators
7. Logistical support
8. Reporter

Whereas the first three roles in practice have been combined with roles 4 and 5, the latter five roles are mutually exclusive.

The lingua franca of IMPRESSIONS is English. English is also the workshop language applied in the European and Scottish case studies. The need to work with additional languages next to English in workshops is addressed separately for the EU-external, Iberia and Hungary case studies. In the EU-external case study, based on prior consultation with stakeholders, we opted to work in English only. In Iberia and Hungary, interpretation between Hungarian and English (Hungarian case study) and between Portuguese, Spanish and English (Iberian case study) was provided.

## 6 Participants in the second set of workshops

### 6.1 Mapping of Stakeholders

Details on the actual mapping of the IMPRESSIONS stakeholders can be found in D6A.1 (Stakeholder mapping report) and will not be discussed here. In short, the mapping process follows the Prospex-CQI approach (see Gramberger et al. 2015) and the key components can be summarised as follows:

1. Identification of selection criteria (i.e. key sectors, geographical scope of activity, organisational affiliation, age, gender);
2. Agreement of criteria per case study; due to the different nature of the case studies not all criteria are relevant for each of them (e.g. the forestry sector is relevant in the European, Scottish and Hungarian case, but not in the Iberian and EU external case);
3. Mapping of individual stakeholders against the criteria.

The mapping process was undertaken in close collaboration with case study leaders and with the leaders of the decision-maker survey in WP1. The mapping built on an online stakeholder database per case study allowing entry and registration of potential stakeholders. In order to obtain a database with an adequate number and diversity of stakeholders, a minimum number of individuals for each case study were defined (between 40 and 80 individuals). Table 4 shows the initial identification of individuals per case study, which will be further elaborated as the project evolves.

**Table 4: Number of individuals initially identified per category and case study.**

Criteria	EU external	Europe	Scotland	Iberia	Hungary
<b>Organisational affiliation</b>					
- Government	36	33	12	32	37
- Economy/Enterprise	5	16	12	6	19
- Civil society	7	15	8	8	13
- Research	6	16	8	25	9
<b>Level of operation of the organisation</b>					
- Municipal	-	-	18	-	17
- Local	17	33	26	10	45
- Regional	48	42	23	36	38
- National	49	48	36	48	31
- European	30	38	8	7	8
- International	43	15	8	-	-
<b>Function of the stakeholder</b>					
- Politician	1	4	0	9	4
- Policy-makers/ experts/advisor	20	23	6	20	14
- Regulators	1	7	3	5	34
- Practitioners	14	8	9	5	40
- Technical expert	19	32	15	34	4
- Advocacy/lobbyists	2	10	14	7	6
- General public	0	15	2	0	4
- Other	0	5	1	0	0
<b>Level of operation of the stakeholder</b>					
- Municipal	-	-	-	-	21
- Local	17	29	26	10	48
- Regional	48	37	23	36	41
- National	48	47	37	48	23
- European	16	42	5	7	7
- International	37	18	6	-	-
<b>Sector</b>					
- Water	23	37	6	27	25
- Infrastructure	22	34	9	6	22
- Energy	22	25	5	7	13
- Finance/Insurance	4	8	1	3	4
- Agriculture	12	2	3	-	24
- Food & Nutrition	-	-	8	5	8
- Whisky	-	-	5	-	-
- Forestry	-	11	12	-	2
- Biodiversity conservation	-	27	-	18	-
- Tourism	-	-	10	-	-
- Health	-	3	4	3	10
- Land use/land use management	-	2	6	28	-
- Land owners	-	-	11	-	-

Criteria	EU external	Europe	Scotland	Iberia	Hungary
- Trade	10	-	-	-	-
- Security	22	13	-	2	6
- Migration	7	-	-	0	-
- Disaster risk reduction	35	-	-	-	-
- Humanitarian relief	24	-	-	-	-
- Other	8	27	17	14	22
<b>Age</b>					
- 30 years and under	1	6	0	4	3
- 30-50 years	45	43	31	46	27
- 50 years and above	8	9	8	6	22
<b>Gender</b>					
- female	19	26	16	30	23
- male	35	51	23	37	51

**Note:** Numbers indicate the number of identified individuals for each criterion per case study; dashes indicate non-relevance of the criterion for the case study.

Table 5 presents the numbers of individuals identified during each phase of the project per case study. The difference in numbers of individuals identified is due to the different set-up, as well as the different level of evolution, of separate case studies. The Scottish case study for example can build on a dense stakeholder network that has been working with the project partners in the past and has already indicated their commitment to the IMPRESSIONS workshops. As mentioned above the EU external case study has a different set-up compared to the other case studies; therefore instead of focusing on identifying individuals for the entire workshop series, this initial stakeholder mapping focused on the identification of participants per workshop and for the decision-maker survey separately.

**Table 5: Overview of numbers of individuals identified for IMPRESSIONS workshop as part of workshop set 2.**

Case study	EU	Scotland	EU external	Hungary	Iberia
Initial mapping (before workshop 1)	77	39	54	74	67
Mapping in the run-up to workshop 1	130	44	194	107	81
Mapping in the run-up to workshop 2	131	57	214	117	93

## 6.2 Stakeholder invitation process

Given the process design and budget limitations, a selected group of participants attends each workshop (between 20 and 25 participants). This restriction introduces a key methodological challenge for stakeholder selection. In order to be inclusive of different views and perspectives, systematic and consistent sets of minimum quotas of participants from each stakeholder category were established following the Prospex-CQI method (see Gramberger et al. 2015).

Based on the original mapping conducted as described (section 5.1), WP6A and case study leaders jointly agreed on specific quota for each of the criteria per case study. The aim of the quota is to reduce the biases and distortions that could derive from over-representation of certain typologies of participants or societal sectors. Whereas quota for general criteria will be the same in all case studies,

i.e. no less than 30% of male and female participants per workshop, other quotas can differ amongst case studies, e.g. government representatives are highly relevant for the first workshop in the Hungarian case study (minimum 20% of stakeholders should fulfill this criterion), but less so for the first workshop of the EU external case study (minimum 10% of stakeholder should fulfill this criterion) (see Table 3).

Once the quota for each criterion was set, the case study leaders and/or workshop organisers compiled a list of potential invitees subdivided into priority groups and started the invitation process with the highest priority group, moving down the list when invitees declined the invitation.

During each phase of the invitation process the case study leaders and/or workshop organisers monitor the quota and make sure that should an invitee decline the invitation they are substituted with someone that fulfills the same criteria. This continuous exercise ensures a maximum adherence to the quota in terms of the stakeholders represented at the workshops.

### 6.3 Stakeholders attending the second set of workshops

For each of the five workshops of the second set, a target was fixed in terms of number of participants: 20 for Scotland, Iberia and EU, 25 for Hungary and EU external. Each of these targets was fulfilled during the invitation process. All workshops experienced some last-minute cancellations leading to the number of participants as indicated in the table below.

Table 6 also highlights the individual quota set for each criterion and case study in the second workshop and if (yes/no) this quota has been fulfilled looking at the actual group of participants (not invitees). Overall, only 5 out of 143 quota were not fulfilled (3.5%), mainly relating to last minute cancellations.

**Table 6: Matching of quota of stakeholders per category and case study for the second set of workshops.**

Case study	EU	EU external	Iberia	Hungary	Scotland
<b>Number of participants</b>	22	26	23	34	22
<b>Number of invitees</b>	84	92	38	39	33
<b>Quota per criteria/fulfillment</b>					
<b>Organisational affiliation</b>					
- Government	12%/yes	10%/yes	15%/yes	20%/yes	15%/yes
- Economy/Enterprise	12%/yes	10%/yes	15%/yes	15%/no	15%/yes
- Civil society	12%/yes	10%/yes	15%/yes	15%/yes	10%/no
- Research	12%/yes	20%/yes	15%/yes	5%/yes	10%/yes
<b>Level of operation of the organisation</b>					
- Municipal	-	-	-	0%/yes	15%/yes
- Local	0%/yes	0%/yes	15%/yes	20%/yes	15%/yes
- Regional	0%/yes	0%/yes	15%/yes	15%/yes	15%/yes
- National	8%/yes	10%/yes	15%/yes	5%/yes	15%/yes
- European	40%/yes	10%/yes	5%/yes	0%/yes	5%/yes
- International	8%/yes	30%/yes	-	-	5%/yes
<b>Function of the stakeholder</b>					
- Politician	4%/yes	0%/yes	10%/no	10%/yes	0%/yes
- Policy makers/experts/advisor	4%/yes	20%/yes	10%/yes	10%/yes	5%/yes
- Regulators	4%/yes	0%/yes	10%/yes	10%/yes	5%/yes

Case study	EU	EU external	Iberia	Hungary	Scotland
- Practitioners	4%/yes	10%/yes	10%/yes	10%/yes	5%/yes
- Technical expert	4%/yes	20%/yes	10%/yes	10%/yes	10%/yes
- Advocacy/lobbyists	4%/yes	0%/yes	10%/yes	10%/yes	10%/yes
- General public	4%/yes	0%/yes	5%/yes	10%/yes	5%/yes
- Other	0%/yes	0%/yes	0%/yes	0%/yes	0%/yes
<b>Level of operation of the stakeholder</b>					
- Municipal	-	-	-	-	-
- Local	0%/yes	0%/yes	15%/yes	20%/yes	15%/yes
- Regional	0%/yes	0%/yes	15%/yes	15%/yes	15%/yes
- National	8%/yes	10%/yes	15%/yes	5%/yes	15%/yes
- European	40%/yes	10%/yes	5%/yes	0%/yes	5%/yes
- International	8%/yes	30%/yes	-	-	5%/yes
<b>Sector</b>					
- Water	8%/yes	10%/yes	5%/yes	5%/yes	10%/yes
- Infrastructure	4%/yes	5%/yes	0%/yes	5%/yes	10%/yes
- Energy	4%/yes	10%/yes	5%/yes	5%/yes	5%/yes
- Finance/Insurance	4%/yes	5%/yes	5%/yes	0%/yes	5%/yes
- Agriculture	8%/yes	10%/yes	5%/yes	5%/yes	-
- Food & Nutrition	-	-	5%/yes	5%/yes	0%/yes
- Whisky	-	-	-	-	5%/yes
- Forestry	8%/yes	-	5%/yes	5%/yes	10%/yes
- Biodiversity conservation	8%/yes	-	5%/yes	-	-
- Tourism	-	-	-	-	10%/yes
- Health	4%/no	-	0%/yes	5%/yes	5%/yes
- Land use/land use management	4%/yes	-	5%/yes	-	-
- Land owners	-	-	-	-	5%/yes
- Trade	-	5%/yes	-	-	-
- Security	-	10%/yes	0%/yes	5%/yes	-
- Migration	4%/no	5%/yes	0%/yes	-	-
- Disaster risk reduction	-	5%/yes	-	-	-
- Humanitarian relief	-	5%/yes	-	-	-
- Other	0%/yes	0%/yes	0%/yes	0%/yes	0%/yes
<b>Age</b>					
- 30 years and under	4%/yes	5%/yes	5%/yes	5%/no	5%/yes
- 30-50 years	24%/yes	30%/yes	30%/yes	30%/yes	30%/yes
- 50 years and above	8%/yes	10%/yes	10%/yes	10%/yes	10%/yes
<b>Gender</b>					
- female	24%/yes	30%/yes	30%/yes	30%/yes	30%/yes
- male	24%/yes	30%/yes	30%/yes	30%/yes	30%/yes

## 7 Outcomes of the second set of workshops

The second set of workshops in general had the following objectives:

- Develop a vision for the geographic area in view of high-end climate change;
- Explore the storylines;
- Identify responses in view of the scenarios;
- Explore modelling results for the scenarios;
- Stress-test existing policies with the scenarios;

- Form first sets of strategies / pathways.

The outputs generated from the second workshop for each case study vis-à-vis these objectives have been aggregated into respective individual reports with the help of the IMPRESSIONS partners present at these workshops. These reports provide an almost literal transcription of the materials produced by the stakeholders (in the form of e.g. plenary presentations, flip chart notes and post-its) for each step of the workshop process. Specifically, the following has been covered in each report:

- A refined vision for each case study;
- A revised storyline for each scenario;
- A collection of comments on the link between models and storylines for each scenario;
- A review of existing policies for each scenario;
- 4-16 clusters of responses for each scenario (see details below);
- Strategies for each cluster of responses (including a timeline 2016 – 2100).

Once finalised, the reports detailing these outputs were transferred to the respective stakeholders and to all concerned IMPRESSIONS partners as key input for tasks under WP2 (development of multi-scale integrated scenarios), WP3 (Advancement of CCIAM methods and models), WP4 (Development of adaptation and mitigation pathways) and WP5 (Risks, opportunities, costs and benefits of adaptation and mitigation).

Highlighting one output from the second set of workshops in exemplary fashion, Table 7 presents how the selected clusters of responses compare across four case studies.

**Table 7: Example output: Selected clusters of responses across four case studies.**

Case study	EU	Scotland	Hungary	Iberia
<b>SSP 1</b>	<ul style="list-style-type: none"> <li>– Education and good practice examples</li> <li>– EU and global vision and will</li> <li>– Technology and innovation</li> <li>– Agriculture</li> <li>– Governance</li> <li>– Nature protection</li> <li>– Water</li> <li>– Markets and companies</li> <li>– Preparedness</li> <li>– Behavioural changes</li> <li>– Well-being</li> <li>– Land use planning</li> </ul>	<ul style="list-style-type: none"> <li>– National government</li> <li>– Multilevel governance</li> <li>– Lifelong learning</li> <li>– International relations</li> <li>– Community engagement and empowerment</li> <li>– Managing the environment</li> <li>– Water management</li> <li>– Technology solutions</li> <li>– Technology for people</li> <li>– Employment</li> </ul>	<ul style="list-style-type: none"> <li>– Civil/NGO</li> <li>– Economy</li> <li>– Education, Communication</li> <li>– Energy</li> <li>– Food</li> <li>– Governmental regulations</li> <li>– Health</li> <li>– Local regulations</li> <li>– Main principles</li> <li>– Technology</li> <li>– Water</li> </ul>	<ul style="list-style-type: none"> <li>– Agriculture</li> <li>– Water</li> <li>– Energy</li> <li>– Social development</li> </ul>
<b>SSP 3</b>	<ul style="list-style-type: none"> <li>– Education</li> <li>– Equality/</li> <li>– Philanthropy</li> </ul>	<ul style="list-style-type: none"> <li>– Education and training</li> <li>– Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>– Civil society organisation and solidarity</li> </ul>	<ul style="list-style-type: none"> <li>– Water and energy policies</li> <li>– Ecological protection</li> </ul>

Case study	EU	Scotland	Hungary	Iberia
	<ul style="list-style-type: none"> <li>– Technology and innovation</li> <li>– Food</li> <li>– Governance</li> <li>– Cities</li> <li>– Biodiversity</li> <li>– Water</li> <li>– Global governance/ international (market) relations</li> <li>– Infrastructure</li> <li>– Social cohesion</li> <li>– Health</li> <li>– Green energy</li> <li>– Resilience/land use/flooding</li> <li>– Land use</li> </ul>	<ul style="list-style-type: none"> <li>– Community cohesion, local policy and land management</li> <li>– EU influence</li> <li>– Role of private</li> <li>– Technology development and use</li> <li>– Branding outside Scotland</li> <li>– National government</li> </ul>	<ul style="list-style-type: none"> <li>– Communication and education</li> <li>– Crop cultivation</li> <li>– Decision-making</li> <li>– Green energy and alternatives</li> <li>– Health</li> <li>– International cooperation</li> <li>– State regulation</li> <li>– Water management</li> </ul>	<ul style="list-style-type: none"> <li>– Education and information</li> <li>– Increase availability of water resources</li> <li>– Food adaptation</li> <li>– New international orientation</li> <li>– Regional and rural development</li> <li>– Cooperative &amp; strict management</li> <li>– Social &amp; human rights protection</li> <li>– Cooperation in Iberia</li> <li>– Participation and democracy</li> </ul>
<b>SSP 4</b>	<ul style="list-style-type: none"> <li>– Education</li> <li>– Tax and economic incentives</li> <li>– Technology</li> <li>– Agriculture</li> <li>– Governance</li> <li>– Nature protection</li> <li>– Water</li> <li>– Resources</li> <li>– Adaptation/lifestyle</li> <li>– Infrastructure</li> <li>– Miscellaneous</li> <li>– Land cover/urban planning</li> </ul>	<ul style="list-style-type: none"> <li>– Playground for the haves</li> <li>– Ecosystem service exploitation</li> <li>– Community based food growing</li> <li>– Practical and low-tech skills and tools</li> <li>– Local trading</li> <li>– Regulation</li> <li>– Informing, education and motivating multinationals</li> <li>– Resource coordination between multinationals</li> <li>– Social and health services</li> <li>– (unnamed)</li> </ul>	<ul style="list-style-type: none"> <li>– Politics</li> <li>– Rural development</li> <li>– Social health and education</li> <li>– Urban development</li> <li>– Other</li> </ul>	<ul style="list-style-type: none"> <li>– Politics and society</li> <li>– Agriculture and rural development</li> <li>– Education/public participation</li> <li>– Communication</li> <li>– River rehabilitation</li> <li>– Portugal and Spain</li> <li>– Gender equality</li> <li>– Energy</li> <li>– Environmental Sustainability</li> <li>– Governance</li> </ul>
<b>SSP 5</b>	<ul style="list-style-type: none"> <li>– Education</li> <li>– Cross-policy integration</li> <li>– Technology investment/technology based solutions</li> <li>– Agriculture/food</li> <li>– Biodiversity ecosystem services</li> <li>– Market-based policy instruments</li> <li>– Policy</li> <li>– Urban development</li> <li>– Integrated water management</li> </ul>	<ul style="list-style-type: none"> <li>– Local empowerment</li> <li>– Tourism and recreation</li> <li>– Global relations</li> <li>– Water as a resource</li> <li>– Education and awareness</li> <li>– Taxation and funding</li> <li>– Land ownership</li> <li>– Technology innovation</li> </ul>	<ul style="list-style-type: none"> <li>– Agriculture</li> <li>– Communication</li> <li>– Education &amp; Training</li> <li>– Energy</li> <li>– Government strategies</li> <li>– Health</li> <li>– Involving partners</li> <li>– Local solutions/responses</li> <li>– Technology</li> <li>– Spirituality</li> </ul>	<ul style="list-style-type: none"> <li>– Governance</li> <li>– Economy</li> <li>– Policies</li> <li>– Education</li> <li>– Subsidies</li> <li>– Regulation &amp; taxes</li> <li>– Renewable energy</li> <li>– Technology</li> <li>– Land use &amp; forestry</li> <li>– Water management</li> <li>– Transition</li> <li>– Monitoring</li> </ul>

Case study	EU	Scotland	Hungary	Iberia
	<ul style="list-style-type: none"> <li>– Soil management</li> <li>– Energy</li> <li>– Risk management</li> <li>– Global Implications</li> <li>– Land use planning</li> </ul>	<ul style="list-style-type: none"> <li>– Peripheral connectivity</li> <li>– Planning and land use</li> <li>– Regulation</li> <li>– Environmental Enlightenment</li> <li>– Resources mapping and data collection</li> </ul>	<ul style="list-style-type: none"> <li>– Water management in land, standing water</li> </ul>	

More detailed discussions of the other outputs can be found in existing deliverables D2.2 (socio-economic scenarios), D3A.2 (global case study modelling) and D3B.2 (European case study modelling), and forthcoming deliverables D3C.2 (regional case study modelling), D4.2 (adaptation and mitigation pathways) and D5.3 (stress-testing of policies).

## 8 Stakeholder evaluations

After each workshop, an evaluation form was distributed to all the participants, to receive feedback on the overall workshop and practical arrangements, as well as feedback on more specific parts of the workshop process and the research produced by the IMPRESSIONS team as input to the workshop. The questions presented to the stakeholders in the evaluation forms were identical for each workshop, except for the necessary adaptations for case study specifics. Annex 1 provides a detailed overview of the responses received per question across the case studies.

In total, 97 responses were received, out of a total of 127 participants across the five workshops. Similar to the evaluations of the first set of workshops, the evaluation forms of the second set indicate a very high approval rating for all the workshops (see Annex 1). In addition, the work of the IMPRESSIONS team (resource persons and supporters) and the facilitators received similar very high ratings from the respondents. The IMPRESSIONS input scenarios as the basis for the case study specific scenarios received generally medium to high ratings in terms of their suitability for the future of the respective region. Some parts of the workshop process proved to be more difficult across the case studies, with divergent ratings for the usefulness of modelling results (Question 13, Annex 1) and the review of existing policies (Question 14, Annex 1).

The summary results of the evaluation sheets per workshop were attached to the individual workshop reports and circulated to all IMPRESSIONS partners. All points of attention were considered at internal post-workshop debriefing meetings (online or offline), to further improve preparations and processes where needed.

## 9 Next steps

After each workshop a detailed factual report was written, giving an accurate account of the discussion and input provided by stakeholders. These reports formed the basis for the IMPRESSIONS research team to re-visit the scenario storylines, visions, models, pathways and strategies to harmonise them with the stakeholder input. In this process it became evident that a next round of iteration with stakeholders concerning the pathways will be needed to allow for additional links between stakeholder input and scientific work. It was therefore decided to organise an in-between engagement



activity in the form of online surveys (European, Iberian, and Scottish case study) or a face-to-face meeting (Hungarian case study, followed by a review by all participants in a survey). These in-between engagement activities will take place in the first half of 2017 and the results will be again taken back to the IMPRESSIONS project team to be elaborated before the third set of workshops.

In summary the following steps will have to be completed by the IMPRESSIONS team in-between the second and third set of workshops:

- Result reporting on workshop set 2 (completed);
- In-between engagement (on-going);
- Finalise case-specific storylines for Scotland and Europe (completed);
- Finalise stress-testing of existing policies (on-going);
- Finalise vision for each case study (on-going);
- Development of draft strategies and pathways (on-going);
- Analysis of stakeholder-reviewed draft strategies and pathways (on-going);
- Preparation of modelling of stakeholder-reviewed draft strategies and pathways (on-going);
- Analysis of pathways across scenarios and identification/analysis of robust elements (on-going);
- Develop and prepare process for workshop set 3, differentiated by case studies as needed (on-going);
- Logistical preparation and follow-up for workshops set 3 (on-going);
- Stakeholder invitations and registration (on-going).

The third set of workshops are scheduled as follows:

- EUx case study: Berlin, 20-21 April 2017
- EU case study: Troyes, 3-5 May 2017 (this is the second workshop for this case study)
- Hungarian case study: Szekzsard, 22-24 May 2017
- Scottish case study: Stirling, 29-30 June 2017
- Iberian case study: Cáceres, 13-14 September 2017

Deliverable D6A.4 will report on this set of workshops.

## 10 Acknowledgements

The writers of this deliverable greatly appreciate the contributions of the IMPRESSIONS project team, in particular the work package leaders, the case study leaders and the Project Steering Committee who have significantly contributed to the design and implementation of the stakeholder workshops reported on in this deliverable.

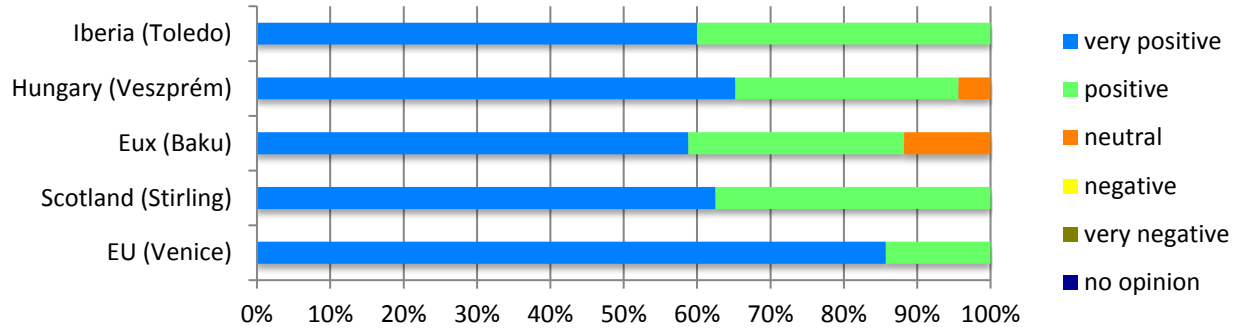
## References

Gramberger, M., Zellmer, K., Kok, K. & Metzger, M. (2015). Stakeholder Integrated Research (STIR): A new approach tested in climate change adaptation research. *Climatic Change* 128(3) 201-214.

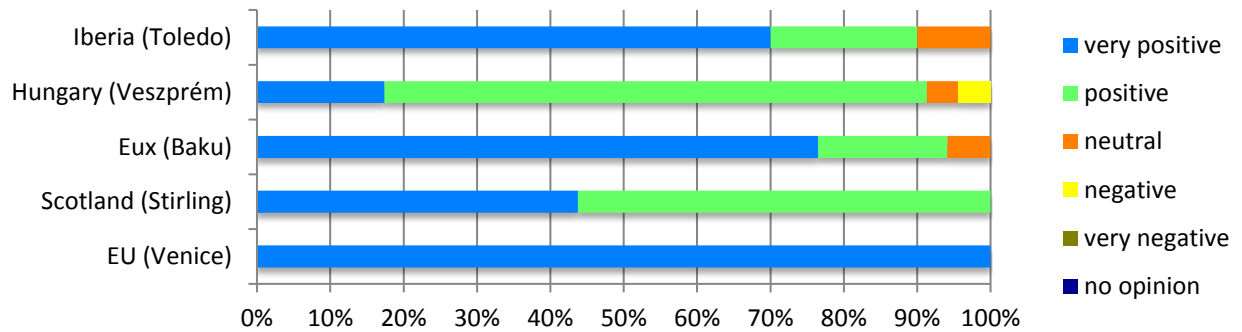
Kok, K. & Pedde, S. (2016). IMPRESSIONS Socio-economic scenarios. Deliverable D2.2 from the IMPRESSIONS project. Available from [www.impressions-project.eu](http://www.impressions-project.eu).

## Annex 1 Detailed overview of stakeholder evaluations for the 2<sup>nd</sup> set of IMPRESSIONs workshops

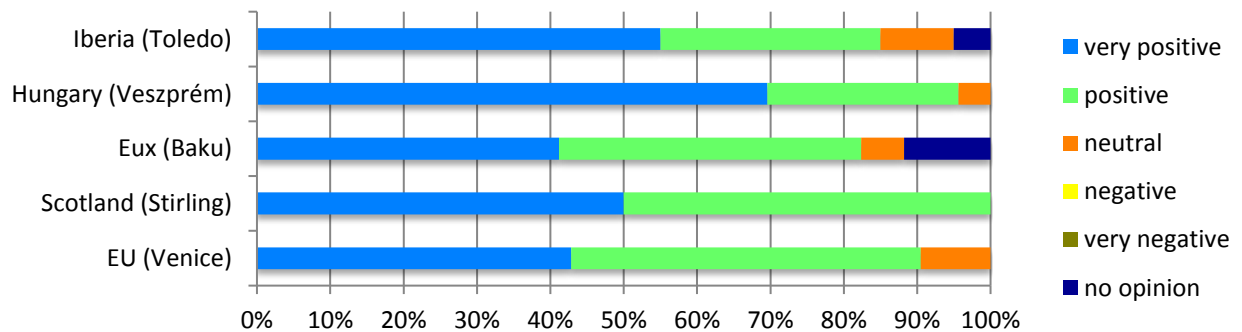
### Question 1) How do you rate the workshop in general?



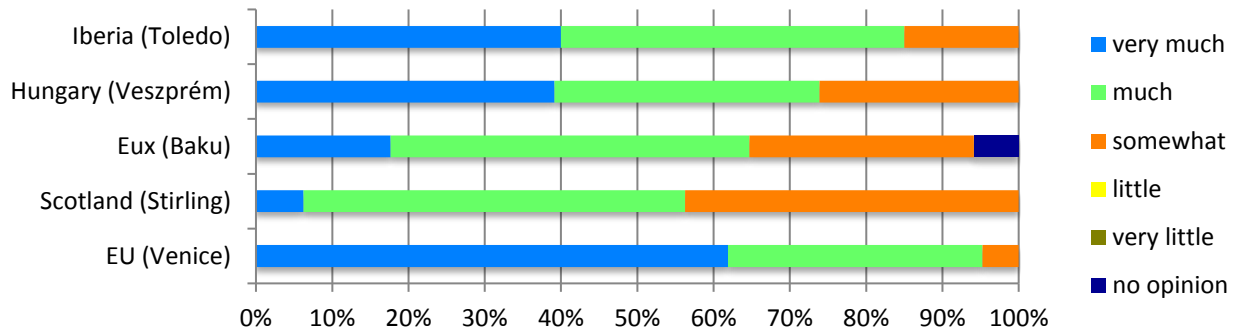
### Question 2) How much were you enabled to contribute to the discussion?



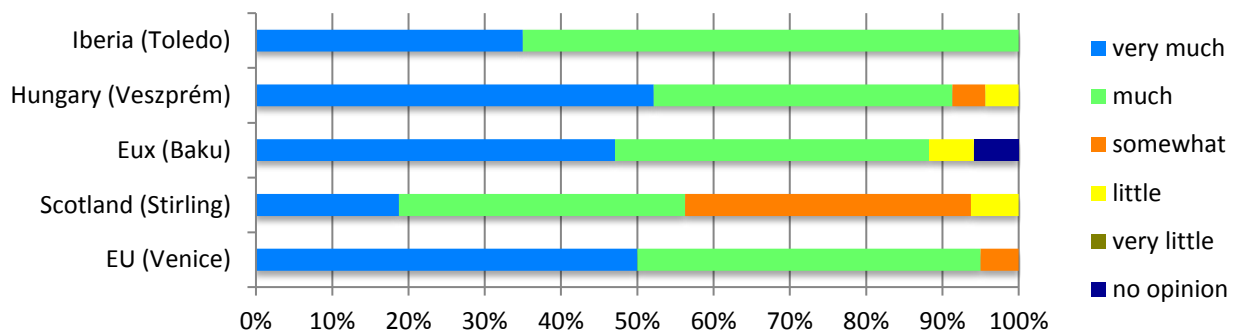
### Question 3) Were the objectives of the workshop met?



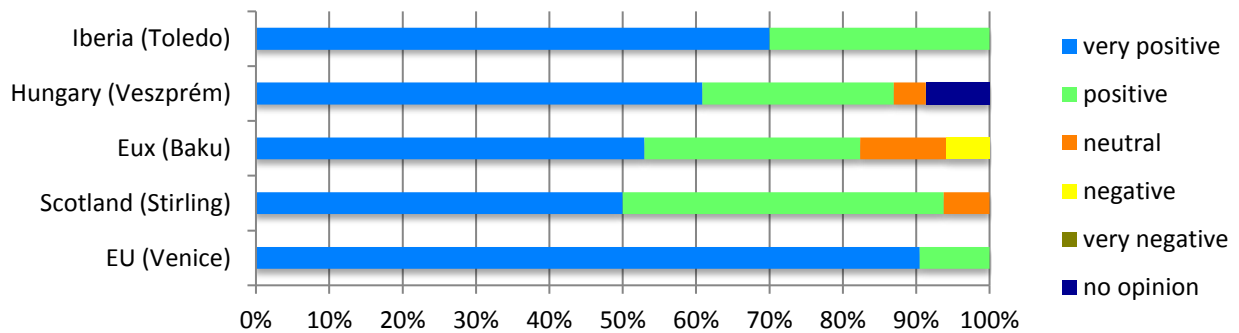
**Question 4) Was the composition of the group of participants beneficial to the objectives of the workshop?**



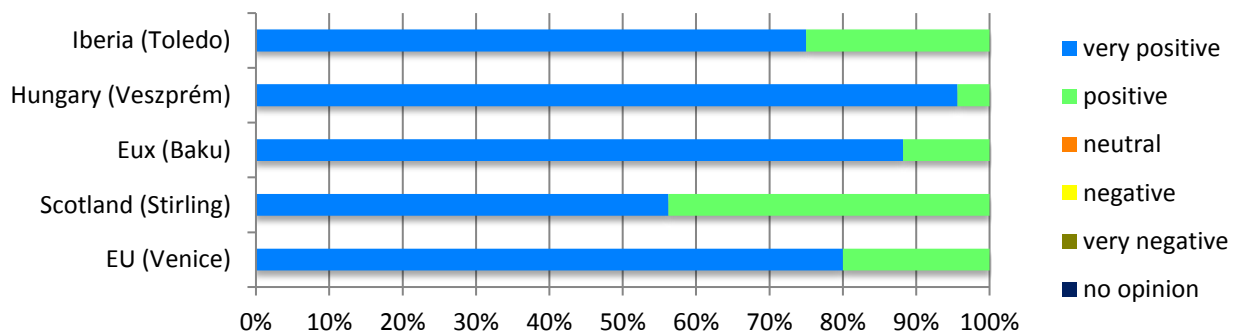
**Question 5) Were you able to develop insights and knowledge relevant for you and your work?**



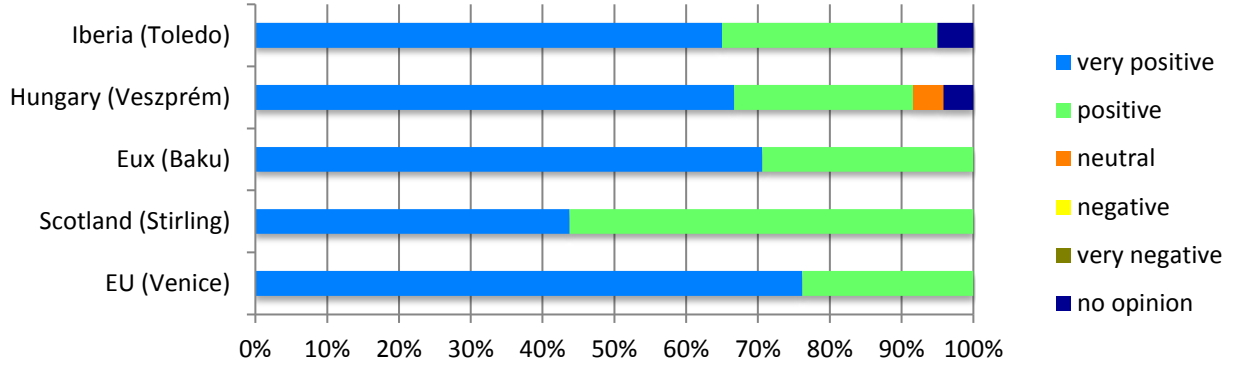
**Question 6) How do you rate the process of the workshop?**



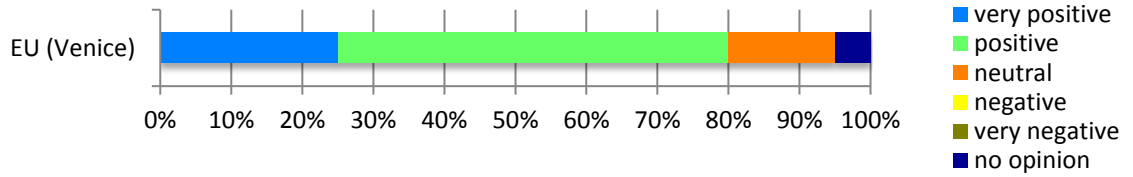
**Question 7) How do you rate the work of the facilitators?**



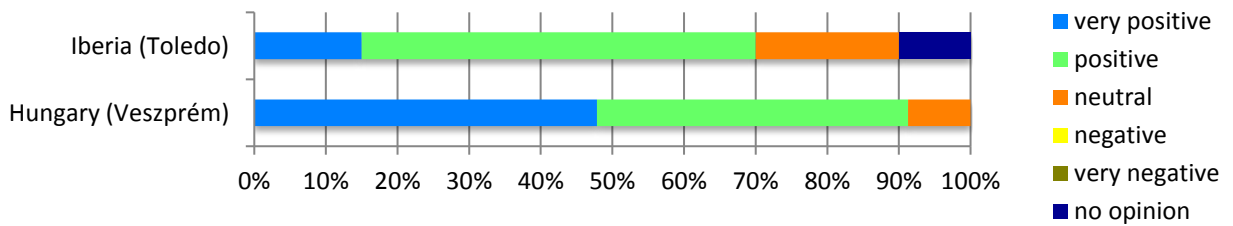
**Question 8) How do you rate the work of the resource persons and supporters?**



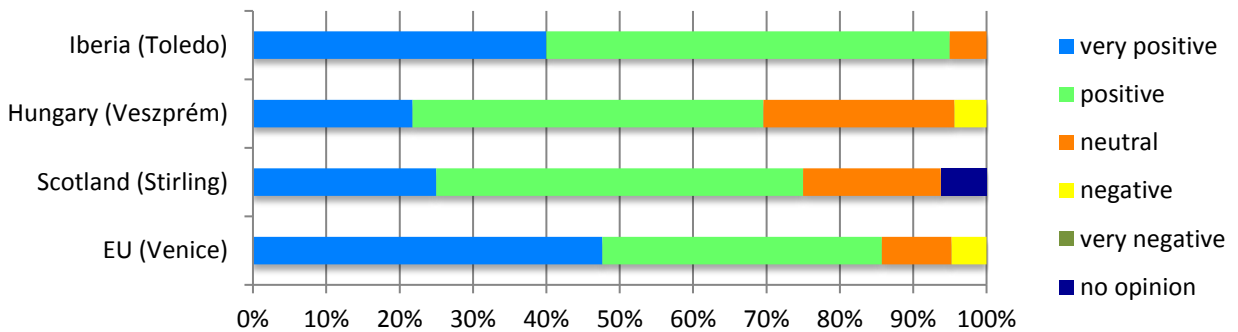
**Question 9) How do you rate the vision input survey sent to you in advance?**



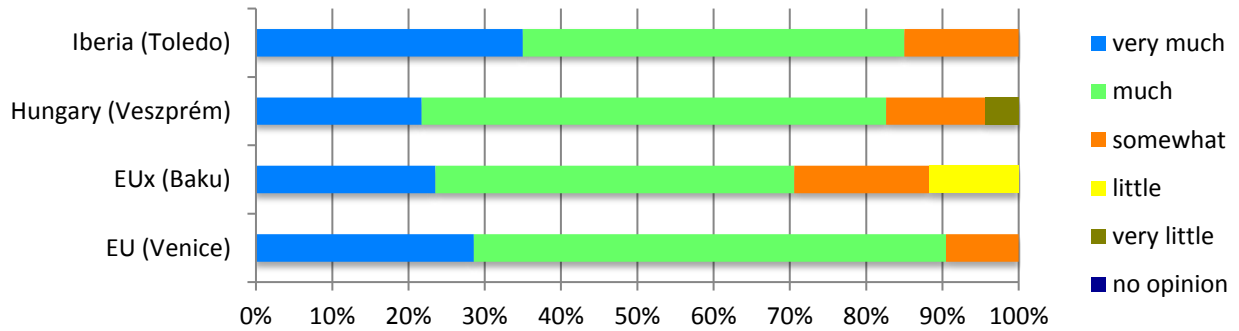
**Question 10) How do you rate the amount of local information at the workshop?**



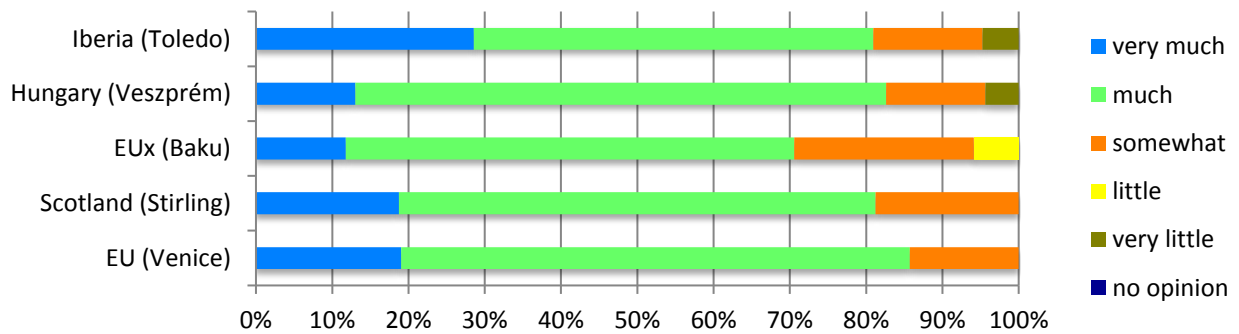
**Question 11) How do you rate the vision session at the workshop?**



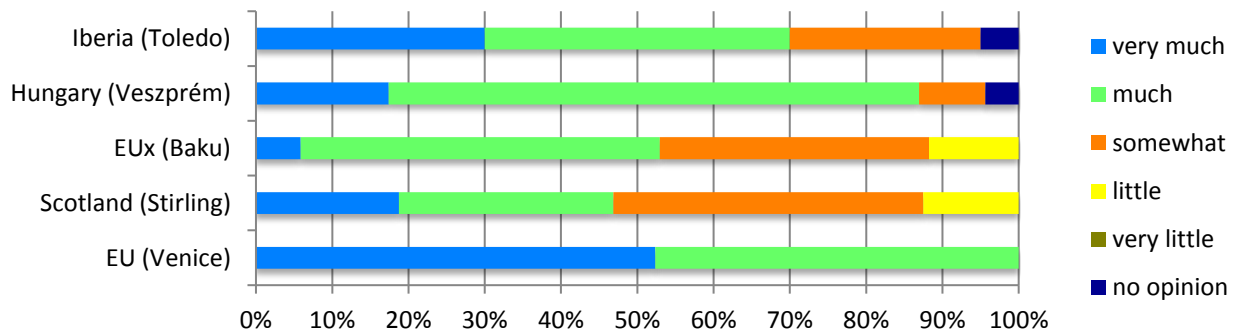
**Question 11) How much do you think the four socio-economic IMPRESSIONS scenarios are suitable for developing scenarios on the future of your region/Europe?**



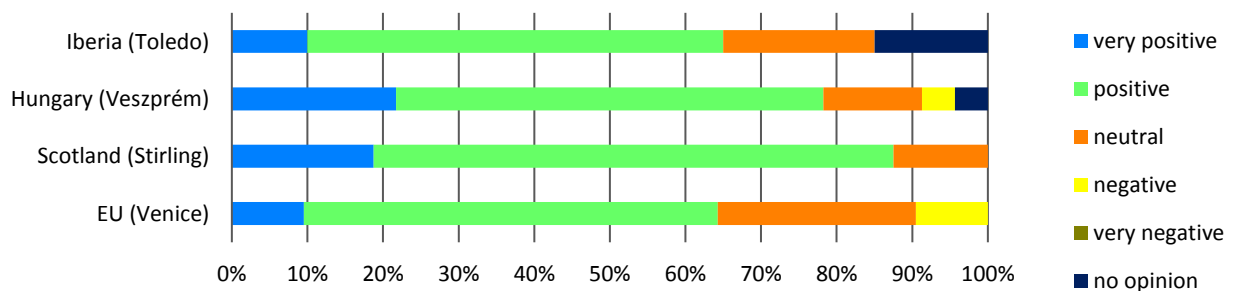
**Question 12) How much do you think the four socio-economic IMPRESSIONS scenarios were suitable as a basis for identifying responses?**



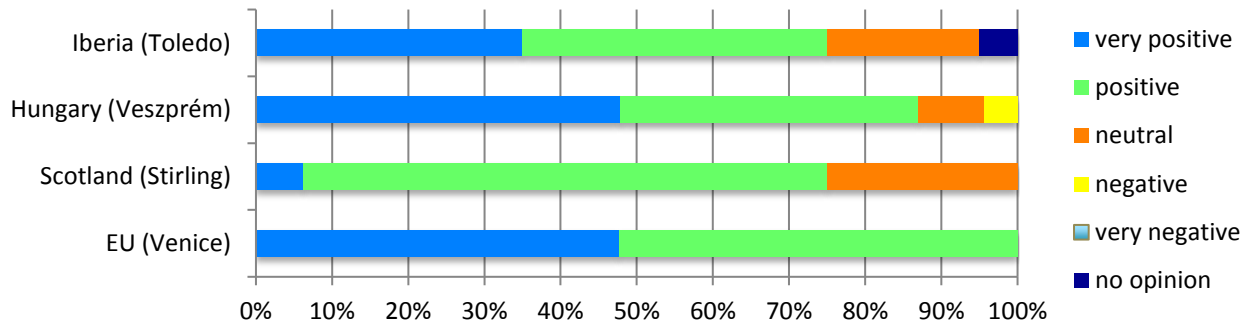
**Question 13) How useful were the modelling results in discussing possible responses?**



**Question 14) How do you rate the exercise “reviewing existing policies”?**



**Question 15) How do you rate the exercise “forming of strategies”?**



**Question 16) How do you rate the practical arrangements (invitation, travel, venue, hotel, catering)?**

