World Wide Views Initiative

Evaluation Report
International level

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Content

1 Summary of findings and recommendations on WWViews 3

World Wide Views (WWViews) is a successful initiative indicating that dialogues among citizens at national level can be effectively extended to a world wide scale. This is a great achievement for the 'button up perspective' of democratic decision making. With the implementation of the third edition of events, WWViews has established itself as a big player among the international participatory initiatives. WWViews has grown in order to its' organisational capacity and the network of supporting organisations. This capacity includes the knowledge and the experience regarding the options for designing events such as the decision on how to synthesise dialogue results from the national events to collective results, which are ready for the dissemination into the society and for political consultation. The WWViews process and the results have their value. Beside the organisational growth, WWViews is now at an essential decision point for the reflection about which character and quality further participatory activities should have. These decisions will influence the opportunities to further connect the initiative with societal decision making processes and development.

This report presents central results and recommendations of the evaluation team for supporting an informed decision making about the WWViews event designs and processes. The detailed empirical results are presented in the chapter 3. The evaluation research mainly is based on survey data from 18 sites of WWViews 3. The available data was analysed at level of the 'world sample' across all national sites for identifying the overall tendencies in the given feedback of the participants. In addition, the analysis compared the statistical results at level of individual national WWViews sites to identify effect patterns, which might be consistent or contradictory across variables and national events. The interaction between these two levels of data aggregation is a central feature of the research design for gaining valid and systematic empirical knowledge about the initiative. Another level of analysis is the comparison of selected results between the WWViews initiatives 3 and 1, which both focused on the topic of climate change.

The WWViews initiative obviously succeeded in many procedural and motivational aspects. Findings basically express the broad satisfaction and a basic connectedness of the participants with the WWViews event and the entire initiative. The evaluation results broadly indicated a match of the participants' subjectively perceived (1) motives to be involved in WWViews, (2) characterisations of the WWViews event process and (3) impact of the involvement.

- *Motives and preconditions*: Learning and interest in the topic were main drivers of the citizens to participate, together with the motive to influence policy making (section 3.1.2). A significant proportion of participants aimed on a discussion with other people

regardless of the topic, what can be seen as an indicator that a serious and simultaneously 'free minded' discussion of their own were valued by the citizens. As the results of the pre survey data indicate, the participant field was composed by a significant rate of 'engaged' persons, who were actively involved in social and ecologic activities or interests. The WWViews events, however, were not dominated by activists. So, the WWViews event profited from an enormous potential to develop powerful results, what simultaneously places the question of how this potential was implemented.

- *Subjectively perceived quality of process and results*: The events developed a prolific constructive and open working atmosphere (section 3.2) with a respectful treatment of the involved citizens and with an in large proportions clearly structured event process. This is documented by the respondents' assessments on the fairness and transparency indicators. The overall satisfaction with the event process and the dialogue results was high, what together with other results expresses a broad support of the participants and their connectedness with their event and the initiative. This can be seen as an important aspect of legitimacy.
- The finding of the broad support of WWViews was also echoed by the indicators on the *subjectively perceived impact of participation* (section 3.3.1). For instance, almost all citizens signalled to be motivated to participate again in projects such as WWViews. Overall, the participation provided a rich and broad set of 'activating impulses' to the citizens.[1] This finding expresses also the high connectedness of the participants with WWViews. For instance, the event provided the impression to citizens that their voices are basically relevant for decision makers. Albeit a relevant number of participants were already engaged persons (section 3.1.4), their answers signal that the event provided activating and motivational impulses in a variety of impact fields such as further information search, mindfulness regarding the discussion topic, etc. (section 3.3.1).

Overall, the WWViews initiative broadly met the expectations and motives of the participants, what is a great achievement. Based on the research results two main aspects were detected regarding the preparation, event design and implementation, which are to reflect especially in light of a possible next initiative. The issues are multifaceted and, therefore, complex so that the explanation requires a differentiated argumentation, which balances between pro and con aspects.

[1] What will be transferred into real effects in the time after the participatory event can only be answered by a post evaluation survey.

1. The aspect of *representation* is related in WWViews with a basic discussion on the proportion of deliberating vs. voting elements in the event design, which affects the result quality. According to the world sample, the gender and age variables appeared to be well distributed. The differences of the gender proportions at the level of the national sites are within an acceptable range compared to the age distributions. The analysis of the age variable at the level of national sites revealed differences according to the mean values and the age distribution, particularly the coverage of age classes. With the exception of some countries with a moderate distribution and a broad coverage of age classes, there are enough sites with a focused selection of specific participant groups. Occasionally, complete age classes or a range of age classes were absent, for instance 'older persons'. Taking a step backward from individual events and focusing on the basic design of single events and the initiative, the question arises especially at worldwide level, what basically is expressed by these voting results. This includes the questions of 1. how meaningful and valid are the voting results per country according to the relation between the people participating in an event and the population of the respective country ('representativeness') and 2. how comparable are the results from the different national sites when the evaluation detected some national samples with complete opposing patterns of representation according to relevant indicators such as the age distribution. The replication of WWViews 1 result in WWViews 3 (section 3.3.4) added a new argument to this discussion. The detected effect pattern at world level indicated continuity and reliability according to the question of how both WWViews events took impact on participants, albeit the data bases, concerning the investigated sites, differed clearly between the samples. Albeit more samples are needed for securing the finding, the result suggest that there is a specific impact pattern of the WWViews design, albeit there can exist additional differences between sites based on peculiarities of the national settings. Continuity can have good or bad implications. It definitely does not relieve the coordination of WWViews from the necessary effort for optimising the event design and implementation, also in terms of the recruitment. According to both evaluative references of representation, meaning 'voting' AND 'deliberation', the analyses revealed the need for a reflection of the WWViews design and respective preparatory measures. A well-structured rule set for the recruitment should be established, including the rule for sufficient organisational focus, capacity and funding for the recruitment. In addition, an active monitoring activity during of the recruiting processes is required to optimize the recruiting results. Developing effective recruiting rules is complex, since decisions have

to cope with the tension between two competing basic demands – developing sufficient diversity vs. sufficient comparability.[2] Before making any decision on the recruiting strategy, the central question needs to be clarified which result qualities are basically expected from (future) WWViews events, including the decision on the relevance of deliberating and voting in the event design. The following point adds some findings to this discussion.

2. Research results recommend for developing a stronger focus of the WWViews organisation on the question of how substantial input and argumentation can be better included to enrich the deliberation process and its results. This aspect includes:
   a. the *competence development* and especially the *question of how scientific input can be better integrated into the deliberations* of the citizens during the event. Compared to the other positive participants' evaluations on the event process, participants reported that there were enough situations during ALL events where the WWViews dialogues run short of relevant scientific input. This finding was supported by results of WWViews 1 (Goldschmidt et al., 2012) and corresponded with other results in this agenda. A high information flow for instance by information videos, can be assessed positive, but bears the risk that not all participants are enabled to memorise and structure the information appropriately. This would require (1) an intense reflection by the individuals and the discussion groups during the event and (2) the support of experts (input of meta knowledge and clarification of open questions, etc.).
   b. *The development of knowledge, ability to judge and (over) confidence* – subjectively perceived and intersubjectively observed impact potentials of the events: Based on statistical mean value comparisons (section 3.3.2), the results at world data level indicated clearly that the participation in WWViews boosted the citizens' confidence in their own perspective. This effect was detected based on mean differences according to three self-assessments – to have an overview on the issues, arguments and perspectives, to have enough information for making solid judgments and to have a clear opinion. This 'self confidence boost' effect was consistent and one of the clearest effects of this evaluation study at level of the national sites and the world. So, this impact is a 'WWViews wide effect', most

[2] Differences between countries build no basic argument against a comprehensive set of sufficiently specified recruitment rules, albeit the differences between countries are to take into account when designing the rules, so that they can be implemented in all participating countries of WWViews.

probably triggered by the event design. A growing self-confidence of participants in their own perspective is basically a positive outcome, but it inherently comprises a risk. Over confident persons may not reflect incoming information in an elaborated manner and may ignore, therefore, relevant alternatives. The consistent effect patterns across the investigated sites and effect sizes indicate that some 'over-confidence' was triggered. A supplemental analysis added some results. In addition to a general moderate tendency at world level, participants at some sites criticised the missing input of relevant scientific information during the dialogue, whereas simultaneously there was a clear boost of self confidence in the own perspective. Obviously, there were differences between the sites according to the way in which incoming information was assessed and how it was seen as basis for the own decision making, but the risk of fostering over-confidence is to reflect for the WWViews design.

c. In their assessments on the subjectively perceived impact (section 3.3.1), the participants were more restrained in their affirmation to the statement that the event influenced their opinion. The statistical mean comparison for investigating the *attitude development on climate change* revealed three main findings: (1) The statistical comparisons detected differences between the national sites how the participation influenced the assessments whether the climate change has relevant influence on the current life and the life of next generation (relevance of climate change). For both relevance items, there is a majority of effects in one direction but also a relevant number of controversial attitude change effects. A complete explanation of these different change effects in the events is complex, but the differences indicate that individual 'frames' existed at national sites how the decision problem of climate change was discussed and elaborated. It would meet the WWViews objectives, if the differences are based for instance on cultural factors. In contrast, it is possible that the differences were triggered by the implementation and the setting of the events. This would be a biasing factor for the result quality. The framing conditions of the events (event settings) should be reflected and a comparable framing for the events should be secured or differences of the framings should be made explicit. (2) The climate change basically was a very relevant subject for the participants (Table 7, see also section 3.1.2 to 3.1.4), especially when consequences on next generations were assessed. This result converges with the analysis result of the increasing awareness among the WWViews participants

that significant measures, such as reduction of incomes and comfort are acceptable to fight against the climate change. The answers of the participants express overall a clear will to enforce solutions for the climate change problem in multiple sectors of the society. (3) However, some tendencies were detected, which were worth reflecting and which were most probably caused by the event design. A first effect was that participants partly shifted the responsibility from the 'own group' to other actor groups. The participants broadly confirmed to the statement that their own country is the world leader in fighting climate problems. This 'climate patriotism' was a WWViews 3 wide effect, since the results were consistent across *all* national sites, and many difference effects at the national sites were statistically significant. A supplemental finding was detected according to variables, which measured the perceived relevance of actor groups to develop solutions for the climate change problem. The most significant increase of affirmative answers was detected according to the role 1. of international agreements and 2. of technologies. Again, this was a 'WWViews effect', since almost all results were consistent across the national sites. The coefficient according to the attitude change on the role of the citizens was near null, since the participants perceived themselves already in the pre survey in a crucial role to persuade national leaders to fight again climate change. Overall, such an attitude development can strengthen external amendments against WWViews. So, a recommendation to address these issues will be presented in the end of this summary. The relevance of a basic reflection about these issues is indicated by the findings based on the comparison of WWViews 3 and 1. WWViews design clearly effects on participants (internal impact) and the detected result pattern of the attitude change indicated that there is a continuity of the impact on WWViews participants.

d. The form of the *result synthesis* (in relation to point 1) should be reflected for several reasons. The participants broadly appreciated the achieved results (section 3.2.2), but a relevant proportion of voices in the world survey reported that essential contributions to the deliberations were not included in the final results. The yardstick here is not to include all inputs from the deliberation process. Since the indicator variable in the survey focused on the loss of *essential* content, the participants' feedback is to take very seriously. So, it is recommended to reflect the WWViews design in order to the question of whether deliberative results such as supplemental recommendations or statements should be developed in the events

beside the voting results. Voting processes may, theoretically, be easier to synthesise and to compare, but obviously they do not carry all essential messages. As discussed above, it is currently not clear what reasoning stands behind some voting results or how the discussions were framed. If the voting will be kept as central base for the result synthesis, deliberative event results could be added, for instance to include general additional recommendations from every national site or to explain the rationale behind the voting results or to present citizens' recommendations according to national peculiarities for instance on specific implementation issues.

What is recommended based on the gained research results? A 'good' participatory process meets and balances two main functions (Stern et al., 1996). The 'inclusion' not only comprises the involved persons but also arguments, perspectives and knowledge claims into the dialogue. The 'closure' focuses on the features of the event design, which support the completion of the dialogue with the envisioned quality of decisions. Findings indicate a certain tendency in the WWViews events to enforce the closure, especially in form of the voting.

According to the results, several aspects of 'inclusion' were pushed back (among others there was a partial absence of scientific input during dialogue and a loss of essential content in the results, etc). In addition, the analysis results indicated a fast 'closure' of the decision process also at level of individual participants (over-confidence, climate patriotism, partially shift of responsibility to other actor groups, etc.). So, the main recommendation is to open the event design, meaning to locate design options which support the referenced inclusion aspects. This would also address some (currently mostly hidden) legitimacy issues connected to the design of the WWViews voting questionnaire.

Decisions on the design development of WWViews call, first of all, for a strategic reflection about the objectives as well as the expected process and result quality. The decision making on the event design, however, depends not only on empirical and conceptual, but also on organisational and pragmatic arguments. This reflection could be organized as workshop, which involves designers and coordinators of WWViews. The evaluation presented the central results and suggests the following leading questions as basis for the reflection:

- Which possible direct impact potentials and synergy effects are expected as results of WWViews? Which event design options should be selected to achieve these expected impact potentials effectively? Among other questions, the proportion between voting vs. deliberating in the event design should be discussed. A central question is of how sub-

stantial and especially relevant scientific input can be better included to enrich the deliberative process and its results.

- Which recruitment rules are necessary and which are acceptable or 'feasible' for all levels of coordination? Which national peculiarities are to consider for decision making on the recruitment strategy? This discussion includes also the task to develop a set of basic rules for an effective monitoring of the recruitment processes, implemented by a 'formative' evaluation.

The results indicate *promising impact potentials and synergies for WWViews*: The majority of surveyed citizens indicated as central driver for participation the self-advancement and the opportunity for learning experiences (section 3.1.2). This included the learning about the general subject of climate change and the learning about practical measures, how individual persons can act more environmentally-friendly in their daily live. Why is this potential not actively used? Future WWViews processes could develop the objective to make the process a learning experience according to pragmatic questions, in addition to the discussion of general issues of climate change (or respectively other discussion subjects focused in WWViews). The idea is also derived from the WWViews input videos and the voting questions, which focused on rather abstract issues. These WWViews elements are necessary, but could be designed more compact. An event phase could be established, which provides an information input on concrete measures against climate change in the daily life (What can I / we do? What is the impact of my individual measures against climate change? What needs to be communicated to the people in my country and by whom?). This would bring the topic of climate change closer to life. This event phase could be designed to develop elaborated and balanced results for the national contexts or individual settings. This would enrich the outcome from WWViews. In addition, a synergy effect can be triggered by this strategy. The scope of the WWViews impact could be widened on actively generating 'social impact', in addition to the objective to feed in the voting results in the political decision making. According to the survey results, the event strongly boosted the engagement of the participants, who could further disseminate their results as 'ambassadors' of WWViews, especially when there is a 'briefing' session on effective all day measures against climate change during the event. When looking at the number of involved participants, significant social impact could be triggered. This would meet the expectations and the mood of the WWViews participants.

2 About the evaluation activity conducted by ZIRIUS

ZIRIUS, the Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies, is an interdepartmental research center at the University of Stuttgart. ZIRIUS is the official evaluator of process quality and internal impact of WWViews. Our partner organisation, the Loca Institute, analyses the external impact.

ZIRIUS conducted an international evaluation survey among the participants of WWViews 3 (during the event June 6th) at the partner sites, which supported the evaluation activity (15 national partner sites intended as minimum). The participants were requested to assess the quality of their WWViews event and the results achieved during the dialogues. They also assessed the subjectively perceived impact of their participation in the event (internal impact). The attitudes for instance on climate change related issues were attained, if possible, in the beginning of the event and in the end, what provided the opportunity to compare these survey results in short explorative analyses.

This international evaluation report sums up the final results gained by the survey activity. As an extra effort, a few comparisons with selected results of the former WWViews data sets are included (sections 3.1.1 and 3.3.4). A more systematic comparison is possible with additional budgets. The basic understanding of the evaluation is to present results of the evaluation survey (chapter 3) and to derive a feedback of the evaluation team for supporting an informed decision making about the further development of WWViews designs and processes. Every national coordinator who provided data from his or her event to the international survey received a result summary for the respective national site. Therefore, the international evaluation report focuses on the world wide initiative and the comparison of events. The national sites in these comparisons are labeled with cover names to maintain this focus. Overall, this is a somewhat decontextualising perspective, but there is no other way for deriving general empirical knowledge about the initiative.

2.1 Research method and empirical validity

The evaluation research was based on *survey* data from 18 WWViews sites (WWViews 3 events were conducted in June 6, 2015). The available data was analysed at level of the 'world sample' across all national sites for identifying the overall tendencies across all the available participant voices. In addition, the evaluation team compared the statistical results at level of individual national WWViews sites to identify effect patterns, which can be consistent and contradictory across the variables and national events. Beside the comparison of sites, another component of the analysis was the comparison of pre and main survey results,

which were attained shortly before and in the end of the event at each site. The US sites were an exception, since the pre survey here was conducted some weeks before the event. The comparison of results between pre and main sample informed about attitude changes, which most probably are effected by the participation in the event. These effects can be compared also with the subjective perceptions and assessments of the participants.

Result presentation: The results are presented as descriptive data, i.e. variable distributions or mean comparisons. Statistical procedures such as the T-Test were used for proving whether there were statistically significant differences, for instance between national sites. The variable distributions were summarised in figures, which ordered the variables according to the achieved response rate of the two most affirmative answer options ('TOP2 reporting'). The distribution of the indicator variables often showed a tendency of affirmative answers, meaning the participants broadly indicated their satisfaction and support. This is a well known effect in evaluation and research (Carnes et al., 1998: 391; Beywl et al., 2005: 47; Goldschmidt et al., 2012: 97). Variable distributions diverging form this affirmative tendency indicate aspects, which clearly call for further exploration.

The *return of questionnaires* across the participating national WWViews sites was at sufficiently high rate (average of approximately 89,4 percent).[3] Generally, each analysis involved as much responses of the participants as possible for maximising statistical validity. This was true for the descriptive statistics in the figures. The T-Test statistics required valid answers of each participant in the pre AND the main survey, which explained a slightly lower number of valid cases in these stats. A few sites did not succeed completely in structuring the survey activities or the provision of codes, which were required to match the responses of each participant in the pre and main survey. These pre and post responses were matched ex post as good as possible accompanied by extensive validation activities. The number of valid cases for these sites is finally lower than of the other sites. One US event delivered three cases in the pre survey, what reduced opportunities for some statistical analyses for this site, especially the mean comparisons. The voices of this US site were, however, included in the analyses based on the 'world sample' and the main survey.

Besides the exploration and crosscheck based on the available data set, the evaluation team further *validated assessments*, for instance by contacting individual national coordinators for getting more detailed insight in specific conditions at some sites or general frame conditions.

[3] The achieved coverage rates of sites (18,6 percent, 18 out of 97 sites) and participants (17,5 percent, 1645 out of 9379 WWViews participants) were higher than intended.

The next section sketches the evaluation criteria and therefore the conceptual base for the assessments in this evaluation report, which were worked out in a more comprehensive pre study (Goldschmidt, 2014).

2.2 Evaluation criteria as conceptual yardstick for judgments

The assessments of the evaluation are based on normative conceptual yardsticks. The results describe the performance and the character of the individual WWViews events and of the whole initiative. The concept of participation is complex (Rosener, 1978: 458) and multi-dimensional (Newig, 2011: 68) and there is a broad variety of participatory process forms, so called formats, in the practical field (Beierle et al., 2002: 6; Rowe et al., 2000: 6 u. 2004: 90; Laird, 1993: 342; Smith et al., 1997: 144; Newig, 2011: 68). There is no one-and-only-approach (Renn et al., 1998: 35; Daniels et al., 1996: 21; Kuklinski et al., 2010: 170; Rowe et al., 2000: 11). This leads to multiple approaches in research and practice, what on the one hand side inhibits the evaluation of tangible participatory events (Renn, 2008: 302). On the other hand, the variance between single events can be used as supplemental evaluation perspective when comparing research results for different events or groups of events like a format comparison does. The comparison of groups of events or single events can be directed by conceptual normative yardsticks, but establishes an own rationale for evaluations, based on empirical observed conditions within the initiative and the events. Differences regarding the outcomes and impact potentials between individual events or groups of events can be explained by procedural peculiarities of the events. So, the event and format comparison can effectively supplement the evaluation, which normally refers only to abstract conceptual criteria. These criteria will be sketched in the following.

The evaluation criteria were conceptually justified and structured and develop a criteria system of six meta criteria, which is described in Goldschmidt (2014). This matter is far too complex for a discussion in this report. Beside the individual normative claims, the relationships, dependencies but also the conceptual differences between criteria need to be considered. Among others, a basic structural claim of the criteria system is the differentiation in the substantive, normative and instrumental argument in favour of participation, which are broadly presented in the literature (among others Fiorino, 1990: 227; Dietz et al., 2008: 46 u. 226; Blackstock et al., 2007: 727; Laird, 1993: 357; Bradbury, 1989: 383; Webler, 1999: 63; Middendorf et al., 1997: 46; Stern et al., 1996: 79 ff.; Stirling, 2005: 220; Beierle et al., 2002: 64; Newig, 2011: 65 f.). These pro arguments can be turned into evaluative claims for assessing concrete participatory events. A meta criterion is hierarchically ordered in several levels.

It mostly comprises several single criteria, which can be differentiated in a number of evaluation aspects for specifying concrete demands on deliberative events. In addition to conceptual basic claims, assessments of the design and implementation nevertheless have to consider the basic design (format) of the investigated event. This strengthens the argument for supplementing the conceptually funded analysis with the described research strategy to compare events and groups of events. To provide an overview on the normative basis of evaluations, the six meta criteria are sketched in form of a short agenda:

- *Competence development* proves the performance of event and initiative to develop an effective knowledge management and an active knowledge development. The competences of the participants – as individuals and as group – should be activated or developed for fostering effective substantial as well as well reflected discussions processes and results. The meta criterion of competence development covers a broad scope of demands and includes several evaluation aspects, which specify the claims. Beside a plural involvement of knowledge claims (criterion 1), and the development of a best comprehension of the decision problem (2), the opportunities for a sufficient collective reflection of the involved knowledge and the decision making processes should be maximised (3).
- *Fairness* raises the organisational demand that the participatory process meets norms and expectations of the relevant actor groups and especially of the participants according to equity. This includes the demand that all participants have the same right to make contributions (1), to explore and assess arguments and to influence decision making during the event. Participants have adequate process control by collectively agreed rules of dialogue (2). Moderation is of high quality and performance (3). All participants are treated with respect (4). Recruiting process and recruiting results are adequate with regard to the participatory format (5).
- *Legitimacy* proves the participatory event, whether there are procedural flaws, influences of third parties or any other justifiable objections, which reduce the validity of the participatory process and its results according to generic legitimacy aspects such as the sovereignty of decision making or according to the other meta criteria, which are included in the validity assessment in a balanced form. Legitimacy criteria comprise formal demands such as the sovereignty of decision making (1), an appropriate mandate (2) and valid decision making and adoption processes (3). The following criteria belong to a dimension, which is focused on perceptive demands. The participants and other relevant actor groups need to support and value the participatory process and its results

(4). The organisers should be trusted by the participants (5) and there should exist the expectancy that the participatory event will generate impact appropriately (6).

- *Transparency* assesses whether the information and information exchange were clear and comprehensible. The meta criterion is not satisfied if available and relevant information is presented or structured in a way that it is misunderstood or perceived too late or not perceived at all. There is one criterion with several evaluation aspects.
- *Efficiency* investigates the relationship of the achieved results and impact of a participatory event in relation to the invested resources and triggered disadvantages. Core dimensions of the meta criterion are the optimisation of the process and the profitability. Beside an adequate strategic (1) and implementation (2) as well as impact (3) management, the participatory process calls for adequate financial resources and organisational capacity (4) and an appropriate cost-benefit rate (5).
- *Effectiveness* compares the objectives of the participatory event with the achieved results. It is structured according to a result and an impact dimension. A participatory event should be completed as process (1). According to the result quality (2), it should be completed in an appropriate manner with respect to the participatory process format of the event. Beside an appropriate (internal) impact on the participants (3), the external impact of the participatory event is assessed (4). The conceptual pre work specified 12 fields of internal and external impact.

The next chapter presents the empirical results.

3 Empirical results

The first subsection (3.1) reflects about the recruitment and representation. A second subsection (3.2) presents results on the perceived quality of the event processes and the results of the WWViews initiative. A third subsection (3.3) focuses on the internal impact, meaning, the impact on the participants, which was effected by their involvement in the events.

3.1 Recruiting and representation – Who participated?

Sub section 3.1.1 informs about the distribution of socio-demographic variables such as gender and the age within the participant fields at national sites and based on that for the ‘world sample’ across all sites. The motives to participate (3.1.2), the interest in the topic (3.1.3) and some additional descriptor variables on the social, political and environmental activities (3.1.3) widen the understanding who participated in the WWViews events. There are currently no yardsticks for placing ‘hard’ assessments according to these additional aspects, es-

pecially at level of an international comparison. So, the sub sections on the additional variables remain more a descriptive reference point.

3.1.1 **Sociodemographics**

The issue of 'representation' in WWViews is complex since it includes a reflection on procedural measures during the recruitment process, the achieved results of the recruitment (meaning the actual representation of actor groups in the participant field during the event) as well as a discussion on the proportion of deliberation versus voting elements in the event design, which all together can take effect on the result quality of a participatory event.

The reflection about appropriate recruitment strategies, especially of a worldwide multi-site initiative such as WWViews, is a complex topic in itself and requires a long term discussion (Goldschmidt, 2014: 151). Based on data from former WWViews initiatives, a study on the effect of the gender distribution on the result quality provided some recommendations focused on the recruitment processes (Goldschmidt et al., 2015). However, assessments on the WWViews 3 event process (cf. bottom of Figure 3), but also former research results on WWViews 1 (Goldschmidt et al., 2012) suggest that the representation aspect should be monitored by the evaluation. The gender distribution was not the main representation issue in WWViews 3. According to the world data set, the gender (equalized proportions) and age variable (mean of 43 years) were well distributed (cf. Table 1 and 2). The gender proportions at level of the national sites varied clearly but within an acceptable range compared to the age distributions.

	Male	N	Female	N
World	**49,9%**	**735**	**50,1%**	**738**
A	62,3%	71	37,7%	43
B	43,5%	30	56,5%	39
C	47,3%	52	52,7%	58
D	48,3%	56	51,7%	60
E	44,9%	48	55,1%	59
F	38,0%	30	62,0%	49
G	42,3%	44	57,7%	60
H	47,7%	42	52,3%	46
I	52,1%	37	47,9%	34
J	60,8%	45	39,2%	29
K	63,9%	53	36,1%	30
L	64,9%	61	35,1%	33
M	45,9%	34	54,1%	40
N	33,3%	1	66,7%	2
O	46,9%	45	53,1%	51
P	42,6%	29	57,4%	39
Q	48,4%	30	51,6%	32
R	44,3%	27	55,7%	34

Notes: National sites are 'anonymised' in this international report. Every partner organisation, which participated in the evaluation activity, received a personalised feedback on the results compared to the results of the world sample. N is the total number of valid answers in the sample.

Table 1: Gender proportions in percent for world sample and the anonymised national sites

The analysis of the age variable at level of national sites revealed clear differences between the mean values, which indicate that 'very old' and 'very young' sub samples existed among the participants (Table 2). This first impression was confirmed by the age distributions, meaning the coverage of age classes. Beside some countries with a very broad coverage of all age classes, there were enough sites with a clear focus on specific groups. Here, complete age classes or sometimes a range of age classes were absent, for instance 'old persons' (site G or K in Table 2).

When *comparing the results of WWViews initiatives 3 and 1*, which both focused on the topic of climate change, the countries involved in the evaluation survey activities clearly differed, which inhibits direct comparisons. The analyses on both initiatives, however, detected the same main findings. At world level, the age distribution appears acceptable, albeit there are selective samples in WWViews with a focused representation, for instance with a selection bias against older people. In WWViews 1, the age distributions differ not as extreme as detected for WWViews 3. *These results recommend the establishment of a stronger and better structured rule set for the recruitment and for an active monitoring activity during of the re-*

cruiting processes to optimize the recruiting results. In addition, the interpretation and reporting of the WWViews results generally should be transparent according to the variance between results of national sites and the question of whether the effects detected at level of the world are confirmed by the results at level of the national sites.

The concrete direction and content of the recruitment rules depend from the basic objectives and especially from the result quality, which are expected to be met by future WWViews initiatives. Here, the discussion from the beginning of this subsection starts whether voting remains the dominant design element especially of the decision processes during the events. Voting requires other recruiting rules than a deliberative event design.

- Voting: A sample of 100 persons is by far too small for representing a population of millions of people in a country completely. In addition, small samples are prone to selection biases, which can harm the recruiting results and finally the event results. In case, voting is preferred as dominant event design of future WWViews initiatives, the rule set and the monitoring of the recruitment have to be comprehensive for establishing sufficient comparability across national sites. Representation has also to be controlled according the conditions and the distribution of relevant variables in the population of the individual counties ('representativeness'). These are very ambitious recruitment objectives, which also require significant resources.
- When taking the argument of deliberation theory as reference point for evaluation that all relevant arguments should be included in a decision making process, the detected extreme selection bias at some national sites, meaning for instance the complete missing of relevant (age) groups, is a serious problem, which has to be resolved in the future. It's rather unlikely that young people completely share the perspective of old people or vice versa. A deliberative event design would require a much broader and variant composition.

The event results have their meaning and their relevance. With reference to the main event design and taking a step back from individual events the question arises especially at worldwide level, what these voting results mean. This includes the questions of (1) how meaningful voting results per country are according to the relation between the people participating in an event and the population of the respective country ('representation') and (2) how comparable the results from the different national sites are when the evaluation detected some national samples with complete opposing patterns of representation according to relevant variables such as age. According to both evaluative references of representation, meaning 'voting' AND 'deliberation', a reflection of the WWViews design and respective preparatory measures

are needed. Decisions on this issue are complex, since they have to cope with the tension between developing sufficient diversity vs. sufficient comparability.[4] *Before making any decision on the recruiting strategies, as central question needs to be clarified which result qualities are basically expected from future WWViews events concerning the relevance of deliberating and voting in the event design.*

	WWV3 Age - groups per country (site) in %										
	17 and younger	18 to 25	26 to 35	36 to 45	46 to 55	56 to 65	66 to 75	76 to 85	86 and older	M t1	N
World	**2,5%**	**18,2%**	**21,2%**	**15,6%**	**15,5%**	**13,7%**	**8,9%**	**2,3%**	**2,2%**	**43,1**	**1465**
A	0,0%	2,6%	5,2%	13,9%	32,2%	28,7%	13,0%	4,3%	0,0%	54,8	115
B	0,0%	8,6%	27,1%	20,0%	12,9%	12,9%	14,3%	4,3%	0,0%	45,7	70
C	0,0%	4,6%	10,2%	12,0%	17,6%	26,9%	25,9%	1,9%	0,9%	54,5	108
D	0,0%	12,0%	24,8%	27,4%	24,8%	6,8%	4,3%	0,0%	0,0%	41,5	117
E	0,9%	5,6%	10,3%	20,6%	16,8%	30,8%	12,1%	1,9%	0,9%	50,4	107
F	10,1%	20,3%	24,1%	15,2%	7,6%	17,7%	5,1%	0,0%	0,0%	37,3	79
G	5,0%	54,5%	15,8%	14,9%	5,9%	4,0%	0,0%	0,0%	0,0%	28,3	101
H	0,0%	44,3%	21,6%	14,8%	13,6%	2,3%	3,4%	0,0%	0,0%	32,7	88
I	1,4%	11,4%	21,4%	7,1%	28,6%	8,6%	18,6%	2,9%	0,0%	46,8	70
J	13,8%	30,0%	28,8%	22,5%	3,8%	1,3%	0,0%	0,0%	0,0%	28,7	80
K	0,0%	24,7%	40,7%	23,5%	6,2%	4,9%	0,0%	0,0%	0,0%	32,9	81
L	1,1%	12,9%	55,9%	17,2%	8,6%	3,2%	0,0%	1,1%	0,0%	33,7	93
M	0,0%	21,9%	17,8%	8,2%	11,0%	26,0%	15,1%	0,0%	0,0%	44,9	73
N	0,0%	66,7%	0,0%	0,0%	0,0%	0,0%	0,0%	33,3%	0,0%	41,7	3
O	1,1%	0,0%	0,0%	3,3%	16,5%	9,9%	17,6%	18,7%	33,0%	72,9	91
P	0,0%	14,9%	19,4%	13,4%	26,9%	19,4%	6,0%	0,0%	0,0%	44,2	67
Q	1,6%	14,5%	29,0%	14,5%	14,5%	14,5%	11,3%	0,0%	0,0%	41,7	62
R	11,7%	36,7%	21,7%	11,7%	8,3%	8,3%	1,7%	0,0%	0,0%	31,1	60

Notes: One site is greyed due to the small number of valid answers. In tables with statistical calculations, this site is not represented, although its cases are included in the "World" row.

Table 2: Proportions of age-groups in % and mean age per country or site across WWViews participants

3.1.2 **Motivation to be involved in WWViews**

There were clear intentions and objectives why people wanted to be involved in WWViews. The clear majority of participants in the pre survey signalled to be interested in self advancement and learning experiences, which is in line with the conceptual literature on aspects of active deliberation (Warren, 1992: 8 u. 12). Beside a level of general learning, also pragmatic learning was recognised as relevant, for instance the question of how individual persons can act more environmentally-friendly in their daily lives. As second main motivator, the citi-

[4] Differences between countries build no basic argument against a comprehensive set of sufficiently specified recruitment rules, although the differences between respective countries are to take into account when designing the rules, so that they can be implemented in all participating countries of WWViews.

zens perceived the *influence on decision making*, whereas over 40 percent intended to place specific messages for decision makers into the citizens' declaration. Nearly half of the participants aimed on discussion with other people regardless of topic, what can be seen as indicator for a general need the establish more deliberation. *A serious and simultaneously 'free minded' discussion forum and discussion on its own purpose has their value to citizens.* This interpretation can be derived from the result that the great majority of participants signalled to have clear reasons to participate (last variable in the following figure). *Overall, there was an enormous potential and positive energy among participants that highlights the potentials of such a worldwide initiative.*

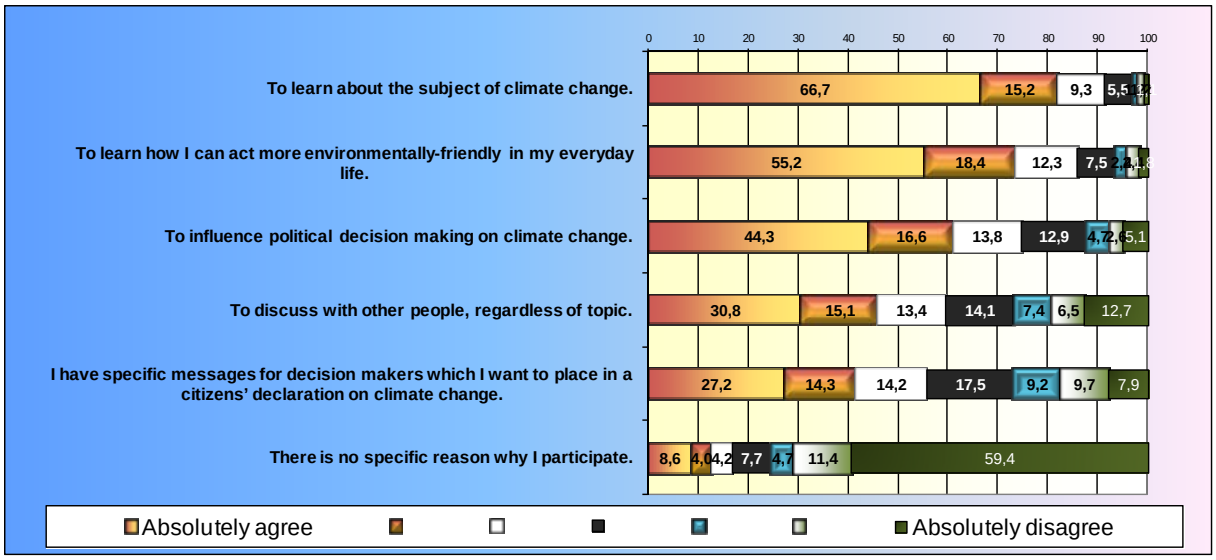

Figure 1: Motivation to participate (top2, world level, pre survey, each item N>1421)

3.1.3 **Interests of the participants in the topic as driving force**

A number of variables indicate a very high interest of the participants in the topic, for instance by the prominence of the motives to learn about climate change among other motives to participate in the WWViews event (section 3.1.2). The assessments in the pre and the main survey converge in the very high rating of the participants (mean value approximately at 6,4 for the world sample) to the statement that it is exciting to get more knowledge about the discussion topic by the WWViews event. These results let assume that *the topic triggered the engagement of the participants* what is also expressed by the results in the section about the subjectively perceived impact of participation (3.3.1).

3.1.4 **Additional descriptors of the participants' sample**

The majority of the participants are active voters in elections and they feel connected with the subject of environmental protection (corresponding to their motives to participate). Beside these 'low cost' activities, relevant proportions of participants reported to be actively involved in organizations for charitable activities and – to some smaller extent – for environmental protection, in churches or in politically oriented organisations. *Albeit there was a significant rate of persons, who were involved in societal activities, survey results clearly indicate that WWViews was not dominated by activists. It was not only attractive for activists to participate.*

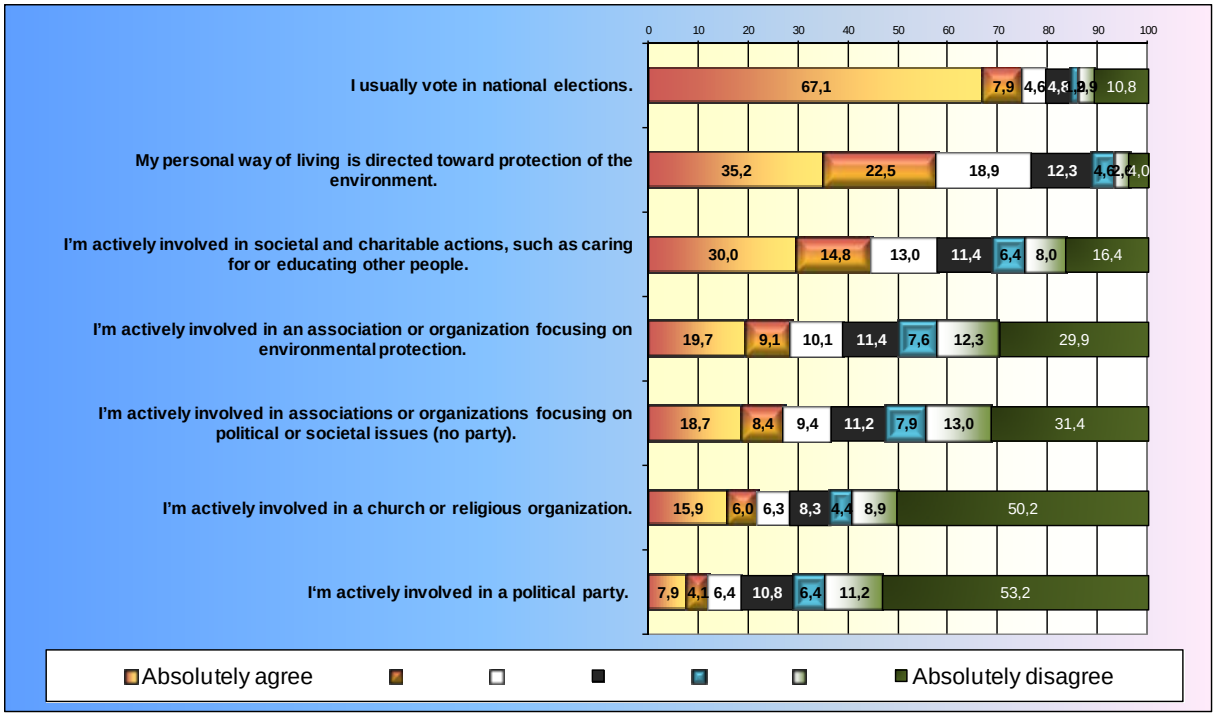

Figure 2: Engagement of the participants (top2, world level, pre survey, each item N>1438)

3.2 Perceived quality of the WWViews event and results

3.2.1 **Assessments on the event process**

Indicator variables represent aspects of the evaluation criteria (Goldschmidt, 2014) such as Transparency (TRANS), Fairness (FAIR), Competence (COMP), Efficiency (EFFI) and Legitimacy (LEG, represented by the overall satisfaction with the event process). The following figure presents participants' answers of the world sample.

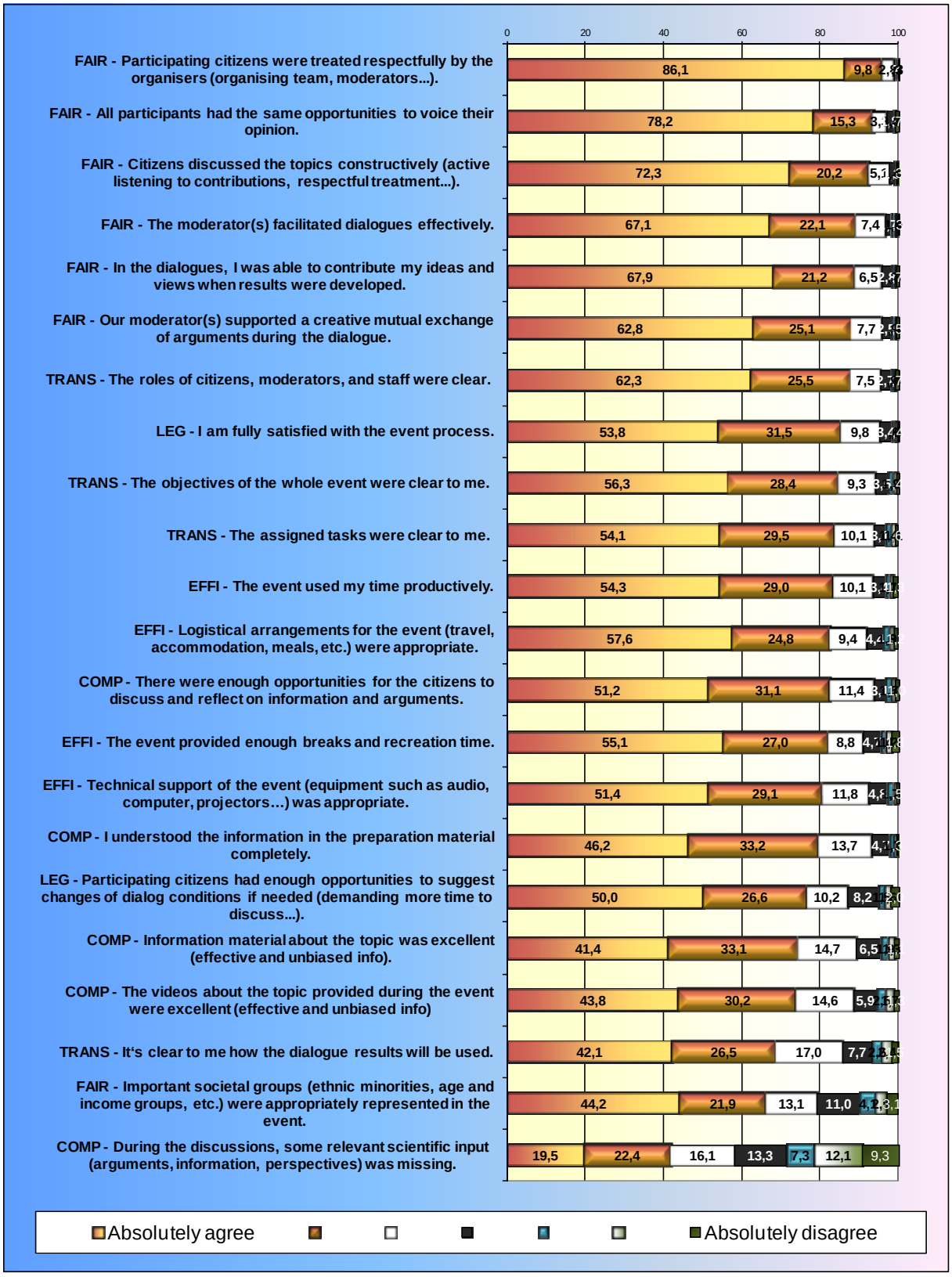

Figure 3: Assessments on event quality (top2, world level, main sample, each item N>1471)

Fairness indicators, together with transparency and legitimacy got very positive ratings by the participants. The small proportion of negative responses additionally indicates that the events

generally provided a constructive and open working atmosphere with respectful treatment of nearly all persons and in large proportions with clearly structured processes. Participants were overall satisfied and supported the events to a significant extent. Albeit some evaluation aspects such as representation have to be reflected, these results are a great achievement considering the scope of the initiative and regarding the fact that significant societal conflicts occurred in some of the participating countries.

Most efficiency and competence variables indicate vast positive proportions contrasted only by small proportions of negative assessments. The participants reported some limitation of the clearness according to the question of how the results will be used after the event (clearness of the 'mandate'). Two other aspects are call for attention:

1. Although a clear majority of participants assessed the representation of actor groups positively (cf. bottom of the figure), the proportion of negative voices slightly indicated some representation issues at least at single sites, what suggested to explore this aspect further (cf. section 3.1.1).
2. All the indicators of the event performance to develop competence (building substantial capacity) were located in the lower part of the following figure, although they already got significant affirmation by the participants. There was a *clear proportion of affirmative voices to the competence indicator that some relevant scientific input was missing during the deliberation*. This result suggests to further investigate the issue of the competence development within the WWViews initiative.

There were differences between national WWViews sites according to the affirmation on the item that relevant scientific input was missing, what should be reflected at the respective sites (individual feedback to national coordinators). However, there was no mean value clearly under '4', which builds the middle of the scale of answer options. So, *there were enough situations during ALL events where the dialogues at least partly run short of scientific input*.

	During dialogues some relevant scientific input was missing	
	M t2	N
World	**4,60**	**1488**
A	4,32	109
B	4,23	70
C	4,99	106
D	4,75	117
E	4,51	102
F	4,29	76
G	4,73	104
H	3,99	88
I	4,10	70
J	5,28	78
K	6,01	81
L	4,13	95
M	4,40	73
N	5,00	27
O	4,54	93
P	4,75	67
Q	5,07	60
R	3,99	72

Table 3: Results for world and national sites on one indicator of competence development

3.2.2 **Assessments on the event results**

Variables in this section represent aspects of the evaluation criteria Effectiveness (EFF), Efficiency (EFFI) and Legitimacy (LEG).

The answer patterns overall indicated a *broad support of WWViews by the participants according to the quality of results*. The initiative was perceived as beneficial and the results as relevant. A clear majority expected that the results will take influence. Majority of the citizens felt that the results converged with their own perspective on the topic and most participants overall were satisfied with the results of their country. *Again, one substantial aspect was salient. A relevant proportion of participants criticised that essential ideas from the dialogues were not included in the results. This converges to some critical voices on the event process, which also focused on substantial issues.*

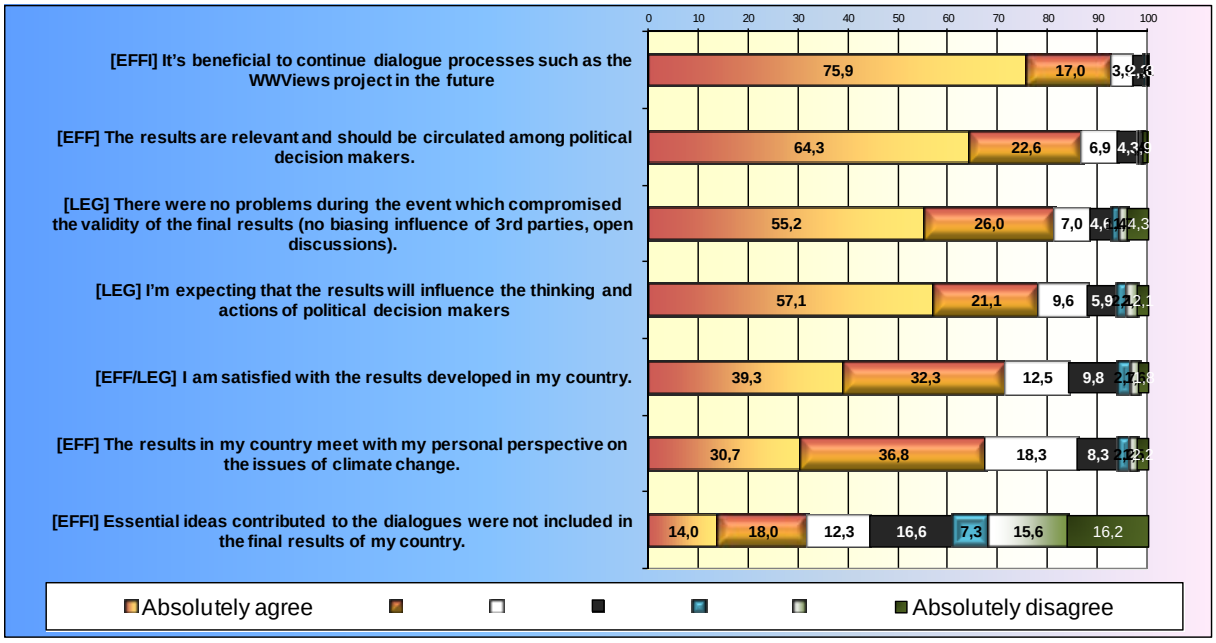

Figure 4: Assessments on the event results (top2, world level, main survey, each item N>1371)

The survey result of one national event called for some attention, since the participants provided a very low legitimacy rating (Table 4), meaning they signalled to perceive factors, which compromised the validity of the results. 21 of the 70 participants in this event used the open question in the survey to explain with their own words the reasons for their judgment. These responses were typologised in two categories:

1. 4 participants criticised that the videos were not free from value judgments or they described the videos and especially the speaker as unprofessional. Some converging feedback was detected in the 'world sample'.
2. 13 counts were detected for the argument that the organisers provided a closed set of answer options to the respondents for producing the voting results of WWViews. The pre-defined result options were perceived as biasing and patronizing intervention which hampered the development of the free will and the free speak of the participants. In addition, the questionnaire options were criticized to be formulated not specifically enough.

   These results also were detected in the world sample, where approximately 20 percent of the participants used the open answer to explain their perspective. Some expressed their general concern about the pre-determined answers in the WWViews voting questionnaire. 15% (49 in total) of these respondents addressed their dislike regarding individual answer options and assessed them as biased since they would force answers in certain positions. Some feedback of individual citizens in the survey was:

- "The questionnaire (5 parts, not this one) answers were clearly oriented to get specific results. Hugely disappointed." (#481) [comment of evaluation: "5 parts …" – participant explicitly marked voting sheets as problematic, not the evaluation questionnaire]
- „Questions were too rigid and predetermined. Effectively determined the outcome." (#P02…8_17)
- Translated citation: It is important to open the discussion within the questionnaire and let the participants express their opinion freely. (#39_14)
- Translated citation: The questions were partly not precise enough and answer options were too narrow or they did not represent the individual opinion (#23_1)

	No problems which compromised the validity of the final results	
	M t1	N
World	**6,07**	**1406**
A	6,30	109
B	**1,97**	61
C	6,05	97
D	6,29	62
E	6,19	103
F	6,38	76
G	6,17	103
H	6,45	88
I	6,38	71
J	6,27	81
K	6,06	78
L	6,42	92
M	6,19	70
N	6,32	25
O	6,27	93
P	6,22	69
Q	6,20	56
R	6,22	72

Table 4: Results for world and national sites on one legitimacy indicator

This feedback is relevant for the evaluation of the entire WWViews. Although there was only one salient national site in the rating, there was a relevant count of converging answers in the

open question at level of the respective national site, but also in the world sample. The survey results match to (1) descriptions of procedural limitations of national coordinators and (2) evaluation results, which were detected in other sections such as the attitude change effects. So, both issues are discussed in the following:

1. *WWViews Videos*: An assessment of the argumentation in the WWViews videos (quality of information input, balanced arguments), which were shown during the events, would require a systematic content analysis, which was out of the objectives and of the budget of this evaluation. However, according to an unsystematic review, some feedback on the information quality can be derived. Each of the WWViews videos summarised the state of climate politics in few minutes. The information provided to the participants per time was fairly high. *Such a high information flow, however, bears the risk that not all participants were enabled to memorise and structure the information appropriately, what would require (1) an intense reflection by the individuals and the discussion groups during the event and (2) – under optimal conditions – the support of experts.* There were detected attitude change effects (3.3.2), which overall fit to this risk setting. In addition, individual national coordinators reported that the time frame to discuss the single issues was very narrow, since five sub topics on climate change had to be prepared (information input), discussed and voted. *At least the collective reflection of the information input was limited what obviously influenced the attitude development.*
2. *WWViews voting questions*: The WWViews voting questionnaire was used during the event to attain the substantial assessments of the participants on the climate change, what constituted the final results of the WWViews events. An unsystematic review of the questionnaire revealed some formal issues. Sometimes, two or more questions were matched together, which actually should be separated. In addition, the symmetry of answer options or the respective wording of the options should be reflected. Some labels of single answer options have additional explanations, what reduces efficiency (complexity to answer) and what in fact could inhibit citizens to find a clear position and answer. For a detailed assessment of the questionnaire, the objective of every question has to be clear, but *some issues emerged explaining the result that some participants complained about the operative quality of the voting. The voting in general caused some legitimacy problems, too.*

3.3 Impact on participants

The research on the impact of deliberation is complex, especially the research on the effects of participation on the competence development and the ability to judge. Research on these issues is still in the initial phase of conceptualisation (Goldschmidt, 2014). On the one hand side, subjectively perceived impact simply can be attained by surveys during the event and provides valuable findings (sub section 3.3.1). Intersubjectively based findings, including for instance statistical comparative analyses of opinion change effects, are more complex, but they are essential for getting more insight into impact potentials and respective influence factors (3.3.2 to 3.3.4).

3.3.1 **Subjectively perceived impact of participation in the event**

The surveyed citizens subjectively perceived a clear impact of their participation across a broad range of surveyed aspects. This response pattern supports the finding on the procedural quality that participants experienced a very constructive event atmosphere. This interpretation also is indicated by the most affirmed statement that the event strengthened the motivation to get involved in another deliberative initiative (Figure 5). *The WWViews setting obviously provided multiple motivational impulses.*

- *Involvement in social issues*: The involvement in the event fostered the feeling of the participants that their voices were relevant for decision makers, what can trigger multiple positive effects (cf. Lind et al., 1988; Tyler et al., 2001). The participants confirmed, for instance, to be motivated for engaging in societal issues or in their everyday life.
- *Competence and interest in the topic*: In the eyes of the citizens, the participation triggered the motivation to search for more information and to follow debates and it increased the knowledge about the subject (section 3.2.2, Table 5). The involvement widened the understanding of alternative perspectives and of participatory events in general. The positive responses slightly were lower to the variable whether the participation changed the individual opinion about climate change.

The subjective perceptions can be crosschecked with intersubjective attitude changes detected by statistical comparisons, which are investigated in the next sub section.

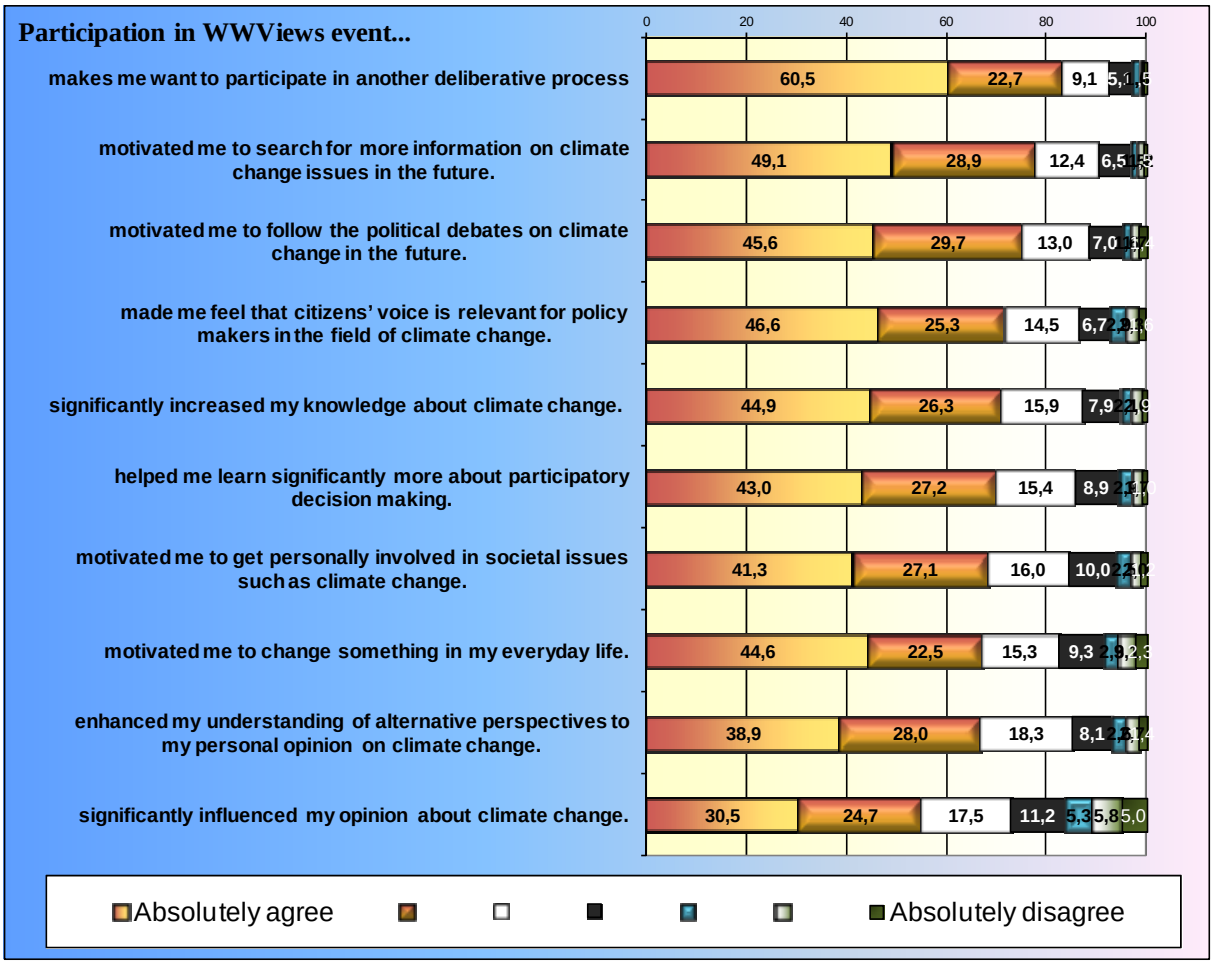

Figure 5: Subjectively perceived impact of the participation in the WWViews event (top2, world level, main sample, each item N>1457)

3.3.2 **Competence development and self confidence**

Based on statistical mean value comparisons of the pre and the main survey (Table 5), the results at world data level indicated that *the participation in WWViews boosted the self-confidence of the surveyed participants, for instance according to their self-assessment to have an overview on the issues, arguments and perspectives (item 3). The participation strengthened also the attitude to have enough information to make solid judgments and to have a clear opinion (item 4 and 5). The result for the world data aggregation level was broadly supported by the results at level of national sites, where highly significant coefficients were detected* (often ***). All significant coefficients and almost all other mean values supported the main finding. *This consistency indicates a "WWViews" design effect* so that the label 'boost' is appropriate.

In contrast, the analysis did not detect clear effects according other items of the block. Item 1 offered not much potential that affirmation further might grow from pre to main survey, when looking at the absolute mean for M_{t2} and the mean difference M_{diff}. Item 2 is much more relevant, since it indicates that participants' perceptions significantly reduced during the involvement in WWViews that the discussion topic is relevant when comparing it with other scientific topics. Albeit the absolute mean value signals that the climate change is relevant at all, this reduction effect calls for further reflection about the impact of the events.

Basically, the effects on a growing self-confidence are a great achievement for a deliberative event. Depending on the setting, these survey results can indicate a risk. If people get too confident they not further reflect new information in an elaborated way and ignore possible alternatives. If a complex subject such as climate change is discussed, the provision of some more information does not necessarily make people more informed or enables them for making better judgments. *This risk of overconfidence will be reflected for WWViews considering available findings such as the detected relative relevance loss of the discussion topic.*

	1. It's exciting to get more knowledge			2. Climate change is not the most important topic			3. I have an overview on issues, arguments and perspectives			4. I have enough information to make solid judgments			5. I have a clear opinion on the topic		
	M t2	M diff.	N	M t2	M diff.	N	M t2	M diff.	N	M t2	M diff.	N	M t2	M diff.	N
World	**6,48**	0,03	1316	**3,26**	0,35***	1285	**5,68**	0,75***	1289	**5,34**	0,97***	1290	**5,89**	0,67***	1283
A	6,23	-0,06	106	3,51	0,53**	105	5,61	0,85***	104	5,49	0,72***	104	5,84	0,27*	105
B	6,09	0,08	67	3,40	-0,29	65	5,49	0,91***	67	4,96	0,97***	68	5,97	0,50**	66
C	6,42	0,00	105	3,00	0,35	100	5,48	0,51***	104	5,04	0,762***	105	5,84	0,55***	104
D	6,23	0,10	113	2,87	-0,02	112	5,57	0,70***	111	5,30	0,84***	111	5,88	0,65***	110
E	6,62	0,01	102	3,06	0,38	97	5,03	0,62***	92	4,87	0,91***	95	5,39	0,72***	94
F	6,48	-0,05	77	3,82	0,22	74	5,03	0,76***	75	4,85	1,01***	72	5,03	0,57*	74
G	6,71	-0,19	31	2,84	0,62	29	4,84	0,32	31	4,30	0,57	30	5,50	-0,90*	30
H	6,73	0,06	88	3,52	0,67*	88	5,84	0,75***	88	5,14	1,09***	88	5,73	0,42*	88
I	6,52	0,38*	66	4,01	0,77**	65	5,46	1,23***	66	5,20	1,65***	65	5,67	1,34***	67
J	6,60	-0,30*	76	3,69	-0,14	71	6,38	0,89***	75	5,96	0,63	72	6,14	0,25	72
K	6,72	-0,12	75	3,37	0,47	77	6,26	0,38	74	6,09	1,82***	76	6,26	1,36***	69
L	6,62	0,11	91	3,05	0,72*	88	5,92	0,38	88	5,63	0,86***	90	6,23	0,33	89
M	6,45	0,22	60	2,86	0,18	60	5,93	0,72***	60	5,68	0,85***	60	5,97	0,70***	60
O	6,30	0,10	84	3,65	0,30	83	5,99	1,00***	82	5,58	0,78***	83	6,08	1,12***	82
P	6,22	0,02	56	3,51	0,46	56	5,86	1,05***	56	5,62	1,20***	55	5,96	0,75***	55
Q	6,80	0,12	58	2,24	0,15	53	6,27	0,58***	55	5,44	0,87***	55	6,32	0,30	56
R	6,56	0,12	58	3,28	0,73*	59	6,03	1,17***	58	5,87	1,17***	58	6,42	1,17***	59

Notes: Mt1 or Mt2 lists the arithmetic mean on the respective item on top of the column. Mt1 is the mean for the pre survey, Mt2 for the main survey. The scale varies from 1 for the total disagreement of the item – over 4 for indifference – to 7 equal to total approval of the item. Mdiff lists the difference of the answers by the same participant measured before and after the event. Positive values represent an increase of approval, negative numbers a decrease of approval. The stars indicate the statistical significance, what indicates the relevance of an effect: * ≤ 5% probability of error, **≤ 1% probability of error, ***≤ 0.1% probability of error. The more stars are presented the more relevant is a difference effect in a statistical sense. Beside the results for the world sample ('world'), the results for individual national sites are presented. The national sites are anonymised.

Table 5: Mean differences between pre and main survey

Table 6 presents the absolute means at the world level and national sites according to event and result quality (section 3.2) and some selected variables from the section above on subjectively perceived competence.

- At *world level* ('World'), there were moderate effects: Partly (mean approx. 4), some relevant information was missed during the dialogues and also in the final results. The participants felt prepared for decision making on climate change, but they not overwhelmingly felt as experts in the subject of climate change. This matched to the results of WWViews voting questionnaire (http://climateandenergy.wwviews.org/results/).
- At level of *some national sites*, the participants got the impression to be ready for making solid decisions or even to be an expert, albeit they simultaneously indicated that relevant scientific information was missing during the dialogue (for instance cf. site K).

Generally, *the detected answer patterns indicate differences between the sites according to the way how incoming information was assessed and how it was perceived as reference for the own decision making. The analysis detected single sites, where the input of relevant scientific information was criticised as too low whereas simultaneously the self confidence in the own judgment was significantly high. Although this issue is complex, several results indicated that the WWViews design fostered the risk of overconfidence among participants.* This matched to other results (section 3.2).

Based on this finding, the next section explores the attitude changes on climate change.

	During dialogues some relevant scientific input was missing		Essential ideas contributed were not included in the final results		I have an overview of the issues, arguments and perspectives		I have enough information to make solid judgments		I have a clear opinion on the topic		I am now an expert on CC	
	M t2	N	M t2	N	M t2	N	M t2	N	M t2	N	M t2	N
World	**4,60**	**1488**	**4,03**	**1342**	**5,68**	**1465**	**5,34**	**1471**	**5,89**	**1468**	**4,24**	**1461**
A	4,32	109	3,76	105	5,61	104	5,49	106	5,84	106	3,53	105
B	4,23	70	3,25	55	5,49	68	4,96	68	5,97	68	3,15	68
C	4,99	106	4,04	94	5,48	105	5,04	105	5,84	104	3,50	104
D	4,75	117	4,56	45	5,57	112	5,30	112	5,88	112	5,44	112
E	4,51	102	4,51	99	5,03	99	4,87	101	5,39	100	3,51	98
F	4,29	76	4,37	71	5,03	76	4,85	75	5,03	77	3,70	77
G	4,73	104	4,13	102	4,84	101	4,30	101	5,50	102	4,11	102
H	3,99	88	3,44	88	5,84	88	5,14	88	5,73	88	6,41	88
I	4,10	70	3,44	70	5,46	69	5,20	69	5,67	69	4,51	69
J	5,28	78	5,26	73	6,38	78	5,96	79	6,14	80	5,00	80
K	6,01	81	5,81	78	6,26	81	6,09	82	6,26	77	5,04	77
L	4,13	95	3,71	91	5,92	92	5,63	94	6,23	93	4,22	93
M	4,40	73	3,75	63	5,93	73	5,68	73	5,97	73	3,77	73
N	5,00	27	4,13	24	6,04	27	6,00	27	6,56	27	4,33	27
O	4,54	93	3,42	92	5,99	93	5,58	93	6,08	93	3,85	92
P	4,75	67	3,48	69	5,86	69	5,62	68	5,96	68	3,69	68
Q	5,07	60	4,04	51	6,27	59	5,44	59	6,32	60	4,26	57
R	3,99	72	3,58	72	6,03	71	5,87	71	6,42	71	4,08	71

Notes: cf. Table 5

Table 6: Participants' subjectively perceived ability to judge (main survey, conglomerate from different item blocks)

3.3.3 **Influence of participation on attitude development on climate change**

The climate change (CC) was of high relevance for the participants (section 3.1.3). However, the analysis detected differences regarding the question of how the participation in WWViews affected the individual relevance assessments. There was a small increase of sensitivity with respect to the current climate change problem, i.e. the affirmation to the statement was strengthened that the CC already has an effect on today's life of the participants. The analysis of the world sample detected no increase (mean difference is near null) according to the question of whether the climate change has an effect on the life of the next generation. This item already got high affirmation in the pre survey (cf. mean value t_2, Table 6), so that the potential for a further increase was low for the main survey. *Looking at both items, a relevant number of national sites (six and eight sites) produced controversial effects compared to the majority of sites*, what finally effected an equalization expressed by the mean differences near null at the world data level. There are multiple potential explanations for this result. So, an interpretation is complex. Overall, *the differences between national sites indicate that several framings existed how climate change was discussed and elaborated*, for instance differences based on cultural background. However, it is possible that the differences between the implementation of the events triggered these effects, what would be a biasing factor for the results. It is complex to investigate these effects, but some more empirical knowledge can be presented.

	1. Climate change (CC) has already has a negative effect on my life			2. CC will certainly reduce quality of life for our children		
	M t2	M diff.	N	M t2	M diff.	N
World	**5,23**	**0,15****	1270	**6,10**	**0,00**	1275
A	3,04	-0,25	98	5,07	-0,34*	99
B	3,90	-0,08	64	6,13	0,15	66
C	4,84	-0,02	100	6,12	-0,14	98
D	5,79	0,42**	111	6,49	0,15	111
E	5,23	0,09	90	6,21	-0,06	95
F	5,01	0,47**	76	6,09	0,35*	75
G	5,75	0,65*	31	5,91	-0,27	30
H	6,33	0,09	88	6,42	-0,22	88
I	5,16	-0,15	64	6,32	-0,09	66
J	6,37	0,39	78	6,13	-0,47*	77
K	5,74	-0,08	73	5,96	-0,12	74
L	5,30	-0,25	81	6,04	0,00	81
M	5,16	0,24	59	6,27	0,10	60
O	4,77	0,25	84	5,76	0,18	83
P	5,03	0,91***	53	6,06	0,55***	53
Q	6,12	0,32	57	6,51	0,30	57
R	5,54	0,03	60	6,41	0,14	59

Notes: cf. Table 5

Table 7: Mean differences indicating the attitude development on the relevance of climate change

At world data level, there was an increase in the attitude that all people ('we') have to accept reduced income to avoid climate change problems. So, *there was an increase of the awareness that significant measures against climate change might be necessary. In contrast, the analysis detected a significant increase of participants' affirmations according the statement that their respective home country is the world leader in fighting climate change. Results across all national sites were consistent and a number of effects for single sites were significant, that one can label this as a 'WWViews design effect'. Obviously, the discussion fostered the citizens to focus their demands on other actor groups in the climate change governance frame (CC patriotism).*

	5. My country is a world leader in mitigating climate problems			4. We have to accept reduced income to avoid climate problems		
	M t2	M diff.	N	M t2	M diff.	N
World	**3,99**	**0,38*** **	**1260**	**4,91**	**0,31*** **	**1271**
A	5,49	0,52***	96	4,68	0,00	98
B	4,91	0,43*	65	4,45	-0,02	65
C	3,81	0,20	98	4,73	0,27	98
D	2,45	0,14	104	5,34	0,34*	110
E	3,61	0,13	93	4,86	0,09	92
F	3,64	0,42	74	4,62	0,29	75
G	4,43	0,31	29	5,34	0,58	31
H	3,50	0,58**	88	5,48	0,31	88
I	4,39	0,73***	64	6,06	0,14	65
J	5,62	0,13	78	6,37	-0,04	76
K	5,71	0,41	78	5,01	1,00***	77
L	3,24	0,19	78	4,38	0,52*	81
M	3,58	0,03	60	4,04	0,03	60
O	3,96	0,57***	83	3,72	0,30	83
P	3,79	0,89**	53	4,34	0,47*	53
Q	2,98	0,57*	56	5,80	0,77*	57
R	2,94	0,47*	60	4,42	0,41	59

Notes: cf. Table 5

Table 8: Mean differences indicating the attitude development on climate change issues in relation to particular interests (selected items from the block, ordered according to the mean difference at world level)

A comparable research result was detected according to variables, which measured the perceived relevance of actor groups for developing solutions of the climate change problem. The most significant effects of attitude change were detected when the role of international agreements as well as of technologies to resolve climate change problems were addressed. Both factors were perceived as increased in their importance, whereas almost all results were

consistent across the national sites. Sciences were seen also as progressive factors for finding solutions, although the difference effect at world level was weaker compared to the values for the items presented before. This is explained by the higher number of controversial results at level of the national sites. The result was near zero according to the item on the role of citizens, who were perceived already in the pre survey in a crucial role to persuade national leaders to fight against CC. *The answers of the participants express, overall, a clear will to enforce solutions for the climate change problem at multiple entry points into society. They already signalled their motivation to fight the climate change problem in the pre survey. So, most significant difference effects triggered by the events focused on responsibilities of other actor groups.*

	7. International CO2-agreements will combat global warming			3. New technologies will help solve CC problems			10. Experts and science will help solve CC problems			9. Citizen have to make national leaders combat global warming		
	M t2	M diff.	N	M t2	M diff.	N	M t2	M diff.	N	M t2	M diff.	N
World	**5,56**	**0,47*** **	**1255**	**5,10**	**0,44*** **	**1268**	**5,28**	**0,15*** **	**1261**	**6,08**	**0,07**	**1272**
A	5,49	0,50***	97	5,07	0,26*	99	4,93	0,11	97	5,68	-0,07	97
B	5,47	0,65**	62	5,03	0,2	66	5,37	0,2	66	5,90	-0,21	67
C	4,92	0,52*	98	4,47	0,21	98	4,81	0,14	98	5,99	0,04	98
D	4,79	0,25	109	4,41	0,47**	107	5,17	0,09	109	6,22	0,17	109
E	5,62	0,23	91	4,85	0,36	90	5,29	-0,09	92	6,12	-0,11	94
F	5,78	0,83***	75	5,95	0,84***	75	5,99	0,57**	74	5,65	0,37	74
G	5,90	-0,40	30	5,41	0,60	30	6,08	-0,10	31	6,37	0,32	31
H	6,19	0,43**	88	5,40	0,94***	88	5,52	0,35*	88	5,92	0,02	88
I	6,41	0,37**	63	5,81	0,56*	63	5,96	0,17	65	6,49	0,03	65
J	6,53	0,28	74	6,04	0,29	79	6,29	-0,18	72	6,18	0,07	75
K	6,23	0,25	75	5,81	0,53*	79	6,10	-0,14	77	6,32	0,16	77
L	5,22	0,72**	79	4,67	0,08	80	5,01	0,17	82	5,73	0,15	81
M	5,18	0,58***	60	4,55	0,27	60	4,53	-0,02	60	5,93	-0,13	60
O	4,98	0,81***	83	5,28	0,55***	83	5,07	0,39*	83	5,91	0,34*	83
P	5,25	0,94***	51	4,99	0,83***	52	4,66	0,56*	52	6,00	-0,17	52
Q	6,44	0,22	59	5,29	0,44	57	5,42	0,39	56	6,70	-0,05	58
R	5,26	0,60**	58	4,46	0,22	59	4,19	-0,11	56	6,28	0,30	60

Notes: cf. Table 5

Table 9: Mean differences indicating the attitude development on responsibilities of actors (selected items from the item block, ordered according to the mean difference at world level)

3.3.4 **Comparison of the impact of WWViews initiatives on climate change**

The main finding is that WWViews 3, overall, replicated the effects detected for the attitude changes on climate change statements of WWViews 1 (Table 10)*.* The small differences can be explained by the different count of valid responses in both 'world' samples. In addition, a stronger awareness for progressing effects on climate change can be assumed since WWViews 1. A statistical comparison at national level was not meaningful, since only a few countries contributed to both world samples.

This result basically indicates reliability of results in two ways: Beside the methodical quality of the survey, robust effects of the WWViews design were detected at level of the world sample. It's clear that results are influenced by design factors such as the composition of the participant field (Goldschmidt, 2015). The results let assume, overall, that a 'world' sample is comprehensive enough to balance differences across national sites (cf. also detected effects on representation in section 3.1).

Precise statistical estimations of the "true" value of attitudes requires a high number of samples, which were gained under – best possible – optimised conditions of the participatory event, including aspects such as complete and optimal recruiting, optimal event design and implementation and especially result synthesis. *So, the empirical basis should be broadened with more data, especially to sketch the attitude development during several time points of measurement. The results based on the two world samples so far clearly indicate that the WWViews design had an effect on participants (internal impact). And the detected result pattern indicate continuity and reliability of the results between both WWViews initiatives, concerning the WWViews event designs as well as the topic of climate change.* This relieves the organisation, however, not from continuing the effort for optimising the event design and the implementation.

	World Wide Views 1				World Wide Views 3			
Item	M t1	M t2	M diff.	N	M t1	M t2	M diff.	N
1. CC already has a negative effect on my life	4,85	4,93	0,08	504	5,06	5,21	0,15**	1270
2. CC will certainly reduce quality of life for our children	5,89	5,94	0,04	503	6,11	6,11	0,00	1275
3. New technologies will help solve CC problems	4,53	5,00	0,47***	505	4,66	5,10	0,44***	1268
4. We have to accept reduced income to avoid climate problems	4,38	4,61	0,23*	503	4,61	4,92	0,31***	1271
5. My country is a world leader in mitigating climate problems	3,58	3,80	0,22*	500	3,59	3,97	0,38***	1260
6. We still have the time to cope with CC problems	4,14	4,26	0,12	503	4,53	4,50	-0,04	1268
7. International CO_2-agreements will combat global warming	4,50	5,05	0,55***	495	5,09	5,56	0,47***	1255
8. CC has been exaggerated by environmentalists	2,67	2,54	-0,13	485	5,99	6,01	0,01	1261
9. Citizen have to make national leaders combat global warming	5,53	5,73	0,19*	497	5,14	5,28	0,07	1272

Notes: M t1, M t2 and N include only cases, which provided assessments in the pre AND the main survey, what reduces N in WWViews.

Table 10: Comparison of attitude change effects on climate change for WWViews 1 and 3

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