itly states that cooperation shall take place in the frame of ST&I agreements (BMBF 2015e). The development to include partner countries in the production of policy discourse might ironically also lead to internal ministerial rearrangements: Opening up towards partner countries in agenda setting might pave the way to an enhanced cooperation between the departments – as the International Department's knowledge about cooperation as well as responsibilities for international cooperation agreements turn into useful knowledge for the Sustainability Subdepartment. This might potentially create a speaker position for the International Department in the policy creation. At the same time, the development also theoretically might lead to the abolishment of the International Department: Some interviewees have argued that the expertise on internationalisation might be better utilized if it were integrated into the thematic departments by dissolving the separate International Department and incorporating the staff and its expertise within the thematic ones (interviews with PA09, PA14).

7.3 Discourse coalitions

In contrast to the actors standardly *excluded* from the discourse production in policy making, other actors are routinely *included*. According to Keller, discourse coalitions may emerge as a coincidence if social actors support the same ideas or storylines. However, they may also be a (conscious) strategy of discourse reproduction (Keller 2013). Discourse coalitions – jointly supporting a specific discourse – contribute to *stabilizing* a discourse's meaning: More speaker positions are occupied by actors who share the same idea and argue in the same way. In case of policy making for research cooperation with developing countries and emerging economies, I argue that forming a discourse coalition has further functions. While the coalition stabilizes the discourse on the one hand and the consultation of experts adds legitimacy to policy decisions, there are also discourse-external effects that influence the specific actor constellation. The BMBF is in a position to gate-keep: While taking on board actors who stabilize the BMBF's discourse and add legitimacy, at the same time the ministry maintains its power over the further discourse production, its direction as well as the distribution of resources. Power thus is a central element in the case of coalition building scrutinized here. However, as often, reality is complex – as the distribution of power between the ministry and the project management agencies illustrates. Next to the project management agencies, the BMBF builds a coalition with different external experts as representatives of the research community – both on the institutional as well as individual level. In the last years, an inclusion of further actors can be observed.

7.3.1 Project management agencies: The BMBF's right hands with own signatures

As shown in their name, the project management agencies' task is the technical and administrative management of BMBF funded projects. In addition, the project management agencies are involved in setting up new programmes and funding initiatives of the BMBF, while at later stages also taking over the administration of incoming proposals, distribution of project funds as well as monitoring the selected projects on a content level (interviews with PT07, PT03, PT02). They thus play an important role within the policy making process next to the BMBF as such.

In view of the production of policy discourse, the project management agencies have a rather conservative role, in the sense of stabilizing previous policy directions by repeating rather than redirecting the course of a policy. Due to their dependency, within the discourse coalition they are not in a (speaker) position to openly challenge and change the underlying motivations or general direction of the policy discourse. They rather act as a reinforcer to the BMBF's position.

In order to understand their role, it is important to consider the institutional relation between the ministry and the project management agencies in detail. The BMBF contracts the project management agencies in order to relieve the ministerial staff from the high administrative efforts arising from the increasing level of project funding within the BMBF funding portfolio (ch. 5). Different project management agencies, mainly based at research organisations, have worked for the BMBF since the 1970s (Stucke 1993).[5] In 2010, 372 employees worked on research issues within the BMBF, compared to 685 employees in the different project management agencies (17. Deutscher Bundestag 2011a).

International projects, such as those funded within the Sustainability Subdepartment, are administered through different project management agencies, depending on their thematic focus. In case of the Megacities programme, the Department for Global Change, Climate and Environment Protection and Social-Ecological Research of PT-DLR was responsible for evaluating and administrating projects, while next to them, VDI/VDE-IT was a main actor in designing the concept (interviews with PT07, PT09). PT-KA and PT-J shared the responsibilities of administrating the IWRM funding initiative as well as IWRM-related initiatives

5 Among them the Project Management Agency at the German Aerospace Center DLR (Projektträger beim Deutschen Zentrum für Luft- und Raumfahrt, PT-DLR); the Project Management Agency at the Research Center Jülich (Projektträger Jülich, PT-J); the Project Management Agency at the Karlsruhe Institute of Technology (Projektträger Karlsruhe, PT-KA); the Association of German Engineers/Association for Electrical, Electronic & Information Technologies (Verein Deutscher Ingenieure/Verband der Elektrotechnik Elektronik Informationstechnik, VDI/VDE-IT); and others (BMBF 2014p).

such as IWAS, after the International Bureau of the BMBF, part of PT-DLR, had administered the prephase of the projects (interview with PA02).

The BMBF and the project management agencies interact very closely. The ministry commissions the project management agencies with specific tasks. In doing so, the boundaries of the ministry and the project management agencies sometimes become blurry, with the ministry – as well as funded projects – perceiving the agencies as an extension to themselves. For example, during fieldwork BMBF staff often directed me towards the respective project management agencies in order to obtain insights into funding programmes, instead of answering interview questions themselves (fieldnotes, June 2013).

The nature of the close relation between different science ministries and their project management agencies has been explained through principal-agent models in the past (among others Braun 1993; Van der Meulen 1998; Braun and Guston 2003). In his analysis of the relation between the different project management agencies and the BMBF's predecessor, the Federal Ministry of Research and Technology (BMFT), Braun (1993) characterized their interrelation not only as a principal-agent relationship, but even as a master-servant relationship:

> "The BMFT not only possesses the power to control the activities of project funding agencies, it has also kept the right to decide on all issues in research policy making. Project funding agencies may not fund any research project without the consent and signature of the BMFT. It is, moreover, the Ministry which chooses the program development and establishes or abolishes project funding agencies in a particular area." (Braun 1993: 150)

On the superficial level, this is still characteristic of the relation of the subsequent BMBF and its project management agencies 25 years later: Formally, the ministry does not transfer any decision-making power to the project management agencies, which have a merely executive function. Power imbalances thus shape the relation between the ministry and the project management agencies. However, this is just one side of the coin, which thus should be flipped to consider the other side as well.

Until 2011, the institutional relationship between Ministry and project management agencies was very stable: The BMBF extended their contracts with the same project management agencies, who are of independent legal status, without major changes in the relation. Project management agencies worked for the ministry as if they were governmental agencies. However, the growing number of staff working on behalf of the BMBF in the project management agencies, as well as the lack of public procurement procedures to officially mandate them led to public debates about their relation. Pointing to their informal power over the BMBF, parliamentarian Hagemann called the project management agencies a "shadow ministry" (17. Deutscher Bundestag 2011b); and the Expert Commission on Research on Innovation, appointed by the German Government, accused the tight institutional net

of ministries, project management agencies and research institutes of making reorientation of innovation policy impossible (Expertenkommission Forschung und Innovation 2010). In consequence, the procurement procedure was revised; since 2012, the project management agencies have to compete over project management agency tasks in open public tenders (17. Deutscher Bundestag 2011a).

Despite this change on the contract level, the project management agencies' power continues to lie within their scope of tasks. It still holds true what Stucke described in 1993: Project management agencies, while officially and formally less powerful than the BMBF, manage to informally guide the ministry. In delegating tasks to the project management agencies, the ministry loses steering power, as the project management agencies have the power to channel information and thereby shape preferences and decisions of the ministry. In addition, the ministry often recruits staff from the project management agencies and historically was strongly influenced by pre-existing institutions that later became project management agencies (interview with PA12).

Empirical material shows that Stucke's findings still can be observed today. The ministry entrusts the project management agencies with monitoring current research developments and staying in close contact to the scientific community. This is especially relevant as initial inspirational sparks for new funding initiatives mainly originate outside of the ministry – from hot topics in the scientific community. In the Megacities funding initiative, for example, the impulse for considering urbanisation as a topic of funding for the Global Change Unit stemmed from a paper on global megatrends issued by the German National Committee for Global Change Research (NKGCF) in 2002, which listed megacities as a topic and which the responsible project management agency drew the ministry's attention to (interview with PT07). As in this example, the project management agencies often act as intermediators between the scientific community and the ministry in view of future funding programmes and strategies: "In the thematic departments, funding is rather bottom up. Through the project management agencies, they are close to the research community and receive feedback, and on this basis single cooperation endeavours take place." (PA09) An employee of one of the project management agencies added that "[i]t is our task to observe the research landscape in view of new topics. And to keep track of what is important and be able to answer to the BMBF's inquiries" (PT03).

Considering constructivist literature on science-policy interfaces, objective transmission of scientific facts through the project management agencies is unlikely. While the knowledge provided by the project management agencies has to *appear* valid, accurate, neutral, and produced without interests in order to be taken up by policymakers, there *is* an inherent value dimension to knowledge (Dilling and Lemos 2011; Watson 2005; Haas 2004; McNie 2007). The argumentation of researchers on science-policy interfaces can be extended to include

knowledge brokers such as the project management agencies: While the belief in the rationality and objectivity of science itself has been contested, the transmission of knowledge from science to policy via the project management agencies additionally involves a process of selection and communication, which is coined by interests and worldviews (Hoppe 1999; Weingart and Lentsch 2007; Irwin 2008; Nowotny 2007).

Through their tasks of monitoring external developments in the scientific community, the project management agencies thus may informally guide new programmes in a direction according to their worldviews, interest and preference. In addition to identifying relevant topics for future funding initiatives and strategies, the project management agencies additionally identify further experts from the scientific community as external advisors for the BMBF (interview with PA04). Preselecting experts further extends their influence on the directions of policy.

Despite this informal power, project management agencies will not likely deviate far from known policy paths. On the one hand, this has structural reasons: The project management agencies' organisational set up as well as focus of topic generally mirror BMBF structures and priorities. The focus of the specific project management agencies corresponds to the specific departments or units of the ministry. General directions of past BMBF policy, which are institutionally embedded in the organisational structure of the ministry, lead to selecting and shaping the project management agencies that work on its behalf. Nevertheless, the organisational history and culture of the individual project management agencies result in a specific handwriting:

> "The project management agencies play a big role in formulating programmes. And it depends on the way they role – if it's the VDI or DLR, engineers or also social scientists or with a humanities background. That strongly influences the programmes. These forest related things in FONA, where Jülich was the project management agency…you definitively notice that. Each one is different." (EE18)

However, a technology-oriented working unit of the BMBF rather commissions a technology-oriented project management agency than a project management agency focused on socio-ecological perspectives. In the past, different project management agencies worked for the BMBF's Resources Unit, responsible for resources and sustainability, including the project management agency at the DLR (section on Global Change, Climate and Environmental Protection). However, the Resources Unit did not mandate PT-DLR again after the change in procurement law. Having a socio-ecological tendency, the respective section of DLR continued to work only for the Global Change Unit with a similar approach. Tasks for the Resources Unit were continued by the technology-oriented project management agencies such as PT-J and PT-KA (fieldnotes on FONA-forum, 9-11.9. 2013). To maintain the working

relation, the project management agencies thus cannot deviate too far from the respective working unit's discourse.

As any organisation, the project management agencies have an interest in their own institutional survival. Proposing a change of the policy discourse and deviating from the given direction might endanger their position: new policy orientations might require new funding structures and different competences, which might not necessarily fit to the current project management agencies (interview with PA14). The changes in the procurement procedure in 2011 add to the project management agencies' vulnerability and financial dependence on the ministry – as they can lose their contract in a next round of calls if the ministry disagrees with their work. At the same time, this results in even higher stability of the policy discourse: The financial dependence on the BMBF inhibits criticism of past policy directions and leads to a type of *anticipatory obedience*. The project management agencies therefore likely monitor and preselect topics within the focus given by BMBF. For institutional stability, it is safer to repeat accepted notions and concepts rather than daring to come up with novelties, which inherently would criticize old ways of doing things by proposing something new.

From the point of view of funded projects, the project management agencies seemed like a prolonged arm of the BMBF rather than like an independent institution. According to an interviewee, the project management agencies' ways of acting strongly mirrored the current policy direction (interview with PP4). On the other hand, projects also acknowledged the project management agencies' room for interpretation. In view of the quest for visibility, an interviewee involved in an accompanying project stated that "I am sometimes not sure where the demand of visible findings in the BMBF stems from. If the project management agency just assumes that the BMBF wants it that way" (PP27).

Put in SKAD terms, the project management agencies maintain, repeat and renew a given discourse rather than changing its contents and therefore are a safe partner within the BMBF's discourse coalition. In providing ideas and topics for new funding initiatives, they rather resort to approved models of the past in order to preserve their institutional relation. Thereby, they indeed exert a high degree of power over policy making and agenda setting, without being in a speaker position in power to change the underlying motivations or directions of the BMBF.[6]

6 The institutionalized relations between the actors involved in policies for cooperation with developing countries and emerging economies cannot be explained as an effect or dispositive of the discourse on cooperation with developing countries and emerging economies, as they existed previously to its emergence. Nevertheless, they further shape the discourse – as institutions belonging to the dispositive the BMBF's core discourse.

7.3.2 Gatekeeping vs opening doors: The BMBF and external experts in policy making

Next to the project management agencies, which were generally involved in shaping new funding initiatives from the very beginning, the BMBF also sought advice from external experts – mainly members of the scientific community – regarding the directions of new funding initiatives, programmes, as well as strategies: "In new funding priorities, we do seek consultancy. Expert rounds take place, industrial associations are listened to. Obviously, we don't know everything." (PA05)

In many cases, the process of seeking advice from external experts remained opaque. In general, the BMBF did not lay open which procedures took place behind the scene to choose experts, or which experts were selected for which reason (interviews with PA02, PP30). The process of consulting advisors was not subject to formal rules or a standardized procedure in the past, either: "A framework programme develops through dialogue. The bioeconomy programme was strongly developed by an external round of experts, including other ministries. In FONA, we worked a lot on our own. We talked to smart people, but there was no formal involvement." (PA07)

A researcher who had been consulted as an expert in agenda-setting processes within FONA shared similar insights stating that "[t]here are no rules. In some departments, expert talks take place, as they seem fit, and also with those experts that seem fit. Thus, without clear-cut definition what ‚actor from practice' really means" (EE18).

As the quotes illustrate, it was up to the respective BMBF responsible to decide whom to consult at which stage of developing a funding initiative. While in some funding initiatives, so-called *Fachgespräche*, i.e. expert discussions, took place before defining a funding initiative (interview with EE18), in other funding initiatives, a small group of experts designed a first draft which was then discussed with a larger circle (interview with PA02). In case of the Future Megacities funding initiative, an official advisory panel accompanied the selection process of the funded projects as well as their implementation. Due to the programme's focus on applied research in and with developing countries and emerging economies, aimed at creating impact, the advisory board included scientists and practitioners, such as experts from GIZ, as well (interview with EE06). In case of IWAS, the BMBF appointed an advisory board after the project had started (interview with EE17).

In contrast to those experts who were regularly included in consultation processes of one kind, the doors to the discourse coalition remained closed to other members of the scientific community and other societal actors. Interviewees reported about the random in- or exclusion of civil society actors in agenda setting for different funding programmes, such as FONA or the BioEconomy 2030 programme (interviews with EE18, EE11). Similarly, I had previously assumed that

in order to represent scientific views, the Scientific Advisory Council on Global Change (WBGU), co-established by the BMBF and the BMUB, would be systematically included in designing or accompanying funding initiatives. This was not the case, however (Box 7-1).

Box 7-1: Alternative discourse on science policy processes

Within a discursive field, different actors may compete "for the constitution or definition of a phenomenon" (Keller 2013: 72). In the past, shaping the dominant policy discourse took place in restricted circles open to only selected actors, as I argue in this chapter. Actors speaking from positions within this alternative discourse are often not included in the policy makers' discourse coalition; or are invited to participate, but are not able to obtain speaker positions which contribute to discursive change. The variety of actors in the alternative discourse coalition contest the discursive direction of policy – such as its focus on economically viable technological solution paths (ch. 8), as well as the practices that stabilize the dominant discourse – and thus criticize the way how policies come into being, who is involved in the process based on which democratic legitimation. While these are contents of the alternative discourse, they inherently deal with the processes of the discourse production in policy making and maintain a critique and counter stance to the latter – and are therefore presented and analyzed here rather than in chapter 8.

Contestation occurs in different discourse arenas: it has turned into a subject of critical scientific as well as public discourse. As some interviewees argue, policy makers are more likely to be influenced by larger public debates leading to changed public opinions, rather than through attempts to exert direct influence in personal contact (interviews with EE21, EE 22).

Within the German context, an alternative discourse coalition gathers around critical positions of science policy making, policy interfaces or modes of research. Actors include institutions like the WBGU as well as individual researchers, members of science funding institutions, members of civil society organisations as well as politicians from oppositional parties. Being organized in several institutionalized networks, such as Ecornet, Forschungswende or NaWis (NaWis 2011; Vereinigung Deutscher Wissenschaftler 2012; Jahn and Kraemer 2013), their mode of organisation seems to correspond to the idea of a discourse coalition. In contrast to the policy making coalition, the function here seems to bundle similar ideas and make them more visible in public and policymaking.

Their critical ideas on the status quo of the process of science policy making are often centred on the idea of a transformation towards sustainability. It is argued that the participation of diverse stakeholders in policy processes is an essential element of a transformation process, as well as transdisciplinarity as a guiding principle for

stakeholder involvement and interdisciplinarity in research projects (ch. 9). Instead of lobbying for concrete new topics of research or research funding, speakers of the alternative discourse coalition thus rather propose a procedural change. Opening up the agenda-setting process, making it more transparent and including a diversity of actors is considered as a means of safeguarding societal relevance as well as ensuring that public money is spent on public goods (Jahn and Schuldt-Baumgart 2013; Schneidewind and Singer-Brodowsky 2013a; Ober 2013).

Key events in discourse production and dissemination include the publication of the flagship report of the WBGU on *The Great Transformation* (WBGU 2011), which was influential on a number of following scientific articles and public positions (Grunwald 2015; Haum and Pilardeaux 2014). Researchers, research organisations as well as civil society organisations took up the debate on the concept of transformative science and its consequences for policy production.

Civil society organisations began to reflect on science and science policy in position papers of. For example, the Friends of the Earth Germany (Bund für Umwelt und Naturschutz, BUND) published a position paper on sustainable science in 2012, including their demands on more inclusive agenda processes (BUND 2012). In a similar line, civil society organisations such as Greenpeace, Germanwatch, BUND and others signed a joint memorandum on their demands in view of a sustainable science and science policy (Forschungswende 2013). In order to open up the policy discourse to broader stakes, the community argued that it would be essential to open up expert panels, advisory boards, programme committees etc. to other societal groups, whose interests are currently neglected, while other privileged actors gain disproportionate influence (Ober 2014).

Next to the researchers or research institutes contributing to the alternative discourse from a mainly socio-ecological perspective, such as those organized in Ecornet or Nawis or the members of the WBGU, even scientific institutions that traditionally do not position themselves in the context took over speaker positions in the emerging alternative discourse. The German Council of Science and Humanities (Wissenschaftsrat) issued a position paper on science policy in the context of grand societal challenges, demanding that future grand challenges should be identified in open discussions without predetermined conclusions, which should be open to a plurality of actors and positions (Wissenschaftsrat 2015).

The alternative discourse of science policy and participatory processes entered the political arena, the Bundestag, as well, brought forward through members of left and green parties. After a BMBF-initiated science year targeting research for sustainable development in 2012 (BMBF 2012b), Green Party members of parliament suggested to implement transparency as binding principles in public research funding as well as to improve participation in decisions relevant for research in two official requests to the parliament (17. Deutscher Bundestag 2012c; 17. Deutscher Bundestag

2012a). A year later, Parliamentarian members of the Linke voiced similar requests in parliament: To redirect science policy towards the inclusion of social innovations in view of grand challenges; and to increase transparency and participation of civil society and other interest groups in research agenda setting. However, these recommendations were turned downed by the Parliamentarian Commission on Education, Research and Technological Impact Assessment (17. Deutscher Bundestag 2013a; 17. Deutscher Bundestag 2013b).

The alternative discourse and its positions in view of participation in policy making and research caused counter reactions among members of the scientific community anchored in more traditional discourse positions. Strohschneider, president of the DFG and thus of a funding institution that funds research based on excellence and not on potential application, expressed concerns that boundaries between science and policy were vanishing (Strohschneider 2014).

The WBGU and its members do not belong to the group of experts consulted. An interviewee reflected:

> "You take on board people when you need advice and if they happen to argue in the lines that the BMBF wants to represent politically at that moment. From the political perspective, it would therefore not make sense to institutionalize the process. You want to remain flexible. So, you can say you have a great Advisory Council. But you only actively include it into policy making when you feel the need for it." (EE20)

From the BMBF's perspective, the non-standardisation of advisory groups was caused by the desire to keeps things simple: "There are no standard rules who is included, because you would increase the bureaucratic procedure." (PA04) For the ministerial employees, this was thus not a drawback but an asset, as they saw themselves as organizers of multi-actor consultations for new funding initiatives:

> "Within the consultancy groups, you need a mix. They are controversial among them. We have included associations such as the one for waste water, the DWA, and the one for drinking water, DVWG, which display the range of positions of their members. And who inhibit that single opinions are out forward too strongly. That's the art of mixing in the editorial team and the expert group. That's our task, and it works out well. Afterwards, there are always some people complaining, they would not have been listed too and we should have done things differently. But by and large, it works out well." (PA02)

BMBF employees thus perceived themselves in the role of neutral facilitators of an agenda process that becomes objective through the inclusion of different positions, as illustrated by the quote above. In interviews, BMBF employees repeatedly

asserted to achieve unbiased decisions on new funding initiatives by including a range of different stakeholders and experts in the process (interviews with PA02, PA05, PA11, PA14).[7]

However, interviewees involved in the policy process as external experts had a more critical perception. One interviewee reflected on the impartiality of the BMBF as a facilitator of the discussion and its neutrality:

> "The units have their 20 points of contact in the science system. Actors who were already relevant in the previous programmes. With these, there are background talks, communication, I know that from SÖF. They invite 10 experts who they have known before. You discuss what they want to do. Add some ideas and publish that. That's a closed in-circle, and it actually guards the resources of those involved. The scientists involved have an interest in keeping the cycle of decision making interesting for the ministry, to advise, to offer ideas. It's a win-win situation which stabilizes the whole thing." (EE22)

The "win-win situation" mentioned in the quote derives from the fact that after being part of the agenda-setting process, experts may apply for funding within the same call. In times of growing dependency on third party funding, this fact hampers impartiality in the consulting process (interview with PP30). At the same time, the quote also illustrates that parts of the scientific community benefit from the current set up and direction of science policy. Once admitted into the in-circle and therefore regularly included in agenda setting, experts have an interest in maintaining the status quo of agenda setting: "If they arrange expert talks…well as a scientist you have your research interests and you hope for a subsequent call for proposals that fits. That's the same for everyone, and you cannot prevent that." (EE18)

Another interviewee stated that he was even involved in formulating the call for proposal's wording as such (interview with PP10). Being knowledgeable about the very details of a future call and having potential influence on its direction is a clear advantage for applying successfully to the call later. Interviewees from within the BMBF did not consider this as a potential conflict of interest: "You find out quickly if an advisor has self-interests. The community is not big. You have a good overview who has stakes at which point. And not everybody with a self-interest is a bad consultant. You have to consider that." (PA05)

I argue that the BMBF's indifference in view of the positionality of the experts consulted is based on their capacity to preselect experts, while being included in formulating calls for proposals is advantageous for the researchers consulted.

7 This indicates a growing sensitivity to the issue of participation in policy making in times of rising external criticism of intransparent agenda setting and privileging a certain policy direction (Box 7-1).

From the discourse perspective, the lack of binding common rules of procedure leads to an authoritative position of the BMBF as central speaker in discourse production. In the past, the responsible BMBF staff and the project management agencies working on their behalf decided from case to case whose advice was sought, whose knowledge was integrated into policies and which alternatives were left out. The BMBF thus possesses a high degree of power to invite or exclude experts as speakers in the policy discourse. The BMBF's power did not begin or end with finding a balance of interests of the experts included. The ministry's power instead lay in its gate-keeping (or door-opening) position, which started with the selection of experts to take part in the process. As one interviewee put it, pointing to the power of policymakers in the agenda-setting process: "If you want to include suitable experts, you take those which potentially work in that line. You might ask if that is correct in view of transparency. But then, actually, you shouldn't do consultancy processes anyway." (EE18)

Even though the BMBF is not formally obliged to do so, it is beneficial for the BMBF to seek for a discourse coalition with external experts within the process of producing new policies and funding initiatives: The experts have a legitimizing function. Especially in a policy field like science policy, which is aimed at fostering further knowledge production as a policy outcome, the legitimacy of policies and funding increases if experts from the scientific community back them up. In this vein, consulting experts is a way of legitimizing policies and miming objectivity (Irwin 2008; Leach et al. 2010). Discussion rounds with experts, advisory commissions and representatives of civil society provide a justification to policies in public: The inclusion of certain actors is a technique of creating evidence-based policies. At the same time, involving external actors in the policy process may also turn into a strategy of providing legitimacy to policy initiatives within the BMBF as such (in backing up decisions that deviate from previous policy discourse, as in case of the African Science Service Centers). As a strategy, drawing on external experts' knowledge is analogous to drawing on science-based arguments to back up value-based decisions, as constructivist literature on policies argues (ch. 6).

7.3.3 Science-society-policy interfaces: On the road to participatory policy making?

In the last years, international as well as German debates – as in the alternative discourse coalition (Box 7-1), concepts of policy making are shifting towards a participatory, deliberative approaches. As the Sustainability Subdepartment itself promotes participatory modes of research, such as transdisciplinarity, this does not go unnoticed in the BMBF. Attempts to broaden the discourse coalition through more deliberative forms of agenda setting illustrate this point. The BMBF's Sustainability Subdepartment has turned more sensitive to the issue of participation

and transparency in agenda setting in the last years – at least on the surface.[8] The process of designing the FONA as a research programme illustrates how a changing discourse on policy design contributes to changes in policy practice: Whereas the input for the first two editions of FONA still came from a limited number of experts with an insider view, with the third edition of FONA, the BMBF however changed the processes and aimed to increase participation of civil society and other actors (interviews with PA11, PA15). In interviews as well as in public talks, high level ministerial staff emphasized the importance of participatory processes and pointed out the new transparent and participatory mode of programme design (Huthmacher 2013). The BMBF thereby follows an international trend of scientific governance moving towards transparency, dialogue, and public engagement (Irwin 2008).[9]

Does the agenda process leading up to the latest FONA, as programmatic frame of sustainability research thus illustrate an instance of opening a discourse coalition to a broader public? For the newest edition of FONA, issued in 2015, the responsible BMBF Subdepartment organized a public agenda-setting process, consisting of several conferences open to the public – including scientists, industry representatives as well as civil society organisations – the so-called FONA-Fora (BMBF 2015g). The Forum in 2013 was aimed at a joined agenda process, according to its programme:

> "The BMBF invites […] representatives from science, business and civil society to discuss future tasks and challenges of sustainability research in six sessions. This is the kick off of an agenda process, which culminates in the publication of a further developed framework programme (working title FONA3) in 2015. We expect a discussion beyond purely scientific questions and topics. Embedded in the High-tech Strategy as well as national and European sustainability strategies, FONA aims to support sustainable developments within society. To do so, thinking outside of the box of science and research is necessary. Only that way, research findings will lead to innovations and solutions that are accepted by the people." (BMBF 2013d: 4, *own translation*)

This long quote illustrates that the BMBF is familiar with the discourse on transparency and participation that it promotes itself in its programmes as transdis-

8 The Sustainability Subdepartment's funding priority on Social-Ecological Research (Sozial-ökologische Forschung, SÖF), regular part of FONA and funded since the year 2000, was among the first BMBF funding frameworks to emerge in a public agenda setting process (BMBF 2015f).

9 The BMBF has started to reflect on issues such as transparency in agenda setting, participation in research, or new innovation pathways in other departments as well. Questions around the direction of innovation have moved into the spotlight of an initiative on the meta level of ‚Innovation and Technology Analysis', funded by the Strategy Department (BMBF 2014q), and even in the High-tech Strategy now encourages citizen participation as one of "five core elements of a completely consistent innovation policy" (Bundesregierung 2014: 13).

ciplinarity. However, a clash between paper and practice became apparent in my participant observation of the event – a dynamic that Irwin has described for similar agenda-setting processes in science policy (Irwin 2008).

The BMBF did not wish to institutionalize the participation of any type of social group in the Forum but left the process open to any actors from science, industry to civil society (interview with PA11). Despite the intention of broad inclusion, the FONA forum 2013 was not attended by a balanced audience. The fact that out of 480 participants, around 430 were involved in the German science and science funding system suggests that a prior strategic stakeholder identification might have been lacking.[10] While scholars argue that in political participation processes, the round of participants should represent all legitimate stakeholders sufficiently (Newig 2011), there is little consensus regarding the responsibility, i.e. if it is task of the process organizer or of the public to ensure the representation of legitimate stakeholders in the participatory process. Self-exclusion leading to non-participation must also be considered as a factor. Reasons may range from not having time or financial resources to participate, feeling incapable to contribute, or feeling uncomfortable in a social setting coined by policy experts and scientists (Cornwall 2008). In addition, civil society organisations may not have been aware of the potential impact of science policy on their field of action, therefore not considering participation necessary. In this line, interviewees stated that previous awareness raising and capacity development among potential stakeholders in view of their stakes in science policy would be necessary to increase participation (interviews with EE10, EE11). Cornwall similarly concludes that

> "While opening spaces for dialogue through invitation is necessary, it is by no means sufficient to ensure effective participation. Much depends on how people take up and make use of what is on offer, as well as on supportive processes that can help build capacity, nurture voice and enable people to empower themselves." (Cornwall 2008: 275)

In addition to unbalanced types of participants, other factors hindered an open participatory process. Some discursive core ideas – were pre-established as given facts, thereby narrowing down the options and potential outcomes. As such, the agenda process was explicitly aligned with the High-tech Strategy (BMBF 2013d:

10 An analysis of the list of participants shows that from 480 participants listed, only around 50 belonged to city councils, enterprises or consulting firms and thus were not directly involved in research or science policy. Civil society organisations were not represented well, environmental NGOs didn't participate at all. Different project management agencies, including VDI/VDE-IT, PTJ and PT-DLR, were represented through 75 participants, while about 40 participants came from the policy making sphere, including 20 BMBF employees from the Sustainability Subdepartment and 20 participants from other ministries and their agencies, mainly from the BMU and UBA – but none of the BMZ.

4); the conference panels and workshops were not thematically open but aligned with previously defined objectives. This excluded the possibility to challenge the overall direction of the new edition of FONA as such. As Jasanoff argues, "[p]ublic participation that is constrained by established formal discourses, such as risk assessment, may not admit novel viewpoints, radical critiques, or considerations lying outside the taken-for-granted framing of the problem" (Jasanoff 2003: 237). While according to its programme, the FONA forum aimed at identifying central research questions or adequate innovations for sustainable development (BMBF 2013d), the forum itself did not provide the room necessary to think outside the preset discursive frame. Similarly, participants called for reflections on the meta level of sustainability research, such as the appropriateness of research questions and the suitable framing of problems during the forum, thus questioning the overall definition of sustainability in the BMBF's discourse.

However, instead of providing the space for a thorough scientific analysis of the direction of sustainability research within the new edition of FONA, for the BMBF it seemed enough to touch on these issues in ad hoc discussions (fieldnotes on FONA forum, 9.-11.9. 2013). The underlying discourse thus led to a specific structure of the forum, whose logic and assumptions were not to be changed. Structurally, the agenda therefore remained in hands of the BMBF, the participatory process was merely an add-on to agenda setting, but no crucial element (Cornwall 2008; Irwin 2008). Among the participants, including the public was perceived as tokenism, serving a legitimisation of earlier activities and ideas rather than as an opportunity of discourse change (fieldnotes on FONA forum, 9.-11.9. 2013).[11]

In the final version of FONA, the BMBF states that research priorities were developed jointly with representatives of science, economy, policy and civil society. In contrast to this impression of a coproduction of policy relevant knowledge, the actual level of public influence was neither discussed during the forum, published on the FONA website, nor communicated in a follow up process with participants (BMBF 2015g and fieldnotes on FONA Forum, 9.-11.9. 2013). However, in an interview it became clear that final decisions remained in the ministry: "From the sum of different opinions voiced you paint your picture. What remains and what is extremely important for us, is that we decide about the structure of the programme ourselves within the BMBF." (PA11)

While superficially changing the process, the BMBF was not willing to transfer power – and the participants did not request of the ministry to do so. With knowledge and power being closely interlinked, it is not surprising that the format of the event structurally enhanced the previous line of policy and thereby contributed to a

11 Participants of civil society organisations expressed the same disappointment in view of other participatory processes such as in the Forschungsforum Energiewende (Ober and Paulick-Thiel 2015)

reification and stabilisation of the past policy discourse. Even though upfront, the forum was intended to gather different perspectives through including a range of actors in decision-making, thereby reaching a higher degree of objectivity (interview with PA11), the doors to the discourse coalition remained locked. According to Arnstein's classic "ladder of participation", public consultations as observed here thereby mainly serve to maintain the status quo of the institution in power (Arnstein 1969). In addition, the BMBF also secured its power over the direction of the policy discourse through the separation of different policy levels. The public fora did not address any concrete funding initiatives. Even though the FONA fora theoretically enabled deviating discursive directions, the BMBF could rely on a safety net which ensured discourse continuation.

7.4 Power in discourse production

As analyzed in the previous sections, the interaction with different groups of actors has different functions for producing policies and stabilizing discourse in the BMBF. In addition, the interaction is coined by and further coins the distribution of power among the actors involved.

Non-cooperation in policy processes characterizes the relation between the Sustainability Subdepartment and those actors which potentially endanger its institutional position– or are perceived to do so. Access to the policy discourse coalition and related speaker positions remain inaccessible to these actors. In the past, other ministries as well as the BMBF's International Department have been excluded from formulating policy initiatives as well as strategic documents such as previous versions of FONA. On the other hand, certain actors are invited to join the coalition. It is worthwhile to shed some light on the discourse coalition as such, pointing out the underlying benefits of each party in joining the discourse coalition, thereby also reflecting on the concept of the discourse coalition as such.

As spelled out in more detail in chapter 3, a discourse coalition is composed of actors whose "statements can be attributed to the same discourse" (Keller 2013: 73). This definition certainly applies to the policy making context of the BMBF and explains why a certain policy direction is taken, continued and prevailing. The admission of speakers and discourse contents in a coalition follows the potential speakers' symbolic, social, financial or cultural capital (Keller 2011b).

While SKAD generally stresses the interlinkage of knowledge and power in discourse, stating that discourse structures are power structures (Keller 2011b), there is a theoretical blind spot in the definition of discourse coalitions which becomes apparent in the case of policy making considered here. In the description of discourse coalitions, no reference is made to any potential power imbalances within discourse coalitions. Which coalition member decides about the admission? Who decides