4.2.2 The Delphi method in ESPON: State of the art, innovations and thoughts for future developments

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I. INTRODUCTION

The second ESPON programme puts emphasis on the usability of "territorial evidence" by practitioners (Dürr et al. 2010: 248). The Priority 2 "Targeted analysis based on user demand" is par excellence the institutionalised form of exchange between researchers and practitioners (Hague 2008). This shift towards the users' needs ("stakeholders") may give them different positions concomitantly. In the framework of the Priority 2, users may be involved in a project's specification, implementation and follow-up. Researchers can also solicit them as sources of information for data collection, investigation of policy discourses and concepts or also for strategy building. Dissemination and capitalization strategies are also designed for their benefit. This multi-faceted exchange should give benefits to both sides. Policy makers can receive answers to some of their questions. At the same time, researchers can investigate key concepts thanks to the stakeholders' availability. Yet, the close interaction between stakeholders and researchers raises crucial conceptual questions that would need more than one contribution to be elucidated. They also raise important methodological questions and especially how to frame this continuous dialogue. Over the last years, the Delphi method proved to be a useful tool both to frame exchanges with stakeholders solicited as experts in specific policy fields and to support dissemination strategies. The Delphi method has been used either to operationalise the analysis of a concept (territorial governance in TANGO) or to feed a strategy-building process (Metroborder) or even to investigate policy options (USESPON). This paper will briefly sketch how the method has been operationalised in the ESPON context so far. Drawing on the experience gathered in the Metroborder and USESPON projects, the paper will then investigate some methodological innovations introduced through the Delphi method into the ESPON context. Finally, it will delineate some paths for future implementations especially in the ESPON context.

II. STATE OF THE ART

The Delphi method is more than 50 years old. It has been used so often in so many ways that some scholars speak about "Delphi techniques" (Rowe & Wright 2011). Before focusing on its applications in the ESPON context, we shall summarise some of the main characteristics of this method. This method was originally used to improve the understanding of a problem when limited knowledge and data is available. Very schematically, the method has been developed for three purposes: to forecast, to facilitate decision-making ("policy Delphi") or to reach a consensus among stakeholders. How does it work? A group of experts is consulted through an iterative process through questionnaires. Responses are analysed and filtered throughout the process by a research team acting as a "neutral facilitator" (Linstone & Turoff, 1975). Based on the filtered results of the previous round, experts then have the opportunity to reconsider, deepen and/or to explain more fully their assessments. Anonymity is a crucial element allowing exchange between stakeholders without bias such as can come from the dominance of some experts (Cuhls). This technique is particularly flexible and can be combined with numerous other methods (e.g. scenario planning, focus group, interviews; Landetta et al 2011).

In the ESPON context, four Delphi studies answered diverse research questions (Table 4.1). The 1.3.1 project conducted in the framework of the first ESPON programme (2002-2006) has been the most quantitative survey until now. It was used to investigate how natural and technological hazards affect European climate (ESPON 1.3.1 2006). A policy Delphi has investigated cross-border governance in two case studies at sub-national level (ESPON Metroborder 2010). In the USESPON capitalization project, priorities for future structural funds programmes in the field of research and innovation have been investigated. The definition and measurement of territorial governance has also been refined through a Delphi study (ESPON/TANGO 2013).

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Table 4.1 Implementation of the Delphi method in ESPON projects

	1.3.1 project *Natural and technological hazards in Europe*	**METROBORDER** *Cross-border polycentric metropolitan regions*	**USESPON** *Use of ESPON*	**TANGO** *Territorial governance*
Frame	Thematic project (ESPON 2006), released in 2006	Priority 2, released in 2010	Priority 4, to be released in March 2014	Priority 1, to be released in Dec. 2013
Objective	Develop an integrated picture of hazards in Europe: "Consensus driven" Delphi	Define possible paths for the future of cross-border governance in the Greater Region and in the Upper Rheine: "Policy Delphi"	Develop priorities for the implementation of structural funds in the field of research and innovation in Luxembourg: "Consensus driven"	Deepen and concretise definition and indicators to the territorial governance concept: "Consensus driven"
Main features	– 3 rounds – Mainly quantitative	– 2 rounds conducted in 2 case studies – Quantitative and qualitative	– 2 rounds (1 group discussion & 1 questionnaire) – Qualitative	– 2 questionnaires – Quantitative and qualitative
Expert	16 climate change experts having a European perspective	119 experts in the Greater Region 89 in the Upper Rheine (mix of elected representatives, civil servants and civil society)	11 experts (mix of structural funds experts, civil servants involved in innovation sector and researchers)	Wide range of European experts ("ESPON community")
Research addedvalue	Integrated map on natural hazards	Governance analysis of two cross-border regions	–	Definition & indicators of territorial governance
Outreach added-value	Final report comprising an integrated hazard map	Final report proposing strategies for building a "cross-border polycentric metropolitan region" (accepted and currently partially implemented in the Greater Region).	*Currently in development (expectation: use ESPON results in setting-up priorities for 2014-2020 operational programmes)*	*Currently in development (expectation: use of the definition and indicators to measure territorial governance at EU level)*

The Delphi method has been operationalized for multiple purposes. When the method is mainly used for research purposes (Metroborder and TANGO), results can also assist the dissemination process by making it seem less abstract to the practitioners. The user-oriented approach put into question both the ability to frame stakeholders' inputs with a methodology and the capacity to set-up channels for disseminating activities. Based on the experience gathered in the Metroborder and USESPON projects, we shall focus in the next section on examples dealing with these challenges.

III. METHODOLOGICAL INNOVATIONS INTRODUCED BY THE DELPHI METHOD IN THE ESPON CONTEXT

Investigating the cross-border space with a Delphi study

Maps are powerful tools to grasp some facets of reality. One of ESPON's achievements is undoubtedly the cartography of spatial trends affecting the "ESPON space". In the ESPON context, maps have been used essentially to represent quantitative information for descriptive or analytical purposes. In light of

the user-oriented approach, the Delphi method can both give an input to stakeholders' decision-making processes and facilitate the investigation of the construction of space. The participative approach and the iterative process of the Delphi are coupled with a GIS to support the delimitation of an area (so-called "Collaborative Spatial Delphi" or "spatial Delphi", Vargas-Moreno 2008). In the Metroborder project, experts in two border regions were invited to tick check boxes to indicate on which area the cross-border cooperation should be emphasised (ESPON/Metroborder 2010). Following the logic of "pooled territory", cross-border space is usually defined and represented as the sum of each institutional partner's "territory" (Mamadouh 2001; Chilla 2013; Chilla et al. 2012). As a result of this very preliminary spatial Delphi, another cross-border space appears next to the institutional perimeter. For researchers, this allows a conceptualization on the construction of space (ESPON/Metroborder 2010; Evrard 2013). It also illustrates how cross-border space is perceived and defined by individual policy makers. For policy makers, this result puts into question if and how common projects should focus on this space. This result, which was simply a synthesis of policy makers' individual representations, provided another picture than the cross-border perimeter they were used to. The individual representation of space is confronted by a common aggregated representation. The main output of this question was to help policy makers visualise the cross-border cooperation area through another angle that the usual institutional perimeter would have allowed. It establishes a direct and visual link between discourses describing a perceived reality and the strategy policy makers tend to embed in space. The results of this map, as well as the other results of the project, have been gathered into a synthesis map (ESPON/Metroborder 2010: 13) that now serves as a reference in the negotiation undertaken for a common cross-border strategy in the Greater Region (Evrard 2013; Sommet de la Grande Région 2013).

In the ESPON context, the spatial Delphi might be a useful tool. It allows embedding of "spatial thinking and discursive strategies into participatory processes" (Balram et al, 2003). As a result, it may feed both researchers' investigation of the construction processes of space and policy makers' strategy building. At the same time, this methodological framework tends to bring stakeholders and researchers together. This proximity can mainly be mediated through the transparency of the research process. It is crucial that both sides are aware of the research protocol and aim, as well as of the expected results. The objectivity of the research team is another crucial aspect.

Working up priorities for future operational programmes in the field of research and innovation

"Capitalisation", a new priority under the ESPON 2007-2014 programme, is a consequence of the user-oriented approach. The ESPON Coordination Unit and the ESPON contact points (ECPs) are the main institutions undertaking it. It differs from dissemination insofar as the aim is to meet the audience's needs, rather than to deliver facts and trends. It reflects the intention to communicate ESPON results by a bottom-up approach. ECPs face the challenge to "bridge the gap" between information delivered at European level and local, regional, national concerns. If most of the stakeholders show interest in ESPON results, very few of them use the results in their daily work. The Delphi method can offer some support to bridge this gap and help develop a sense of ownership on the practitioners' side.

The negotiation of priorities for the future operational programmes (OPs) has arrived at a key moment: EU2020 goals are being made more specific through priorities. The ECP Luxembourg launched a reflection process with experts involved in setting-up operational programmes. Focusing on research and innovation, this process involved experts from this field and followed a Delphi technique. To fit with the objectives of the initiative, some methodological adaptations were made to the Delphi. First of all, the rounds were designed with a twofold aim. ESPON information was provided to the experts beforehand, to give them time to reflect on its usability and relevance. Second, the participants' expertise was complementary. This initiative was also taken as an opportunity to set up a platform for common reflection and networking outside of pre-existing working groups. In a preliminary step, stakeholders received a six page document ("support material") presenting the main outcomes of ESPON results for Luxembourg (available at usespon.eu). No feedback was sought, so this stage cannot be considered as a "round". The first round took the form of a 4-hour workshop during which experts were invited firstly to evaluate the relevance of the results according to their own experience, and if necessary to complement them with supplementary sources. On this basis, they secondly sketched out priorities on which the structural funds could be operationalized. After the workshop, a synthesis and first reflection on the results was undertaken and sent out with further questions inviting the experts to deepen and develop their approach (second round). The results of the process

were processed, analyzed and sent out for final input into the operationalization of the structural funds programmes. Two main adaptations to the original Delphi method have been implemented: the process was only partially anonymous. The interactions made it possible to generate and share a lot of information. Experts could learn from each other. At the same time, the second round in form of a questionnaire was crucial, as new elements came out in particular thanks to the anonymity. Second, in contrast to most of the Delphi studies, ESPON results were used to feed the process from the beginning until the end. Usually, the Delphi is mainly based upon the experts' own knowledge.

This method proved to be an interesting way to create a sense of ownership of the results among stakeholders. It made it possible to bridge the gap between results that might seem abstract and the practitioners' concrete needs. This was achieved because this process was conceived as a platform for the exchange of information and experience. From a researcher's point of view, allowing for the methodological adaptions, this type of capitalization activity might be relevant to investigate how policy is being shaped between stakeholders. More than for the operationalization presented earlier, this application of the Delphi method faced the particular challenge of being time consuming not only for the research team but also for the experts. This element makes the choice of the panel of experts even more difficult than in other Delphi studies. Experts can mainly be technicians and civil servants specialized in a specific field and interested in widening their knowledge.

IV. THOUGHTS FOR FUTURE DEVELOPMENTS

Based on the previous experience, one can summarise the added value of this technique in the context of ESPON and draw some thoughts for future developments.

Table 4.2 Thoughts for further implementation of the Delphi method in the ESPON programme

Main added-value of the Delphi method	Specificities of the ESPON framework	Thoughts for future applicatons
Support the development of future-oriented options	Work on scenarios mainly with macro-economic models	The Delphi method could be used to bring a qualitative dimension into forecasting projects
Participatory approach, creates a sense of ownership of the results	User-oriented approach for research projects & dissemination strategies	Could be used in "targeted analysis projects" to deal with lack of data at local level Capitalization strategies
Based on experts' assumptions	Mainly quantitative projects	Could counterbalance the quantitative methods usually implemented in ESPON and investigate other fields of research (e.g. governance, societal issues). In this context, it could facilitate interdisciplinary research projects.
"Collaborative spatial Delphi" (CSD)	Mainly quantitative research providing spatialised information	At local/regional level, developing CSD could be of interest for stakeholders

V. CONCLUSION

The Delphi method has proved to be very useful to investigate contexts where uncertainty plays a major role. In the ESPON context, it is especially useful as it can create a bridge between stakeholders and researchers. From the researchers' side, it offers a framework to confront an analysis with practitioners' assumptions. From the practitioners' point of view, it provides a framework for feedback and thus creates a sense of ownership of the results, which may facilitate the dissemination of the results. At the same

time, it could support the development of new research avenues for the ESPON programme, particularly taking into account a more qualitative approach or reinforcing a spatialised approach through the CSD.

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