

Scientific tools in Europe: focus and application options

Policy Impact Assessment (IA) has been an obligatory procedure in the legislative process within the EU since 2002. It has to identify the likely impacts on sustainable development (specifically the social, environmental and economic impacts) of all major policy strategies and instruments prior to actual implementation. The link between IA and sustainable development is rooted in the 2006 renewed Sustainable Development Strategy.

IA also provides the legal basis to feed scientific evidence into the policy process and to base policy-making on scientifically robust tools and results. In line with the recognition of the importance of IA for sound sustainable policies, the EC (DG Research and Innovation) has funded through the Framework Programmes (FP) 6 and 7 research supporting knowledge creation in this field.

This policy brief presents an analysis of tools developed in the context of FP6 and FP7 undertaken by the LIAISE project. This assessment focused on the following interests of IA practitioners as tool users:

- Which policy area(s) do the tools address?
- Which impact area(s) are covered by the tools?
- Which jurisdictional level(s) can the tools be applied at?
- How can the tools be categorized?

There exists a wide variety of tools that comprises:

- Quantitative and qualitative tools, such as models, scenarios, multi-criteria analysis and participatory tools,
- Tool components, such as indicators, databases and comprehensive analytic methods,
- Evaluation frameworks, toolboxes and platforms etc. serving as a higher level system for tool selection or tool linkage.

These results are based on an analysis of 203 research projects designing tools for IA funded in FP6 and 7. The results shall contribute to addressing the science-policy interface of IA by identifying possible challenges for tool users and tool suppliers with respect to tool development and selection.

LIAISE Policy Brief

This policy brief presents an analysis of tools developed in the context of FP6 and 7. Out of the 7,781 FP6- and FP7-funded projects, 203 projects were identified as contributing to the design of tools for the IA process. The actual tool implementation in practice was not a requirement for selecting a project. This policy brief is based on project information (Cordis website, individual project websites, comments from project coordinators). The study was carried out by LIAISE researchers.

Further reading: Podhora, A., Helming, K., Adenäuer, L., Heckeley, T., Kautto, P., Reidsma, P., Rennings, K., Turnpenny, J., Jansen, J. (2013): The policy-relevancy of impact assessment tools: Evaluating nine years of European research funding. *Environmental Science and Policy* 31, pp. 85-95.

Key findings

IA tools were mainly designed for environmental, agricultural and transport policies

The tools designed in the 203 projects addressed 20 out of 36 EU policy areas. The majority was designed for three areas, namely environment, agriculture and transport, as well as related policy areas such as climate change and maritime affairs. However, as all European policies require an ex-ante IA, tools are also needed to base political decisions on scientific expertise in any of the 36 policy areas.

Few IA tools are targeted at assessing sustainable development in general, and at social impact areas

Tools often addressed only a few impact areas and only one or two of the three sustainability dimensions. Additionally, tools mainly concentrated on the impact areas corresponding to the respective policy. They seldom addressed the variety of impact areas as a whole to fully reflect the complexity of sustainable development in the assessment. A clear gap concerned the eleven social impact areas. A combination of different tools is needed to fully target IA towards sustainable development.

IA tools mainly addressed the European jurisdictional level

Tools developed in the context of FP-funded projects concentrated on the analysis of European Union policies and poorly addressed other jurisdictional levels. Further, the tools were mainly designed for a single-level rather than a multi-level approach. Flexible tools applicable at various jurisdictional levels are needed in view of the increasing role of IA at the national level.

IA tools concentrated on models with few participatory tools

Quantitative tools were dominant (models, scenarios, accounting tools/ physical analysis tools/ indicator sets). Less attention was devoted to established tools such as assessment frameworks, multi-criteria analysis and cost-benefit analysis. Participatory tools may need to be further investigated when developing the science policy interface. Options need to be identified to define how quantitative and qualitative analyses could best be linked for the benefit of improved IA.

Policymaking and research need a common language

In spite of focusing on EU policies, many tools designed for policy IA in the context of FP projects frequently were not framed in the EC IA context. For instance, in many cases these projects did not use the terms outlined in official documents as the European Impact Assessment Guidelines. Thus new tool categories jointly developed by policy makers and scientists may be needed.

Policy areas

The 203 projects designed tools for 16 out of 36 European policy areas: the main policy areas were environment, agriculture and transport and related policies (more than 60%).

Chart 1: Coverage of EU policy areas through projects funded in FP6 and 7 designing IA tools (multiple attributions possible)

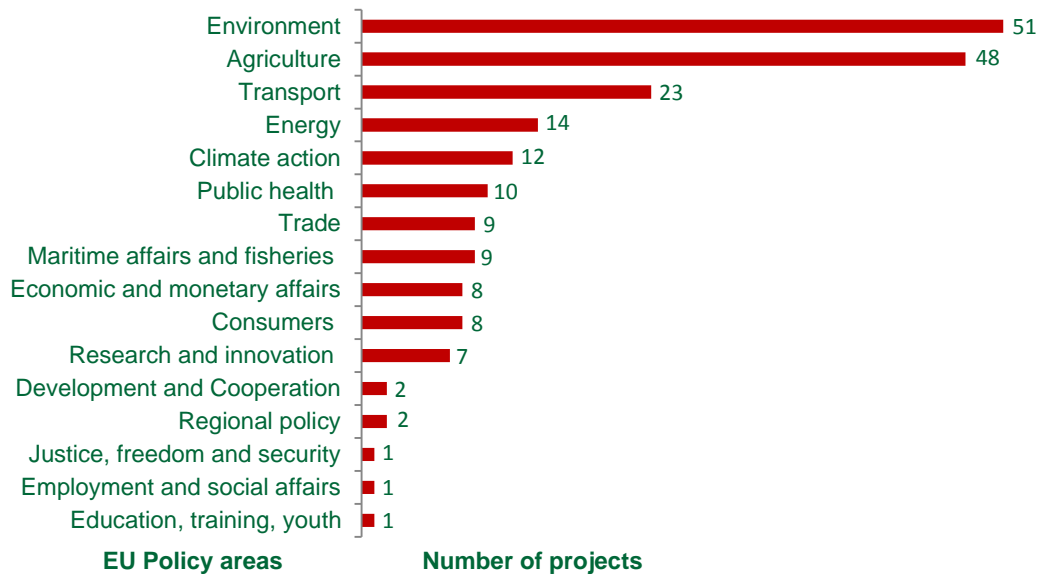


Chart 2: Coverage of policy areas not listed by the EU through projects funded in FP6 and 7 designing IA tools (multiple attributions possible)



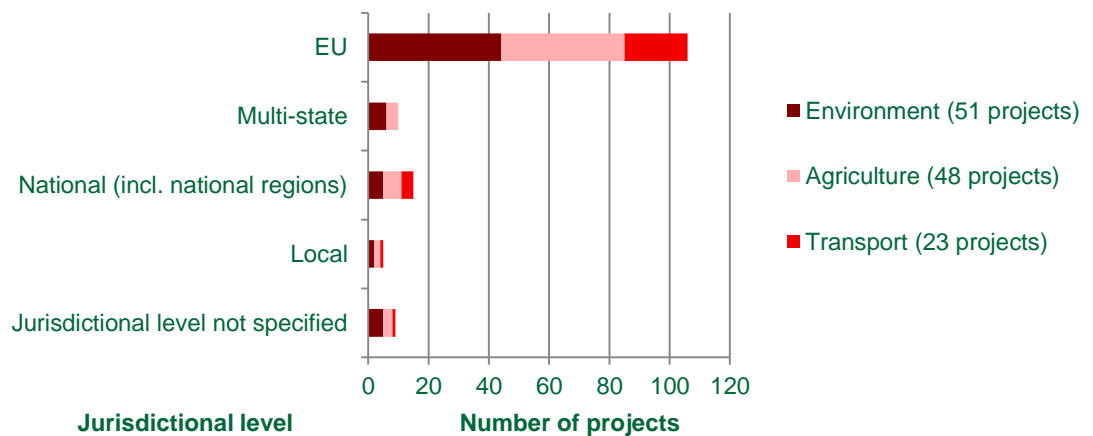
Table 1: EU policy areas not covered by FP6-7 funded projects designing IA tools (multiple attributions possible)

Audiovisual and media	Enlargement	Food safety	Institutional affairs
Budget	Enterprise	Foreign and security policy	Internal market
Competition	EU citizenship	Humanitarian aid	Multilingualism
Culture	External relations	Human rights	Sport
Customs	Fight against fraud	Information technology	Taxation

Jurisdictional levels

In environmental, agricultural and transport policies, the majority of projects designed tools for the European jurisdictional level only. The additional jurisdictional levels (national, subnational) were poorly covered.

Chart 3: Coverage of jurisdictional levels through projects funded in FP6 and 7 designing IA tools (multiple attributions possible)



Further, most tools did not allow the joint assessment of multiple levels, limiting the possibilities of assessing multi-level governance aspects and application options in the national IA systems of the member states.

Impact areas

Projects often related their tool(s) to corresponding impact areas: environmental policies with environmental impact areas in general, agricultural policies with “land use” and transport policies with “transport and the use of energy”.

In all three policy areas, social impact areas were poorly covered compared to the environmental and economic impact areas. First approaches for a comprehensive analysis towards sustainable development were taken in about 10% of the projects.

Chart 4: Coverage of impact European impact areas through projects funded in FP6 and 7 designing IA tools (multiple nominations possible)

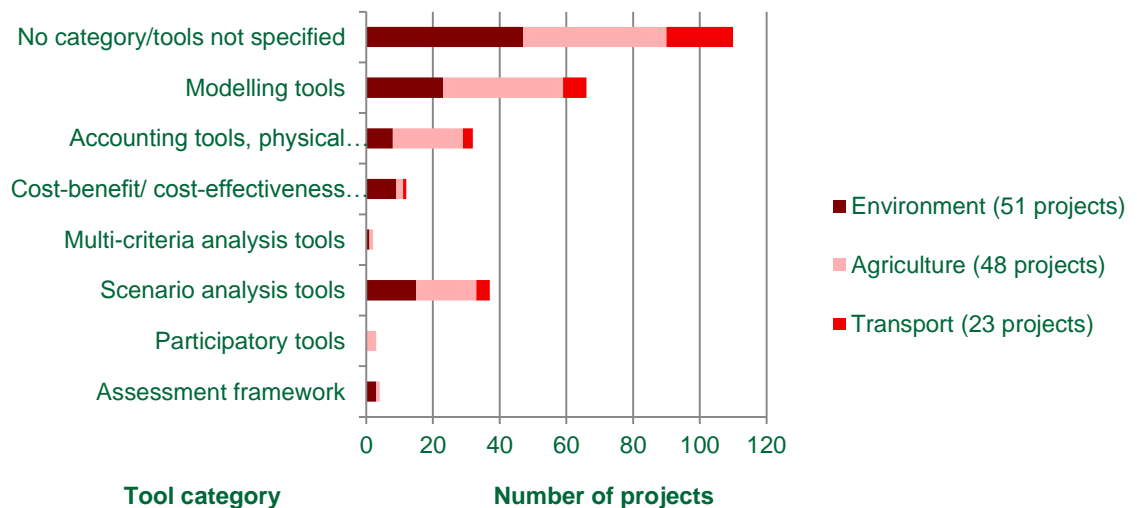


Tool categories

We categorized the tools designed in the projects according to established integrated assessment categories. We found that the majority of the projects designed quantitative tools, including models, accounting tools etc. and scenarios. Very few tools were participatory in nature.

Categorization of tools failed due to either missing categories to match with or limited information on the characteristics of the tools designed by the projects. These tools included specialized assessment frameworks, databases, decision support systems, web portals and maps.

Chart 5: Tool categories covered through projects funded in FP6 and 7 designing IA tools (multiple attributions possible)



Science Policy Interface within Impact Assessment

The notion of research specifically dedicated to supporting policy IA has only recently emerged with IA as a rather new instrument. The reasons for the comprehensive coverage of policy areas related to natural resources and particularly the dominance of agriculture, environment and transport might be threefold:

- (1) Natural resources with preservation and management account for 60% of the European budget,
- (2) Medium-term processes, as the Common Agricultural Policy, give researchers time to design scientifically robust tools,
- (3) An understanding of environment as having a close relation to sustainable development.

Many of the 20 policy areas not addressed by tools in our sample concern social and institutional issues where other methods such as qualitative analysis and consultation might be more common.

Though a well-balanced coverage of all three sustainability dimensions was often missing, sustainable development has partly been addressed in a single, integrated analytical frame. However, sophisticated tools that comparatively assess a multitude of impact areas may contain elements that reduce their adaptability and applicability to new policy issues and thus IA.

EU-funded research focused on tools linked to EU policies. Given the tendency of EU member states to gradually implement individual national IA procedures, the knowledge transfer between EU research and national policymakers seems to be more difficult. Tools supporting policy-making at specific jurisdictional levels limit their applicability at other levels.

The distribution of the IA tools across seven tool categories previously outlined in IA research illustrated the clear focus on quantitative tools. A participatory component of the tools was missing, though it could bring additional values into the assessments. A high number of the projects designed tools that did not fit into any of the defined categories or seemed to fit into several of them. A clear categorization specifically of policy IA tools is thus needed based on IA schemes and elements.

Despite targeting EU policies, the projects did not necessarily use the IA terminology established by the European Commission. A roof for a joint systemic language is needed to bridge the gap between the different terminology of tool suppliers and of IA practitioners (e.g. with policy and impact areas, IA steps, jurisdictional level). The LIAISE toolbox (under preparation) might be a useful step in this direction.

The main purpose of the **LIAISE Network of Excellence** is to identify and exploit opportunities to bridge the existing gap between the research and the policy community in the field of Impact Assessment, improving the use of IA tools in policy making. LIAISE combines the multi-disciplinary competence of a core group of European research institutes.

www.liaise-noe.eu

The Policy Brief Series presents the results of the work carried out in LIAISE to the policy world. It addresses topics of current concern and focuses on those aspects of the issue where the policymaker (and the public opinion) is seeking additional information.