

APRAISE - Assess Policy Interactions through Enhanced System Understanding

As explained in an earlier issue of JIQ, the FP7 project APRAISE (Assessment of Policy Impacts on Sustainability in Europe) aims to assist European policymakers in achieving environmental objectives under different circumstances by designing effective, efficient and efficacious policy mixes, which are socially acceptable and secure the competitiveness of Europe's economy.¹



APRAISE considers interlinkages of policies when they form a policy mix. An analysis of an individual policy might for instance show that the environmental policy is not desirable because of high economic costs. However, in combination with other policies, the environmental target could be achieved at lower economic costs and with higher social acceptance. On the other hand, policies may, when considered in combination with other policies, turn out to be counterproductive to other goals of society.

Definition of Efficacy, Effectiveness and Efficiency

In the APRAISE project, policies and policy mixes are assessed in terms of their efficacy, effectiveness and efficiency. Efficacy refers to a (theoretical) potential effect of policy instruments, assuming a specific context and based on common understanding of how instruments function. Contrary to the theoretically assumed effect of a policy instrument or mix of policy instruments, effectiveness refers to the actually observed outcome of a policy instrument or mix. With this distinction, APRAISE will be able to analyse how and why the effect of an actual policy (mix) deviates from the potential effect. This will increase policy makers' insights into whether and to what extent they would have to reduce their expectations of policy (mix) effects.

APRAISE aims at explaining the deviation between potential and actual policy effects by analysing the 'system' (e.g. market) within which policy instruments are implemented. Such a system analysis helps to understand how the eventual effect of policy instruments is influenced by policy interactions, inefficiencies in a system's value chain, insufficient supporting services and distortions in the system's enabling environment (e.g. insufficient capabilities, competence). With these explanations the common understanding of a policy's efficacy within different contexts can be improved.

In addition to the efficacy and effectiveness of policy instruments, APRAISE will also assess the efficiency of policy instruments by establishing a relation between the effect of a policy (mix) and the resources needed for policy (mix) implementation. The project currently considers three main approaches for assessing efficiency:

1. assuming efficiency, according to economic theory, as the situation where an effect has been achieved with lowest cost possible or where no larger effect could have been achieved given the costs;
2. ranking policy instruments according to benefit-to-cost ratios, which is, strictly, not an efficiency indicator according to economic theory (see definition under 1), but which nevertheless gives insight into how policy instrument effects relate to the resources spent; and
3. determining a ratio between effectiveness and efficacy, whereby a ratio of less than 1 implies that actually achieved effects are below (theoretical) potential effects, which could be an indicator of inefficiency in the policy making process (e.g. insufficient enabling environment, insufficient supporting services and blockages in the value chain addressed by the policy instruments analysed).

APRAISE will analyse the three efficiency approaches to see how informative these will be to policy makers.

Methodology for assessing policy interactions

As explained above, the efficacy, effectiveness and efficiency of policies do not only depend on the type of policy instruments chosen (market-based instruments, subsidy scheme, awareness campaigns, environment standards, etc.), but also on how and under what circumstances they are implemented. This would form the basis for, among others, understanding interaction of policy instruments. For assessing policy interactions, APRAISE has formulated four key assumptions as a starting point:

¹ See JIQ, October 2011, http://jiqweb.org/images/stories/mifiles/jiq_issues/2011oct.pdf; For further information about the APRAISE project, please visit: <http://apraise.org>

1. Policies originate from policy objectives and targets;
2. Policies are implemented through policy instruments;
3. Policy instruments interact through stakeholder behaviour; and
4. For an understanding of how this policy interaction takes place we need to understand the systems within which stakeholders operate.

As these assumptions both reflect a top-down (working from a policy objectives/targets) and bottom-up direction (understanding stakeholder system to understand policy interactions), the challenge is to formulate a methodology that can cover both directions in light of the project's resources.

The approach which the APRAISE team has been working on contains four main stages or working modules:

1. Description of a system for policy instruments and their interaction;
2. Analysis of policy interactions within the system identified based on policy efficacy information and using policy evaluation techniques;
3. Analysis of actually achieved policy effects within the systems identified, including consultation of system stakeholders; and
4. Evaluation of findings based on criteria for effectiveness, efficacy and efficiency.

The description of a system for policy instruments and their interaction starts with a survey of relevant EU policy areas (Energy & Climate, Water, Waste, Air and Bio-diversity) and corresponding policy instruments (e.g. feed in tariffs, Natura 2000, bird migration regulations). For these policy areas relevant stakeholder groups/areas can be identified and it can

then be analysed which of the policy instruments are likely to interact through these stakeholders. This results in a so-called policy interaction heat map (see Figure 1 for an example).

Based on the policy interaction heat map, a further detailed description of the systems within which the stakeholders operate will be provided by describing the general conditions under which addressees and stakeholders of identified policy instruments operate (economic, institutional, environmental, social and other factors forming the system contexts).

For the latter description, a 'market mapping' technique can be used, which describes the actors in a system (e.g. producers, consumers, retailers, product designers, feedstock providers, etc., in a value chain) and how they interact, the general services that support these actors in their operations (e.g. finance, technical support, legal advice, etc.) and the enabling environment for the system (e.g. context description, existing policies, cultural aspects, lobbying practice, government structures, enforcement regimes, operation of governments, etc.).

Market mapping enables an understanding of how stakeholders operate in their system and why and how a change in the policy environment would affect the behaviour of the stakeholders (see Figure 2). This would help assess policy interaction as the map describes which policy instruments are relevant for a stakeholder and *whether* the behaviour of the stakeholder and other stakeholders could change because of policy interactions.

In order to understand *how* the policy instruments might interact through the stakeholders within the identified system, APRAISE will analyse the potential



Figure 1. Heat map example Stakeholder categories (vertical axis) and policy instruments (horizontal axis) as presented at APRAISE workshop in Groningen (red cells mean that within, e.g., Forestry and logging (A2) policy instruments 1, 7, 8, and 12 are likely to interact through the stakeholders within this area).

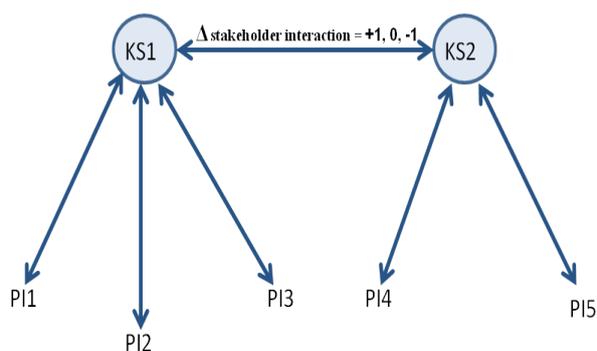


Figure 2. Illustration of possible policy instrument interaction. This diagram shows how the changed behaviour of stakeholder due to policy interaction leads to a change in behaviour of the other stakeholder, and the other way round. As a result, the incentive created by, e.g., Pi5 has an impact on the behaviour of stakeholder 1 through the behaviour of stakeholder 2. Therefore, an indirect policy interaction could be seen between, e.g., Pi 5 and Pi 2.

impacts of identified policy instruments: what incentives they create and how strong these are (based on knowledge of policy instruments' efficacy), how these incentives interact with stakeholders' individual incentives, how a changing behaviour of one group of stakeholders affects the behaviour of other stakeholder groups, and what this says about policy instrument interactions.

The insights thus gained are subsequently compared to observed effectiveness of the (mix) of policy instruments in a number of case study situations across the range of policy areas mentioned above, as well through stakeholder consultation.

Finally, based on the above project findings, the consortium will draw conclusions on the potential effects of policy instruments, their efficiency within different contexts and how policy interactions affects these potential effects. These insights will improve the common understanding of the working and effects of policy instruments, either individually applied and in policy mixes, which will improve the common understanding of policy instruments' efficacy (see Figure 3).

This method was discussed within the APRAISE team and with the project's Scientific Advisory Board at a workshop held in Groningen, the Netherlands, on 2-3 July of this year. Based on these discussions and consultations, the methodology will be finalised in a detailed step-wise approach. This approach will subsequently be applied by the consortium for a range of case studies for policy interactions across eight EU Member States. In a future JIQ issue, the case study results will be presented.

For further information, please contact:
 Vlasis Oikonomou
 Joint Implementation Network
 Laan Corpus den Hoorn 300
 9728 JT Groningen
 The Netherlands
 mobile: 00 31 (0) 64 53 80712
 landline: +31 (0) 50 524 8430
 fax: +31 (0) 50 789 0019
 e-mail: vlasis@jiqweb.org
 Internet: <http://www.jiqweb.org>

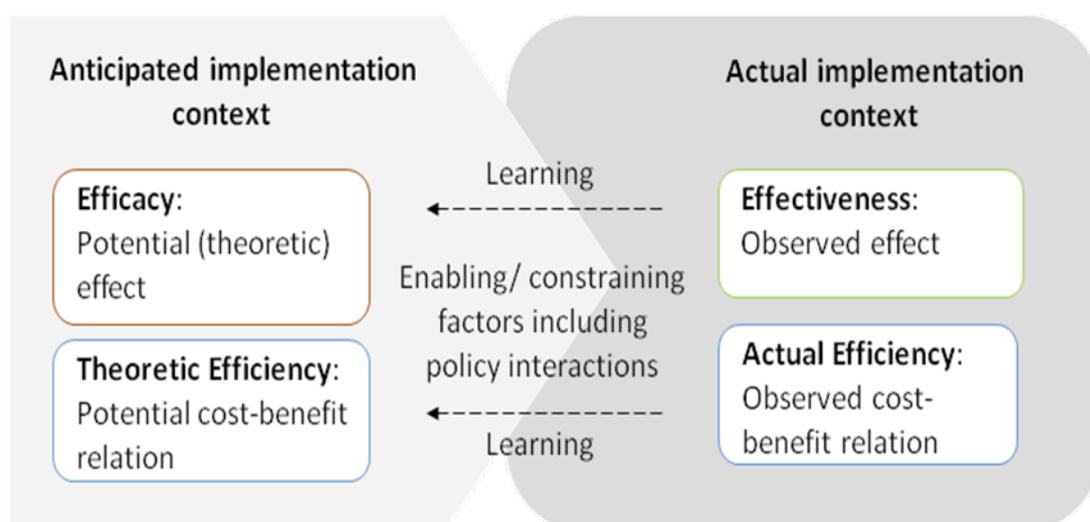


Figure 3. Interaction between observed effectiveness and potential effects of policies and/or policy mixes (efficacy)

This diagram shows the interaction between efficacy, effectiveness and efficiency in APRAISE. For example, efficacy information contributes to the consortium's judgment of policy instruments' incentive structures within the systems identified and overall finding on policy instruments' actually observed effectiveness can be fed into common understanding of efficacy.