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*POLICYMIX - Assessing the role of economic instruments in policy mixes for biodiversity conservation and ecosystem services provision*



## POLICYMIX WP5 Best practice guidelines for assessing social impacts and legitimacy of conservation policy instruments

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**About POLICYMIX.** POLICYMIX focuses on the role of economic instruments for biodiversity conservation and ecosystem services provided by forest ecosystems. POLICYMIX evaluates the cost-effectiveness and benefits of a range of economic versus regulatory instruments in a variety of European and Latin American case studies.

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## 1. Introduction

The POLICYMIX guidelines for assessing social impacts and legitimacy of conservation policy instruments are part of a set of guidelines for examining the role of economic instruments in policy mixes for biodiversity conservation and ecosystem services provision. Other guidelines produced under the POLICYMIX project cover ecological effectiveness, valuation and institutions. Case studies carried out at national and local level in several countries have researched the issues addressed in this set of guidelines, providing an opportunity to test the guidelines and to generate concrete examples of their application.

This brief summarises the main elements of the guidelines for social impacts and legitimacy, bringing in examples from the case studies to illustrate particular questions<sup>1</sup>. The emphasis of these guidelines is on setting out a framework of key concepts and questions that are relevant to conservation policy instruments, rather than on giving a detailed account of data collection methods. Some of these methods, for example household surveys, are common to a number of the guidelines and extensive generic guidance exists<sup>2</sup>.

### 1.1 Scope

These guidelines make the achievement or enhancement of legitimacy for a policy instrument a focal point. They consider fairness in how these outcomes are reached (procedural justice in the process of decision-making on the design and implementation of the policy instrument), and on the fairness of the outcomes in terms of the distribution of the benefits and costs among different stakeholders.

Fairness of the process and the outcome can be judged on the basis of external criteria for procedural and distributive justice but also by examining how the people affected perceive the extent of fairness according to their own criteria. This can be called sense of justice and is linked to legitimacy (Svarstad *et al.* 2011). The assessment of social impacts and legitimacy of policy

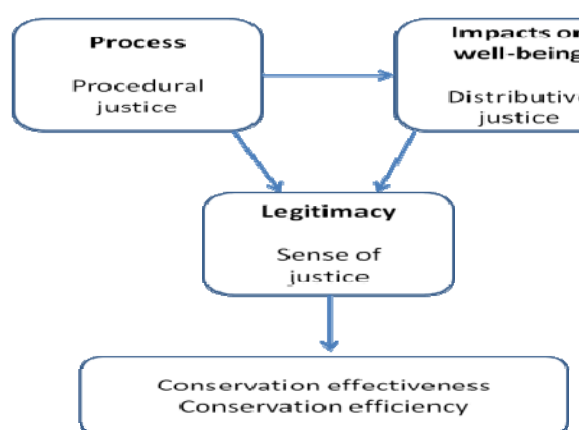


Figure 1. Framework for analysis

instruments therefore has three main elements set out in **Figure 1**. These are linked in turn to conservation effectiveness and conservation efficiency, the main issue being whether there is a tradeoff or synergy between these and enhanced legitimacy.

The framework set out in the guidelines can be applied at a national scale depending on the policy instrument but is perhaps more relevant to assessing social impacts at the local level. The guidelines are intended to guide both ex ante and ex post analysis of social impacts.

<sup>1</sup> The full guidelines are available at <http://policymix.nina.no>

<sup>2</sup> For example: [http://unstats.un.org/unsd/hhsurveys/pdf/Household\\_surveys.pdf](http://unstats.un.org/unsd/hhsurveys/pdf/Household_surveys.pdf)



## **2. Key issues**

### **2.1 Which groups?**

A stakeholder analysis is an important first step to identify and characterise stakeholder groups who will be affected directly and indirectly by the policy instrument and to identify key fairness concerns related to participation in decision-making processes and distribution of the costs and benefits. This will help to determine which stakeholder grouping categories (income groups, ethnic groups, gender etc) it is important to study and whether it is appropriate to define a target social group that will be given particular attention in the data collection and analysis.

### **2.2 Which impacts?**

In order to narrow down the list of social impacts and data requirements, an iterative process is needed of reviewing preliminary information, developing hypotheses about the impacts and the pathways by which they might occur (that is the sequence of events and combination of factors that would lead to the impacts) and identifying the information that needs to be collected to assess them.

**Activities→Outputs→Outcomes→Impacts**

### **2.3 How to determine attribution**

To assess impacts it is not sufficient to only observe changes in social indicators following a policy intervention. The case has to be made that these changes are the result of the policy instrument as opposed to other factors. Attribution can be established in a number of ways depending on the situation:

- Simulation of a ‘without policy instrument’ scenario to compare with the policy scenario (see Box 2 ).
- Through comparison of a treatment group that is subject to the policy intervention with a control group that is not. The challenge is to ensure that the two groups are similar in key characteristics and only differ in their exposure to the policy intervention (See Box 3).
- Eliciting local people’s perceptions of the impact of the policy instrument.

## **Box 2: Comparison of a treatment group with a matched control group – example from Mexico**

**Attribution:** An evaluation of Mexico's Payment for Hydrological Services Program (PSAH) adopted a control group approach to examine environmental and social impacts (Alix-Garcia *et al.* 2012). A stratified random sampling strategy was applied in four regions of the country. Within each region, three to four Landsat footprints were randomly selected. Within these footprint areas all the successful applicants to the PSAH in 2008 were matched with applicants who were unsuccessful. By matching the 'treatment group' with people who had shown a desire to participate in the scheme, the study addresses the problem of self-selection bias. Matching was done on the basis of covariates such as distance to the nearest locality with population greater than 5,000, elevation, slope, the area of the property to be enrolled, the density of roads within a 50km buffer, the average local poverty level in 2005 and the percentage of forest submitted to the scheme in different types of forest. The sample was further stratified within common property communities with random selection of five households with full land use rights and voting power and five without.

**Wellbeing indicators:** The main social indicator compared was household asset ownership, such as a cell phone, computer, refrigerator, TV, or number of rooms in the house. In order to have a baseline, the survey of treatment group and control group included recall questions about assets and land use in 2007, the year before entry to the scheme. Differences over time between 2007 and 2011 in asset ownership between the treatment group and the control group were compared. Households living in common property communities are poorer than private property households and so were analysed separately.

**Findings:** Slight wealth increases for payments for environmental services (PES) participants were found relative to the control group but not statistically significant. The conclusion drawn was that PES is not making households worse off but is not making them significantly better off either in terms of asset growth, even though the payments are significant compared to income, (12 per cent of annual income for private landowners). It is suggested that this is because the transaction costs and forest maintenance costs of participating are so high. The median ratio of the cost of additional labour (paid and unpaid) in beneficiary communities and private households to the amount of payment is 0.84 and 1.1 respectively.



### **Box 3: Simulation of the ‘without policy instrument’ scenario – example from Portugal coarse grain study**

The national level analysis of ecological fiscal transfers (EFT) in Portugal (Santos *et al.* 2012) employed a simulation approach to examine the effect of the new instrument on fund allocation to municipalities. The amounts transferred to each municipality in 2008 and 2009 under the new system of allocation criteria were compared to the estimated transfers if the former criteria had still been in place, while keeping constant the total amount transferred nationally. This enabled an identification of the municipalities that had gained and lost with the introduction of the new ecological criteria. It revealed that over 50 per cent of municipalities had been made worse off by the introduction of the EFT. Analysis of the gains and losses for a sample of municipalities with over 70 per cent of their territory under protection showed that only one of these was a ‘winner’ with the new system.

## **2.4 Assessing social impacts and legitimacy in a policy mix**

A policy mix is ‘a combination of policy instruments, which have evolved to influence the quantity and quality of biodiversity conservation and ecosystem service provision in public and private sectors’ (Ring and Schröter-Schlaak 2011). The social impacts of a policy instrument depend on the elements that make up its design, in turn a reflection of the process of design and implementation, as well as the policy and institutional context into which it is introduced. Measures such as targeting of specific groups, capacity building for certain groups, or promotion of banking and credit services are often introduced as part of the policy instrument in an effort to reduce adverse social impacts. The need to take these measures may be a reflection of the inadequacy or conflicting nature of policies in other sectors, agricultural policy or financial sector policies.

### **Box 4: Interaction with other policy instruments – example from fine grain study, Germany**

The POLICYMIX study of incentives for afforestation in West Saxony used a choice experiment survey to examine the various factors that would be important to farmers for their participation beyond the size of the economic incentive (Lienhoop *et al.* 2013). It was discovered that an important factor is to provide the opportunity for farmers to revert to agriculture at a later stage. However, this would not be possible under current law which prohibits deforestation. Designing the scheme to broaden participation by introducing this flexibility would require an adjustment of the forest law.

### 3. Procedural justice

In formal legal terms, the fairness of the process of decision-making can be assessed by examining whether key procedural rights expressed in international and regional environmental and human rights law are upheld. These include effective participation in decision-making, access to information and access to justice through procedures such as grievance mechanisms for considering the public's complaints about decisions (Siegele 2008).

Some aspects of procedural justice are not enshrined in law but are 'soft' norms of good practice aimed at promoting a democratic process, within supporting legal frameworks, or sometimes to counteract unsupportive legal frameworks. A complementary approach to legal analysis is to examine the extent and nature of the participation of different stakeholders in the decision-making process and compare with typologies of participation such as that of Pretty 1995 or Le Moigne 1994. In both typologies, the key issue is the extent to which the social target groups can have an influence on decisions as opposed to being merely informed of the decision. The emphasis on a participation typology allows for assessment of the effectiveness of participation and suggests a number of indicators for this e.g. the extent of interaction between local stakeholders and managing institutions, or the extent to which local stakeholders define problems and information-gathering processes.

#### Box 5: Examining procedural justice in the design of ecological fiscal transfers, Brazil

The POLICYMIX fine grain case study of ecological fiscal transfers in Mato Grosso, Brazil used semi-structured interviews with key informants to examine the process of introduction of the policy instrument in the state (May *et al.* 2013). The interviews revealed that the instrument was not a demand of the local population and had been introduced in a highly top-down process with little consultation or provision of information to the municipalities. As a result, municipal officials had very little knowledge about the amounts of revenue generated by the ICMS-E. Within the two municipalities studied, differences were found in the extent of consultation on intra-municipal allocation of the funds. In Juína, there have been negotiations with the National Indigenous Peoples' Foundation (FUNAI) on behalf of the indigenous groups to establish a permanent arrangement for transferring part of the ICMS-E funds to these groups. In Cotriguaçu there has been no attempt to discuss allocation to the indigenous communities but this may be part of an emerging 'Green Municipality' strategy.

### 4. Impacts on wellbeing and distribution

#### 4.1 Who participates in a policy incentive scheme?



This is an intermediate indicator of distributive justice as the impacts on wellbeing of different groups and the social target group (if one has been selected for the study) will reflect to some extent the ability of different groups to participate in a scheme. This applies particularly to PES schemes, or subsidies for afforestation, or certification. This often depends on the design of the scheme, notably the rules which determine the activities or type of property that are eligible and the types of landowner to be prioritised, and the effort that is made to incorporate measures to overcome barriers to participation, for example provision of technical assistance.

#### **Box 5: Tenure insecurity as a barrier to participation in PES in Costa Rica**

The POLICYMIX case study in the Osa peninsula examined barriers to participation in the national PES scheme, in particular tenure insecurity, and how priority-setting criteria for targeting could incorporate tenure security and other social criteria (Barton *et al.* 2013). To qualify for the PES scheme landowners need to have a property title registered in the National Register and consistent with the national property cadastre. Inconsistencies in land titling can affect eligibility for the PES and delay the processing of applications. Since 2009, owners with possession rights rather than full land title could be eligible for PES but demonstration of these rights is laborious. Through interviews with the local population and with key informants in government agencies such as FONAFIFO, the administrator of the PES scheme and the national land register, a set of cadastral inconsistencies that would make properties ineligible for the scheme were identified and mapped. The resulting map showed that a large part of the study area would have a score of zero in the priority ranking because of the cadastral inconsistency. The study makes some proposals to broaden participation, in particular provision of soft credit to small/poor owners with possession rights so that they can formalise their land registration, plus the introduction of social criteria in priority-setting such as ‘owner lives on-farm’ and ‘owner family recipient of means tested social welfare support’.

#### **4.2. Impact on wellbeing of participants**

Being able to take part in an incentive scheme does not necessarily translate into deriving net positive benefits. It is therefore important to assess both the extent of participation and the impacts for those who participate.

The income components of wellbeing are clearly important. For example, the effect on income of the cash payment of the national PES scheme in Costa Rica in remote rural areas, particularly indigenous areas, is considered to be its most significant positive social impact (Porrás *et al.* 2012). However, as well as changes in income streams related to the policy instrument, it is necessary to examine changes in costs and risks as these may offset the benefits (see Box 2 on the implementation costs for landowners of PES in Mexico). It is important to examine less tangible impacts on non-income aspects of wellbeing, such as health, education, social organisation and sense of empowerment.

### 4.3. What is the impact on the wellbeing of non-participants?

Individuals or groups that are not participating in the instrument may also be affected negatively or positively. For example there may be a reduction in agricultural employment if land is set aside for conservation, but there may also be increases in tourism-related employment. The nature and relevance of the impacts on non-participants will depend on the policy instrument. Ecological fiscal transfers affect all municipalities in a jurisdiction through changes in municipal revenue, not just the ones with protected areas (See Box 3). Other policy instruments may have more localised effects. In Costa Rica, for example, a number of studies on the national PES scheme have shown that the payments for reforestation have had a modest positive impact on employment in the wood products supply chain, but studies on payments for conservation find that farms participating in PES have fewer workers than those that do not, suggesting a negative impact on employment (Porrás *et al.* 2012).

### 4.4. Are the impacts fair?

Establishing that some groups have seen an improvement in their income and non-income aspects of wellbeing is important information particularly where this is found to be the case for a designated social target group. However, this does not necessarily indicate that the outcome is fair, and further questions and analysis are needed. Determining fairness is inherently subjective and there is no single set of criteria that can be applied to all situations. If a target social group has been selected for the study, the criteria for fairness could be ‘do no harm’ but perhaps more likely is an expectation that the members of this group should be made better off by the policy instrument. If the focus is on the distribution of costs and benefits between a number of groups, several criteria could be considered, depending on the context:

- *Equality*: Equal shares of costs or benefits to groups or individuals regardless of their characteristics.
- *Ability to pay/need*: Groups/individuals with higher income should take a higher share of the costs. Conversely, those with lower income or greater *need* should receive a higher share of the benefits.
- *Proportionality*<sup>3</sup>: Groups/individuals that contribute more to biodiversity loss (improvement) should take a higher share of the costs (benefits).

The impact results on wellbeing for different groups can be assessed against these different criteria for distributive justice but results will depend heavily on the criteria chosen. Comparing results generated using different criteria will be important. Incorporating the non-quantitative impacts on non-income components of wellbeing in such assessment is challenging. For this reason, a useful approach which can complement assessment against standard criteria is to ask people directly about their degree of satisfaction with the scheme or their perceptions of the fairness of the instrument in

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<sup>3</sup> In the sociology and social psychology literature this is often referred to as equity e.g. (Vermunt and Törnblom 2007) but to avoid confusion with broader uses of the term equity we use proportionality instead.

**Box 7: Eliciting perceptions of fairness - example from the fine grain study of afforestation, West Saxony, Germany**

The case study of afforestation in West Saxony involved a choice experiment survey to examine farmers' preferences for different types of contract feature (Lienhoop *et al.* 2013). Follow-up qualitative interviews were conducted with 15 of these farmers to explore their perceptions of the fairness of the incentive scheme. It was found that the scheme is considered fair because everyone can apply, even if they have no forestry experience. However, a high proportion of the farms (72 per cent) rent additional land, and farmers who rent land have no decision-making power to plant forest on rented land. A minority of participants indicated that the costs or effort of planting exceed the benefits of the scheme, while a number of farmers felt that there was inter-generation unfairness as the costs would be immediate but the positive effects of forests would occur far into the future.

terms of the outcomes, for example the benefits they receive from the instrument compared to the costs they incur or compared to what other groups receive (Box 7).

**5. Legitimacy and sense of justice**

The way that people evaluate the fairness and legitimacy processes and the outcome may be

**Box 8: Capturing sense of justice with narrative analysis – example from fine grain study, Norway**

The Trillemarka –Rollagsfjell nature reserve, in Buskerud County, Norway was associated with an intense conflict when it was established in 2008 (Guttulsrød, M. 2013). Later on in an effort to address the conflict, substantial funds were offered by the central government to the municipalities and forest owners involved. To examine the social impact and legitimacy of the nature reserve establishment and subsequent compensation mechanisms, a narrative analysis was utilised. Local forest owners were interviewed and asked to narrate their experience of the process and establishment of the nature reserve. They presented a narrative of marginalisation regarding the conservation and establishment of the nature reserve but when asked how they perceive their situation today, they presented a narrative of pragmatic adjustment.

different from the ways these look when assessed with external criteria. In order to evaluate legitimacy in a way that is relevant from the perspective of local people and other stakeholders, internal-based evaluation criteria are needed to capture people's 'sense of justice'. Asking people directly about their perceptions of fairness in a questionnaire survey goes part of the way to answer this but still leaves an element of researcher-defined criteria in the framing of the question. Qualitative methods such as narrative analysis give more freedom to the respondent to narrate their experience of a policy intervention without the restrictions or framing effects of pre-defined questions (Box 8).

## 6. Exploring linkages

Improving understanding of how the degree of procedural justice and distributive justice affect the legitimacy of the policy instrument and in turn its effectiveness and efficiency is an important but challenging part of the assessment. This can show the extent of the tradeoffs that may be involved if policy instruments are to meet both social goals and environmental goals but can also help to identify improvements that can be made in design to improve both distributional impacts and environmental impacts. The national PES scheme in Costa Rica, for example, is required by law to promote employment generation and to raise the living standards of the rural population through effective involvement in forest activities, making it important to examine whether it can both provide environmental services and be equitable (Porrás *et al.* 2012).

Key questions concern the link between procedural justice and distributive justice, that is, whether fair processes lead to fair outcomes, and whether investing in making the decision-making process fairer or in overcoming barriers to participation for disadvantaged groups will pay off in terms of environmental effectiveness or efficiency. Box 9 shows an example from Mexico of the distributional impact of different targeting strategies for PES. Box 10 gives an example from the Policymix case study of the forest conservation PES scheme in Finland of how forest owners' perceptions of the social impacts of PES and of the importance of fairness in contracting are linked to conservation effectiveness and efficiency through effects on participation rates and the amount of compensation required.

### Box 9: Tradeoffs and win-wins in PES targeting – example from Mexico

The researchers evaluating the Mexican payments for hydrological services programme (Alix-García *et al.* 2012, see also Box 2) used their results to examine the tradeoffs involved in different targeting strategies. They found that targeting payments to areas closer to large localities would be more environmentally effective as it would be concentrating the incentive on areas that are at a higher risk of deforestation, but the effect would be to reduce poverty alleviation. Similarly, targeting wealthier municipalities would increase effectiveness but the benefits would be captured by the relatively wealthy. They did identify a potential win-win in that targeting common property communities, who tend to be poorer than private landowners, would result in both greater avoided deforestation and more payments received by the poor.

**Box 10: Links between perceptions of fairness, actual and potential participation rates and required compensation - example from fine grain study, Finland**

The Policymix case study in South West Finland examined the motivations for PES contracting. Forest owners were asked about their perceptions of ecological, economic, and distributional impacts of a conservation contract and for their views on contract terms including the fairness of the contracting process and equal opportunity to contract. They were also asked to indicate how much the payment for conserving habitat should be in relation to their estimate of income loss per hectare with conservation. Responses were received from 86 contracted forest owners and 101 forest owners who have valuable forests but have not yet made a conservation contract. Perceptions that the contract would increase the welfare of local such neighbours, other forest owners and family were found to be positively related with likelihood to already have a PES contract and willingness to make a new contract (Primmer et al. 2013). Perceived positive welfare impacts to family were found to reduce the payment requests that forest owners stated for a new PES contract (Tainio et al. Manuscript).

The results from this survey therefore indicate some synergy between perceived positive social impacts and effectiveness in terms of participation rates and efficiency in terms of required compensation. However, results related to other fairness aspects were less conclusive. An emphasis on equal opportunities to contract was found to be a strong predictor of high payment requests while perceived importance of the fairness of the contracting process was associated with increased (but not statistically significant) likelihood to choose a low payment request (*ibid*).

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