

Title

The Social Pre-Conditions Necessary for Successful Payments for Environmental Services Programs

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Introduction

Payments for Environmental Services (PES) programs are increasingly embraced by donors as a more efficient and cost-effective approach to conservation than previous community-based conservation efforts (Wunder, 2006a; Hope, et al., 2005a). They are attractive to donors and multi-lateral agencies because of their claim of cost-efficiency which fits in nicely with the dominant paradigms of neo-liberalism and financial sustainability that now dominate conservation and development agendas. However successful PES programs require the right environment in order to work – community capacity, appropriate local institutions and social capital. The attractiveness of PES is its purely economical and simple nature but to make it work, messy political and social actions must first be undertaken. The three necessary pre-conditions form a positive feedback loop. If present at the beginning, they greatly increase the chance of a PES scheme succeeding and the PES scheme in turn, helps strengthen these elements. The creation of capacity, institutions and social capital is a long and costly process which is not always guaranteed to succeed but it remains an essential and often overlooked phase

of any conservation or development program. Donors and multilateral organisations must keep this in mind if they wish the PES approach to succeed.

This paper, through a review of selected literature, outlines and discusses the early stages of PES programs and the necessary pre-conditions for PES to succeed – community capacity, appropriate local institutions and social capital. It explains what each condition is and why it is necessary for PES. It then provides suggestions on how these three elements can be created or strengthened in a community preparing for an implementation of a PES program. The focus is on developing Third World communities since this is where the majority of PES programs are currently implemented.

What is PES?

A Payments for Environmental Services program is a voluntary transaction where an environmental service (or a land that provides it) is bought by at least one buyer from at least one seller in order to secure the provision of that environmental service (Wunder, 2006a). Three years ago, there were more than 300 PES programs inventoried in the world, most of them in their early phase of existence (Mayrand & Paquin, 2004). There are four typical environmental services covered by PES - carbon sequestration and storage, biodiversity protection, watershed (catchment) protection and landscape beauty (Wunder, 2006a). PES programs can either be public (where a government entity acts as the sole or primary purchaser of a specified environmental service) or private (where both buyers and sellers are companies, non-government organisations, farmers' associations, cooperatives or private individuals). Private programs are typically local whereas public programs usually exist on a regional or national level (UNECE, 2006).

PES programs were designed for conservation, however it was quickly noted that they could have an impact on poverty reduction. Equity considerations are now written into most PES programs as necessary elements for success, creating an underlying tension between efficiency and equity. There are three approaches to PES in the literature (summarised in the table below) which lead to different actions and assumptions. This paper argues that the three essential pre-conditions (community capacity, appropriate local-level institutions and social capital) are necessary regardless of which approach one deems to be true however their mere presence is most likely to lead beyond the Conservation approach into the NRM or Empowerment approach, thus making PES a process of social and political change.

Table 1: Three Approaches to PES		
<i>Approach</i>	<i>Justification</i>	<i>Action</i>
Conservation	PES is only a conservation tool. Adding explicitly the objective of community involvement for poverty reduction will impede efficient market functioning and reduce conservation benefits for all	ADOPT existing and developing Payments/Markets for ecosystem services (PES/MES) programs if they have secure rights to natural resources at a significant scale and quality, as well as the technical and entrepreneurial capacities to gain successful entry into these markets
Natural Resource Management	PES is a tool for poverty reduction and sustainable natural resource management, but community involvement requires addressing the market constraints that they face.	ADAPT communities through capacity building so that they can enter into those programs. Complementarily, seek to develop/shape/tailor PES/MES programs so that they take into account communities conditions and concerns

Empowerment	CES (Compensation for Ecosystem Services) is a tool to empower communities governance over territories they inhabit and control, while ensuring sustainable livelihoods and ecosystem services for themselves and for others.	EXPLORE alternative scenarios and complementary avenues until a CES strategy emerges that is contextually embedded and furthers community-defined goals
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Source: Rosa, 2005.

PES Preconditions and Process

Many experts writing on PES specify social and economical factors necessary for PES programs to succeed. Due to its focus, this paper will look at the social factors and not deal with other necessities such as secure land tenure (which is a political factor) or readily identifiable environmental services. Among the social factors, capacity, appropriate institutions and social capital are most often highlighted (Rosa, 2005; Landell-Mills and Porras 2002; Mayrand & Paquin, 2004).

Before a PES program comes into existence a scoping, or pre-negotiation phase is necessary to carry out a stakeholder and institutional analysis to determine PES feasibility (Hope et al., 2005b). This analysis would also be the building block for later efforts to build institutional capacity. In their instructive manual on setting up PES programs, Smith, et al. (2006) identify four types of stakeholders: The beneficiaries of environmental services (buyers - those who pay), the providers (sellers - those who are paid to for conservation actions), intermediaries (who broker links between buyers and sellers, often act as administrators of the program and could be local non-government organisations, government agencies or community groups) and specialists (who provide information and assessment). Next, in the negotiation phase, these stakeholders come together to form an agreement on PES. Smith, et al. (2006) provide guidelines on how

such negotiations should look. They suggest the use of forums which are designed to build a shared vision through an integrative rather than distributive negotiation process, the use of which can enhance stakeholder capabilities. Sayer (2005) mentions several examples of useful techniques developed in the participatory rural appraisal literature such as participatory mapping, historical trends analysis and participatory modelling. The use of such participatory techniques often provides stakeholders with a greater capacity to understand the environmental problems they face and potential solutions to them.

These negotiations are an essential part of PES because all around the world, rural communities and development advisors have expressed fundamental concerns about the establishment of markets for natural resources, particularly about the prospects that the truly poor will not accrue benefits or may even become dispossessed from current resource tenure and access rights. Such concerns fuel a lack of trust which prevents PES from being established (Waage, 2006).

Community Capacity

Capacity is a rather general term describing the specific knowledge and abilities people need to have in order to fulfil a given task. Experts on PES all highlight the need for capacity building as a key accompanying strategy but note that it is the most often neglected aspect of existing PES programs (Mayrand & Paquin, 2004; Porras, et al., 2003).

The capacities required in each PES will depend on existing abilities and knowledge and the specifics of each PES program. In many Third World communities, previous efforts at community-based conservation, such as integrated conservation and development programs (ICDPs) broke new ground by creating new institutional models, establishing public-private partnerships and cementing a central role for local communities and indigenous groups in protected area and conservation activities. ICDPs have been criticised for failing to achieve their dual goals of conservation and development (PES programs are often compared to ICDPs and judged as more effective by their advocates) but the efforts of ICDPs at building capacity and providing training, education and awareness campaigns have often been their most successful aspects (Mackinnon, 2001). As donors turn from ICDPs and embrace PES, the groundwork in terms of capacity building at a local level has been achieved in many places and PES can benefit from it. For instance, the Costa Rican PES program started in 1995 and was the result of institutional and capacity building that was initiated decades previously and which resulted in an institutional framework, with a solid legal, organisational and social base (Porras, et al., 2003). A thorough stakeholder and institutional analysis should identify previous successes (and failures) of capacity building.

Most advocates of capacity building within PES use the term to mean education about the program itself. At a most basic level, the sellers of environmental services need to find out how much buyers are willing to pay while buyers need to understand the value that the environmental service in question provides. Education is thought to be crucial to remove any prejudices or misunderstandings against the PES idea (UNECE, 1992; Hope, et al., 2005a). This seemingly logical step has been absent in a number of large-scale PES

schemes. In their evaluation of Mexico's national PES program Alix-Garcia et al. (2005) found that participants who received payments for watershed services were aware of the links between cities receiving hydrological benefits provided through forest conservation of their lands however they did not understand that payments they received were as compensation for forest conservation. This lack of knowledge was a result of the PES scheme having a short promotion period of three months and not being well communicated to its supposed beneficiaries.

A strong supporter of PES, the World Bank, has created a training course called Market Creation for Biodiversity in order to train economists in developing countries to “build capacity, develop skills in using valuation, harnessing markets and capturing payments to conserve and sustainably use biodiversity, earn revenues and help the poor maintain their livelihoods” (Bojö & Deeks, 2004). It is interesting to note from this description that PES has adopted the dual goal of conservation and poverty eradication (echoing the Natural Resource Management and Empowerment approaches described in Table 1), the very thing which the predecessor of PES, the ICDP approach has been criticised for.

While the type of capacity described above might also be called promotion rather than capacity building, other forms of capacity are also necessary. In order for PES to work, the local government agencies and non-government organisations need to know how to administer what is essentially a financially complex scheme (UNECE, 2006). The sellers need to understand how the scheme works and have basic knowledge of their obligations and benefits before entering into a contract – this may not be easy in areas with high

illiteracy and low education. Training for communities which receive PES funds in their managements is also advisable (Waage, 2006). In public programs, government entities must aptly manage funds earmarked for PES while in private programs, government need to concern itself only with enabling policies and laws. The administrators of the program, whether public or private need training in conducting baseline studies, preparing monitoring reports, and a thorough understanding of the relevant issues, including best practices for the environmental service in question (Waage, 2006). If the PES program follows the Conservation approach, then capacity building would include providing information to the buyers and sellers and imbuing an existing organisation with powers to administer the scheme (i.e. process contracts, collect and appropriately distribute money, organise periodic assessments of the environmental conditions). In the NRM approach, more extensive stakeholder consultation would take place and the scheme would be changed according to stakeholder preferences. For instance, stakeholders may want to forgo cash payments in exchange for roads, better schools or other in-kind exchanges. To find out, special sessions must be conducted, exposing stakeholders to public forums or PRA techniques. To successfully participate, stakeholders must be trained in such specialised methods. The Empowerment approach takes this process one step further. The NRM approach essentially presents a PES program and asks people what can/should be changed. The Empowerment approach presents a PES idea and discusses it in relation to the problems stakeholders identify until a solution emerges. Stakeholders have more control over the discussion and resulting conclusions than in the previous two approaches. Capacity to voice one's opinions, participate in public forums and critically

analyse one's environment is necessary to make such forums successful but also can result from participation in the process.

In order to work the PES must be periodically evaluated from an environmental point of view, i.e. someone must make sure that the environmental services have not been degraded as stipulated by the contract. This is usually the domain of scientists and experts and can be quite costly, adding to the transaction costs of PES. However there are methods of educating local people to undertake basic environmental assessments in lieu of outside scientists (see Berkes, 2000 on Citizen Science). The Wildlife Conservation Society (2006) has found that effective and sustainable conservation (whether achieved through PES or other means) generally requires well-trained local conservationists able to maintain a presence in the field and work within the context of their own cultural and political environment. Training programs for this would form part of capacity building for PES and can be justified in terms of cost efficiency, especially in the context of small-scale private programs (UNECE, 2006). Such training is more likely to be considered if the PES program subscribes to the NRM or Empowerment approaches. But local people should already possess some capacity, such as some NRM knowledge (this could be a form of local indigenous knowledge) and have basic education (basic literacy or numeracy). In the absence of such basic capacity, costly specialists must be called in or intensive long-term education campaigns must be conducted – adding to the costs of PES.

Community capacity building is the best place to start in order to initiate the positive feedback loop cycle between capacity, institutions and social capital. Providing training

to individuals to run institutions in small, poor communities strengthens social capital thus reducing the poor communities' vulnerability to land use changes and increasing their capacity to seize market opportunities and to voice their interest in decision making (Mayrand & Paquin, 2004). Hope, et al. (2005a) points out that if insecure land tenure prevents individual farmers from entering a traditional PES program (as it often does), increasing community capacity through education may be necessary to provide improved access to credit and market support centres and “wholesaling” environmental services from entire communities or zones.

While capacity building is essential to start the PES program, once started, PES can substantially contribute to capacity building. For instance, the PES scheme in Costa Rica provides advice through two organisations, FUNDECOR and CNFL on basic agricultural and conservation practices such as the planting process, fertilisation, the design and maintenance of paths, harvesting, and minimising the risk of illegal hunting within the properties (Porrás, et al., 2003). In Pimampiro (Equador) this advice resulted in increased agricultural productivity while in Huetar Norte (Costa Rica) PES participants acquired expertise in forestry, although this was largely due to their own efforts with limited external assistance (Grieg-Gran & Bishop, 2004) indicating that the community already possessed the capacity to adapt and take advantage of available opportunities. The PES scheme Scolel Té in Mexico improved farmer skills by teaching surveying, mapping, financial planning and silviculture (Mayrand & Paquin, 2004).

Appropriate Local-level Institutions

Institutions are described by Agrawal and Gibson (1999) as sets of formal and informal rules and norms that shape interactions of humans with others and nature. Pearce (2005) describes them as the social and legal norms of behaviour in a society which determine the extent to which individuals combine to undertake collective action. Institutions are thus closely linked with social capital. In fact Pearce's description suggests that institutions are the visible result of social capital. As with capacity and social capital, institution-building is a slow process. According to Berkes (2000), with the support of non-government organisations, local level institutions (enabling people to govern themselves) require about a decade to develop and mature.

In other words institutions are the way things are done within the community or the procedures used to undertake collective decisions. At a basic village level, there may be a village chief and or a council of elders that have traditional powers. Government agencies (responsible for agriculture, development or natural resource management) may have representatives or extension workers implementing projects within the village and a local district-level representative may have legal decision-making powers. Formal credit unions and informal money lenders may also be present as well as local-level NGOs promoting various ideas. Institution-building refers not only to these organisations but also to the established processes through which these different organisations within a community communicate, interact and make decisions. PES programs would impact on all these organisations differently and this impact must be discussed and agreed to before program implementation.

Most experts agree that appropriate institutions are essential for a successful PES program (Grieg-Gran & Bishop, 2004). Hope et al. (2005b), for instance, states that institutions reduce transaction costs, build local capacity and empower vulnerable and excluded groups. Institution-building or strengthening is thus fundamental to negotiating agreements that reflect the interests of stakeholder groups. Mayrand & Paquin (2004) argue that supporting institutions is necessary in a PES program to carry out key functions which include scientific research, capacity building, technical assistance, certification, fund management, marketing, and linkages with national and international actors. Not all institutions promote market exchanges and appropriate institutions may need to be created. If this occurs the start-up costs can be significantly higher, but they are incurred at the beginning only and can be absorbed over time (Mayrand & Paquin, 2004). Waage (2006) points out that once buyers of environmental services are identified they must be connected to the sellers quickly and efficiently and the costs associated with identifying sellers are significant. Thus effective intermediary organizations (such as local credit unions) need to be developed or trained to facilitate this process.

During the scoping (or pre-negotiation) phase of a PES program, an institutional analysis must be carried out in order to gain an in-depth understanding of the way people are organised in their communities and how institutions link to and influence the buyers and sellers of environmental services (Smith, et al., 2006). The PES program must fit into the current institutional context, both formal and informal. Without consideration of how institutional interactions will occur—between new and old oversight practices within existing entities and/or across new and old entities—it is likely that unintended

institutional complexities and consequences will occur (Waage, 2006). In the Conservation approach, existing organizations would be identified during the institutional analysis and one or two would be chosen (with some changes and necessary training) to administer a PES program. The NRM and Empowerment approaches would most likely see the creation of new or radically altered organizations and the implementations of other, complimentary programs. In all cases institution-building or strengthening would be the result of communication and decision-making amongst the organizations involved in the PES program, local government offices, other community entities, community leadership (whether formal or informal) and community members. The process itself can lead to Empowerment by opening up or solidifying channels of communication, strengthening alliances between local actors and making visible underlying tensions in the community.

Perrot-Maître (2006) describes the experience of Vittel (Nestlé Waters) in north-eastern France where the source of Vittel mineral water was threatened by farming practices in the region. The Vittel company (later bought by Nestlé) wished to persuade local farmers to change their grazing practices and partnered with a research body – the French Agronomic Research Institute (INRA), to conduct a four year multidisciplinary action research program to understand the linkages between water pollution and farming practices; farmers' attitudes to farming and to develop an appropriate incentive package to persuade them to change. Scientific studies showed that drastic changes to farming patterns were necessary (such as abandoning the use of agrochemicals). The studies were done with farmers as partners and the process of negotiating an appropriate PES package

took ten years. The change in farming practices meant that local farms would lose the links to their farming networks (farmers unions and the Chamber of Agriculture) which opposed the PES program. To overcome this, Vittel had to create an intermediary organization called Agrivair to negotiate and implement the program. The intermediary not only ensures compliance and distributes payments but also provides technical, administrative and organizational support to farmers through its links with the research community and new social and professional networks. Agrivair also provides political mediation between different actors and it is a platform through which farmers participating in the PES program communicate with each other and outside agencies. The intermediary body thus replaced the local-level institutions provided by farmers union and links to the Chamber of Agriculture that were lost when farmers chose to accept the PES scheme. To off-set its transaction costs, the organization branched out its activities to address urban pollution and provide other public services in the region. After a 10 year maturation process, it has become a successful local entity that grew out of a PES scheme.

Institutional building or strengthening should be undertaken at the same time as capacity building and is not as difficult as creating social capital (however the presence of social capital will smooth the process and local institutions will help social capital to develop). Berkes (2000) states that in order to nurture local institutions, higher echelons of power should simply legitimize them. If higher governmental structures recognize locally developed rules then local community institutions may enforce these rules themselves. Relevant legislation may be necessary for this to happen. Strong leadership and

confidence-building strategies are also required and participatory processes as well as transparency must be used from the very beginning to instill trust in the new institutions (Mayrand & Paquin, 2004). Participatory processes are costly and time-consuming, greatly raising the transactions costs. The greater the capacity and social capital present, the easier and smoother the participation.

The creation or strengthening of local institutions builds capacity and creates social capital. Grieg-Gran & Bishop (2004) give numerous examples of general improvements in communities that arose out of the creation of PES institutions. For instance, in Ecuador a community involved in the PROFAFOR-FACE carbon sequestration scheme has developed a separate community credit mechanism while in Costa Rica, the agricultural association of Sarapiquí (CACSA), became involved in the national PES scheme and has since developed additional agriculture and livestock projects to diversify activities and improve productivity. The residents of Huetar Norte, also in Costa Rica, believe that the payment scheme has encouraged the creation and strengthening of community associations (Grieg-Gran & Bishop, 2004). The positive feedback loop between institutions, capacity and social capital is thus evident.

Of course, existing institutions may be adapted to service PES. For instance, in watershed-based PES programs the presence of watershed institutions (such as catchment management authorities or water users' groups) can facilitate the setting-up of PES systems and reducing transaction costs (Mayrand & Paquin, 2004).

Social Capital

This paper argues that social capital is essential for the establishment of PES (however, once established, PES contributes to social capital). But what is social capital? Paldam (2000) claims that while there are different definitions of social capital (these are: trust, ease of cooperation and the presence of networks); all have a central tenet of trust. This trust (social capital) enables cooperation in groups and networks within groups to realise joint projects. Ostrom (1990) defines social capital as the “shared knowledge, understanding and patterns of interaction that a group of individuals brings to any productive activity” while Pearce (2005) defines it as the sets of interpersonal and inter-institutional relationships in a society - the better these relationships, the greater the degree of trust, the lower the transaction costs of economic exchange and, therefore, the higher the chances of sustainable development. Pretty and Smith (2004) give four components of social capital as: the relations of trust, reciprocity and exchanges, common rules, norms and sanctions and connectedness in networks and groups.

It is clear from these definitions that social capital enables cooperation (and its lack stifles cooperation). It would thus be logical to conclude that it is necessary for any and every conservation/development effort, not a PES scheme in particular. This is true, but PES especially requires social capital to succeed. The establishment of new markets requires trust from both buyers and sellers. Markets for environmental services are especially problematic because it is a somewhat abstract idea and the physical benefits to the buyers may not be clear. Social capital (i.e. trust) is thus required by buyers and sellers towards each other and towards the market.

According to Pearce (2005), the literature on social capital does not, at the moment, provide conclusive links between social capital and economic development in general. Some authors find significant linkages between the two and others claiming social trust matters very little. However one way to measure social capital is by its decay – by measuring crime rates, expenditure on policing, corruption (Pearce, 2005). Such conditions are not favourable to the establishment and operation of markets, therefore an environment with low social capital would not be conducive to PES schemes. One of the biggest obstacles for the poor and marginalised to enter PES programs is the high cost of transactions. Economies of scale favour larger (therefore more wealthy) landowners who can bear higher transaction costs (Swallow, et al., 2005). Social capital (along with appropriate institutions) is necessary to facilitate cooperation so that smaller and poorer landholders can work collectively which strengthens their bargaining power and reduces the costs of transaction (Swallow, et al., 2005; Pretty and Smith, 2004; Pearce, 2005).

Because all three approaches of PES promote some form of capacity building, communication and increased collective actions, they all promote the formation of social capital to some extent but the Empowerment approach obviously does this the most because its aim is to allow communities to govern their environment. Similarly all three approaches require some forms of collective action (and the ability for a community to undertake collective decisions; i.e. social capital). The Empowerment approach requires the strongest presence of social capital of all three approaches. It is the one most likely to

lead to changes in the distribution of power within a community, a process that can be easily sabotaged and lead to disillusionment and further conflict if it is mishandled.

If social capital is defined as trust and necessary for the establishment of PES how can it be created when it is absent? Experts all agree that the government (or other outside agents) cannot simply create social capital within a community. Pearce (2005) warns that any top-down efforts at stimulating social capital will be counter-productive and short-lived. Paldam (2000) also points out that actions designed to build trust by punishing non-cooperation will backfire while employing incentives to cooperate will induce communities to wait for the financial incentive before beginning cooperation. Social capital takes years to develop and government's role would be to remove the obstacles to communal organisation in order to allow it to form. Paldam (2000) echoes such methods by saying that the ease of building social capital depends upon the environment provided by the state and its institutions. The state must establish a "social capital friendly" legal and political environment. The Economic Council of Europe along with the United Nations, developed a set of guidelines for establishing watershed protection PES programs. These guidelines state that in order to create favourable conditions for building trust and co-operation, policymakers must engage in dialogue at all levels and facilitate public participation in decision-making, including at the local level, where most action takes place. (UNECE, 2006).

Asquith (2006) provides an example of how to create social capital. In Bolivia, the Los Negros Valley is adjacent to a 637,000-hectare Amboró National Park, one of the most biologically diverse areas in the world. A watershed-based PES program would greatly

benefit the Park and downstream residents of the Valley. However a fundamental constraint to developing any type of contract-based system was the lack of confidence, by both upstream and downstream users, that the other party could fulfil a contract. A local NGO, Natura Bolivia conducted participatory negotiations where it was decided that downstream water users would provide compensation for protection of the native vegetation in the watershed. After further negotiation, it was decided that this compensation would take the form of one beehive and training in honey production for every ten hectares of water-producing cloud forest that upstream landowners protected—a cash equivalent of U.S. \$3 a year per hectare, payable up front. Bee hives provided long-term financial security whereas many participants felt that cash payments would be spent in unprofitable ways. The program was slow to start (trust and confidence took time to build). In 2003, in an initial step, sixty beehives were provided to five farmers, in return for the conservation of 600 hectares of cloud forests but by September 2006, 39 farmers were protecting 2,100 hectares (Asquith, 2006).

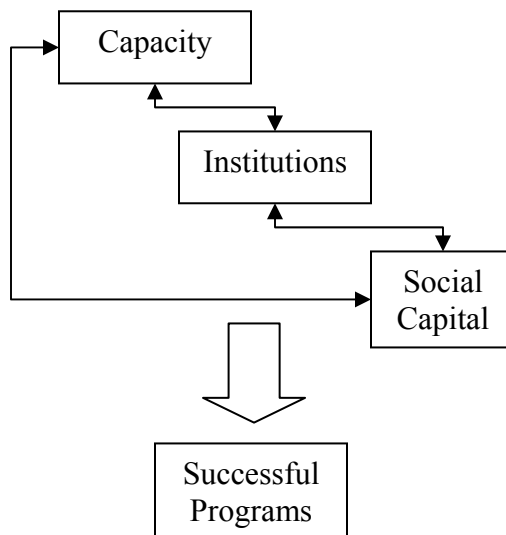
Discussion

One may point out that the three elements discussed here – capacity, institutions and social capital are necessary in any conservation or development action or even for their own sake. This is most certainly true and such an argument only further underlines the necessity of including them in PES programs, which are currently popular with donors. Those who hold to the view that PES is nothing more than a conservation tool and should not be used for other goals such as poverty eradication may object to the promotion of social capital as unnecessary to conservation however they should view the large up-front

expenditure as a requirement for creating the right environment for PES. The promotion of capacity, institutions and social capital, even if done purely to allow PES to succeed will have other positive effects on poverty eradication beyond its stated goal. Thus, if done in the right environment, PES will contribute to poverty eradication.

There is a positive feedback loop between the three elements of capacity, institutions and social capital (visualised in Diagram 1). These elements are arranged in this order because the literature shows that the creation of social capital is most difficult while there are many successful examples of capacity building and creating or strengthening institutions can logically follow training programs designed to increase capacity.

Diagram 1: The positive feedback loop



If one were to embark on a program of creating the necessary social pre-conditions for a PES program, what actions is one required to take? And what timeline should be considered? The three elements discussed here are generally broad, have many definitions and are constantly argued about in the literature. It is therefore hard to create a

solid procedure or a set of instructions for others to follow (indeed the Empowerment approach would preclude such top-down impositions on what should be a local process). If, as stated earlier, it takes about a decade to create local-level institutions, then the stakeholder analysis and negotiation phases cannot be completed using a universal checklist. The example of Vittel's PES in France shows that the formulation of an acceptable PES payment scheme took a decade and was based on a multidisciplinary research and action approach – in other words it was learning through trial and error. The Vittel case study started followed the conservation approach, however the created intermediary institution later expanded its operations beyond the confines of administering the PES program. The example of the Los Negros Valley shows the NRM approach where a PES scheme was modified through negotiations so that sellers were paid with bee hives as opposed to cash. In both cases, a long period of maturation was necessary to establish trust between buyers and sellers, although in the Vittel case this was done through protracted negotiations while the Los Negros case chose to hold a small trial of the program to prove its effectiveness.

Communities do not suffer from a total absence of capacity, institutions or social capital. Each community possesses all three elements in some degrees and bottom-up engagement with stakeholders is vital to discover community capacity.

Since a PES scheme is an essentially complex program and creating the right conditions for its success takes years, it is not surprising that the Empowerment approach is more of rhetoric than reality. Indeed the three approaches are a progression from relatively

straightforward to very complex. This is why the Empowerment approach may fail in communities low on capacity, with weak institutions and a lack of social capital (those that would benefit from it the most) since it gives the greatest responsibility and control over negotiations to the community.

Conclusion

PES is seen by its proponents as a relatively simple and straight-forward approach that utilises market-based incentives to achieve conservation and (depending on your view) reduce poverty and empower communities. This paper argues against such an idea by pointing out that establishing a PES program requires years of social and political change. The establishment of capacity, appropriate institutions and social capital, while essential, is neither simple, nor cost-effective nor efficient. It is an investment that must be made but is hard to quantify and measure in purely economic terms. As an idea, PES is an evolution of the ICDP approach confining conservation action purely into the realm of economic incentives. Regardless of the pros and cons of such an approach, it will only operate in the right social climate and this requires proponents to undertake long-term complex and messy social interventions.

Donors and conservationists are increasingly pre-occupied with cost-effectiveness and PES is the newest invention in that regard. This paper argues that PES will only be successful if it has the right social foundation, and that requires time and money to build. The pursuit of cost-effectiveness cannot lead to cutting corners in the earliest phase of establishing PES because that is most crucial for realising its benefits.

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