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Distributional risk in PES: Exploring the concept in the Payment for Environmental Forest Services program, Vietnam

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ABSTRACT

The distribution of monetary benefits is a central element in PES schemes and arouses 'distributional risk' if felt as unjust by the beneficiaries. The paper defines the concept of distributional risk, proposes a framework surrounding the phenomenon and explores their utility in an analysis of distributional decisions in eight Vietnamese communities that participate in a national forest PES program. This program shares a distributional principle with many PES schemes worldwide, paying out on a per hectare basis, implying that the biggest forest owners get most. Up till now, the communities successfully counterbalance this consequence by asserting the village level as the de facto distributor, able to apply their own principles of justice and partially reframing the disbursements as remuneration for work done for the forest rather than forest ownership. We recommend to legally institutionalize this practice, reaping other advantages as well, such as reduced transaction cost.

1. Introduction

Ecosystem services are benefits that people derive from ecosystems, and many are degrading rapidly (FAO, 2012). During the last decade, Payment for Ecosystem Services (PES) emerged as a promising environmental policy instrument. In developing countries, areas of high biodiversity and high incidence of poverty often coincide (Fisher and Christopher, 2007) and Vietnam is no exception (CIEM, 2010; Muller et al., 2006). Therefore, PES was started with great hopes to serve both biodiversity conservation and poverty alleviation (Huang and Upadhyaya, 2007; Pagiola et al., 2005). PES schemes have been running successfully at different scales from project to nation, in both the industrialized and developing worlds. Concurrently, the PES concept evolved, as can be traced through the PES definitions in Wunder (2005), WWF (2007), Ferraro (2008), Corbera et al. (2009), Muradian et al. (2010), Karsenty (2011), Tacconi (2012), and Wunder (2015). Schemes that are government-based or even non-voluntary, as in the Vietnam case we will discuss in the present paper, are currently called PES even though deviating from Wunder's ideal-type PES (2015) because the central tenet remains that providers of ecosystem services receive payments from the beneficiaries of these services.

The PES instrument still faces significant challenges. A major one is the tension between environmental efficiency and social equity (Pascual et al., 2010). High transaction cost may preclude the involvement of large numbers of small landowners (Huang and Upadhyaya, 2007; Pagiola et al., 2005). A second challenge is lack of data on actual services and their values, resulting in relatively arbitrary payment levels (Landell-Mills and Porras, 2002; Muradian et al., 2010).

Distributional regulations and practices in PES define *who gets what for what reason*. Although Sommerville et al. (2010) and Pascual et al. (2014) advice that criteria of justice should be addressed in PES benefit distribution, the risk of social tensions arising from the distribution of PES benefits has not been much analyzed yet in the PES literature. Some authors did already point at this challenge, however, such as Kissinger et al. (2012) who found evidence of distributional conflicts. Also, according to Loft et al. (2016), risks related to benefit distribution of REDD+ could arise in all stages of the policy process, if REDD+ objectives would solely focus on large landowners for efficiency reasons. Like them, we feel that if left unaddressed, social tensions over the distribution of benefits may accumulate and arouse feelings of resentment that may threaten a PES scheme's success in the longer run. We call this "distributional risk," and will define the concept more formally later on. Without using the term, the existence of distributional risk has been acknowledged in biodiversity conservation projects (Barrett et al., 2001; Smith and Walpole, 2005; Thompson and Homewood, 2002) as well as the PES literature, e.g. Luttrell et al. (2013), Bruner and Reid (2015), Pascual et al. (2014), McDermott et al. (2012), and Loft et al. (2016), often referring to it as perceived unfairness or inequity. The overall structure of their argument is that if too little attention is paid to issues of distributional fairness, e.g. because of a strong focus on

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economic or environmental efficiency in the project design (Wunder et al., 2008), distributional conflict may undermine the legitimacy of any PES scheme as a whole, including its ecological outcomes (Pascual et al., 2014). The outcome may even become negative, as reported for instance by To et al. (2012) who mention that PES-supported plantations were sabotaged by people excluded from PES benefits. As Luttrell et al. (2013) put it, "benefit-sharing arrangements could be subject to upheaval." The present paper builds on these insights, making them more operational through the concept and a framework of distributional risk.

Our data come from two provinces, and eight communities are participating in the Vietnamese PES scheme called the Payment for Environmental Forest Services (PFES) program. PFES was launched in Vietnam in 2008 by the prime minister's Decision No.380/2008/QD-TTG. As highlighted by Trædal et al. (2016), the strong role of the state in Vietnam was perpetuated in the design of PFES. In terms of Wunder et al. (2008), PFES is a privately financed but government-enforced PES program. Based on the findings of two pilot projects, PFES was nationally established in 2010 (McElwee, 2012). About 42% of the country's total forest area was covered by PFES in 2014, with more than 500,000 households and communities receiving PFES disbursements, to a total of US$ 286 million in the years 2010–2016 (VNFF, 2017). For more information including some general data on distribution, see Pham et al. (2014), To et al. (2012), Pham et al. (2013) and McElwee and Nguyen (2015). In an off-hand manner, the latter authors also indicate that distributional risk is present in PFES, see Section 3.2.

The objectives of our paper then are (*i*) to specify the *de jure* distributional rules applying our case study region, (*ii*) to specify the de facto distribution of benefits in the case study region, (*iii*) to analyze these data through the concept and framework of distributional risk, and (*iv*) to reflect on practical recommendations and the utility of the distributional risk concept and framework.

2. Concept, framework, and methods

2.1. The concept of distributional risk and the analytical framework around it

Pascual et al. (2014) recommend looking broader than only the PES literature to arrive at a fuller understanding of equity issues. Therefore, the present section starts on a broad footing.

In a daily life context, it is not difficult to imagine the example of two children both receiving an ice-cream, alas with a difference in the height of one inch. This is an unbearable injustice! The children may accept many deep differences between them, but this trivial one is worth a big outcry, with parents desperately trying to explain that one-inch difference, and both ice creams melting away in the meantime.

From this example, we can see that distributional risk has a layered structure. Layer 1 is composed of all inequalities between people, e.g. in health, intelligence, cultural capital, and income. Layer 2 is composed of the (usually few) elements out of these that enter the justice arena and become objects of contestation, like the ice cream in the daily life example. In politics, incomes are characteristically within the justice arena, while the underlying inequalities in wealth are much less so (Piketty, 2014).

In the rational choice theory of standard economics, we are supposed to be happy with goods and income irrespective of what others get. In non-standard economics, many goods (and even people's happiness in general) are said to be "positional". This means that people may willingly accept a reduction in that good, provided that the others get even less (Ash and Dowling, 2008; Claassen et al., 2008; Wobker, 2015). As with the melting ice creams, this behavior is economically irrational. Wobker's conceptual scheme, for instance, reads as: unequal distribution creates envy, envy creates spiteful behavior, and spiteful behavior creates welfare loss. Positional goods are highly prone to distributional risk. And positional goods are especially those that can be compared easily, like heights of ice creams, or levels of money in PES.

In psychology, much literature exists about envy, jealousy, spite and '*Schadenfreude*' (malicious joy), concepts that all relate to distribution. Gerold et al. (1998) studied the role of felt injustice in the arousal of "differential emotional reactions" in almost 3000 students in 37 countries and found strong correlations, especially between felt injustice and anger, which were remarkably universal. Smith et al. (1994) found a strong link between felt injustice and hostile envy. Piskorz and Piskorz (2009) found that the strong relationship between felt injustice and envy/*Schadenfreude* is tempered by closeness of relationship such as between family members.

One branch of applied ethics is distributional justice. This line of thinking is not so much concerned with what issues in fact enter the justice arena, but with principles of distribution that might ethically be applied within that arena. The PES literature frequently refers to these principles, with authors such as Luttrell et al. (2013), Pascual et al. (2014), Sikor et al. (2014), McDermott et al. (2012) and Loft et al. (2017). This literature displays a somewhat confusing array of terms (e.g. using 'justice', 'equity' or 'fairness' as the umbrella terms and 'criteria', 'principles', 'theory', 'rationale' etc. for the components under the umbrella), but largely agree on the substance of what the principles of distributional justice are. First of all, justice has three dimensions: procedural (e.g. the degree to which all voices are heard), contextual (i.e. the distribution of initial positions such as wealth) and substantive (sometimes confusingly called distributive), which denotes the principles of justice within the procedural and contextual frames. These substantive principles can be summarized as: *Equality*: give the same to all; *Need*, e.g. 'pro-poor': give to those below basic needs level; *Contribution*: give to those who contributed most and *Welfare*: give to those who can make the best use of the money. It may be noted that this enumeration is wider than equity, which focuses mainly on equality and need. As Sikor et al. (2014) put it, "justice offers a more encompassing perspective than equity for the empirical analysis of conservation governance." In the present paper, the procedural and contextual dimensions of justice are present in the margin (e.g. in terms of respected leadership, social capital and the Forest Land Allocation process), but the focus is on the substantive principles.

Contrasting with the ethical principles of justice, felt justice (or 'perceived fairness') is an empirical concept, focusing on the choices that people and communities actually make between and within the substantive principles of justice (or other criteria they might invent). Such choices may vary much, as found for instance by Zanen and de Groot (1991). In the highly egalitarian culture in Southern Sudan, distributions had to be equal to the last centimeter of water wells dug by a project, while in the strongly hierarchical culture in Burkina Faso, communities protested fiercely against equality: the chief's fields had to be improved first, before those of common farmers. Likewise in a PES scheme, a community may, for instance, decide to spend its PES money on a micro-credit to one member with a good business initiative as described by 'welfare' principle above, rather than focus on equality or need. In the PES literature, a focus on felt justice is relatively rare. Working in communities in Madagascar, Sommerville et al. (2010) reported that perceived levels of fairness in PES benefit distribution could be affected by leaders seen to appropriate a too uneven share for themselves, rather than by differences between common villagers. Also in the Vietnamese communities studied by Petheram and Campbell (2010), people emphasized the role of village-level governance in the perception of fairness and their willingness to participate in PES.

In Luttrell et al. (2013), risk is broadly defined as potential failure to meet desired outcomes. In the present paper, the concept of distributional risk is more specific. First, it is concerned with felt injustice rather than theoretical (ethical) injustice; it focuses on the view of the insiders, not the outsiders. If decided upon without injustice being felt, the immediate distributional risk of any distribution is zero, even if seen as inequitable, for instance, by the outsider. Moreover in order to be worthy to be called "risk," the concept should include a notion of