At international climate negotiations the 'common but differentiated responsibility' phrase remained contested for a long time
Photo: World Agroforestry Centre/Meine van Noordwijk

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CHAPTER 21

Common but differentiated responsibility for restoration and avoided degradation of commons: who pays for basic rights?

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Highlights

- The catch phrase 'common but differentiated responsibilities' (CBDR) has been part of international agreements since 1992 but remained controversial.
- As a moral principle and foundation for collective action CBDR applies both within and between countries.
- The groups most in need of ecosystem services (ES) may not be able to pay for them, relying on CBDR.
- Public investment in better ES stewardship can be valid in terms of basic human rights to live in a clean environment.
- Fear for 'free riders' can inform the 'club good' rules for PES beyond what public funds can pay for.

21.1 Introduction

Commons, in the original meaning of land that is managed at community scale[1], have been privatized or taken over by the state as part of 'development' in many parts of the world in various stages of history. Part of the rationale for this was that communities weren't strong enough institutionally to control the private interest of individuals, leading to overexploitation and resource degradation[2]. Privatization was seen as a means to make overexploitation uneconomical and facilitate investment in land productivity and restoration. Elsewhere, the state took over claiming to be better stewards in securing national interests. "The real tragedy of the commons is that people believe collective action cannot effectively defend common interests"[3]. In chapter 1, the spectrum of paradigms in PES was described as ranging from a private-lands commodification on one hand and collective-action co-investment on the other[4].

Collective action based on 'clubs' or 'in-groups' can be seen as exchanges involving social capital, resolving the classical 'altruism' conundrum (Box 21.1) where, from a limited private perspective, the returns do not justify the investment[5].

The target outcome of PES schemes, i.e. more secure and enhanced ecosystem services, may be most relevant for groups in society who don't have the means to pay. Similarly, the least developed countries are likely to suffer most from global climate change. If the economic efficiency argument of 'no pay, no cure' in PES dominates, those groups will not be served as long as there is demand for local services preferred by wealthier 'buyers' anywhere on the globe. Yet, the sustainable development goals (SDGs) reiterate that all layers of society have a *moral* right to live in a world where clean water, energy and food sources are available, where dangerous levels of climate change are avoided, where the unavoidable consequences of the change that has already been caused are softened through support for adaptation, and where global biodiversity values are conserved.

Rio Declaration, 1992

Principle 7

"States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have ***common but differentiated responsibilities***. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command."
http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm

Figure 21.1 The starting point of the common but differentiated responsibility phrase in the 1992 Rio declaration (***our emphasis***)

At village level, drinking water supply from the up-hill forest is a 'common but differentiated responsibility'. Photo: World Agroforestry Centre/Meine van Noordwijk

Box 21.1 Altruism

The term 'altruism'[6] originates in the first half of the 19th Century when August Comte[7] and colleagues needed an antonym (opposite) for 'egoism'. Sometimes translated as 'selflessness', altruism indicates that care for people other than oneself is a driver of decisions. It may seem that 'egoism' and 'self-interest' are central assumptions in economics. The mysterious 'invisible hand' of the market[8] described by Adam Smith[9] can be expected to sufficiently take care of others; in Smith's Theory of Moral Sentiments, however, the care for others is presented as an essential part of human nature: "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortunes of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it. Of this kind is pity or compassion, the emotion we feel for the misery of others, when we either see it, or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrows of others, is a matter of fact too obvious to require any instances to prove it; for this sentiment, like all the other original passions of human nature, is by no means confined to the virtuous or the humane, though they perhaps may feel it with the most exquisite sensibility. The greatest ruffian, the most hardened violator of the laws of society, is not altogether without it."

Altruism is not restricted to the human species. Inferred altruism in the animal world became a puzzle that required specific explanations when theories of natural selection pointed to an 'invisible hand' of differential 'fitness' at individual level in steering the shifting frequencies of genes in a population. At its most explicit, the 'selfish gene' concept removed any moral or ethical sense from the basic entity driving the way the natural world works. 'Group selection' became a highly suspected term, unless the groups are extremely homogenous genetically, as in honeybees and other social insects. Any group is at risk of 'free riders' who benefit from the altruism of others, but don't take their share of the costs.

Within families the genetic similarity may be sufficiently high to understand net benefits of actions that go against the individual. An interesting example is the genetic code that makes mammalian infants beyond a certain age become intolerant for lactose (milk sugar). It supports weaning and reduces mother-infant conflicts when an infant is able to move onto other foods, but it goes against the short-term well-being of the infant. The primary beneficiary is likely to be a next sibling (younger brother or sister), who will share half (in case of the same father) its genes with the lactose-intolerant individual. When humans learned to domesticate livestock, other sources of milk became available and genetic selection turned against this acquired lactose intolerance. However, this gene is still linked in the human population to those with cattle-herder ancestry (and other tricks to induce weaning). Taking a gene as accounting unit, the net effect of individuals showing behaviour that hurts themselves but benefits others can be positive, as long as the genetic similarity exceeds the relative loss of individual fitness. In technical terms this explanation of 'self-interested altruism' was clarified in the 1970's, and in early game theory with concepts of reciprocity and protections against free riders in 1981[10].

In human history, religions, tribal identities and post-religious humanist movements have been prime motivators for restricting individuals in their egoism for the well-being of the group, often restricted to those of the same religion, tribe or social grouping. "Do unto others as you would have them do unto you" became a reciprocity concept engrained in education systems. Social capital as a concept provides a notion of a book-keeping of gains and losses on an account with long-term benefits to the individual, different from its short-term bottom-line. Social norms, ethics, religious solidarity and group dynamics provide ways to resolve the problem of altruism versus egoism by showing that long-term social benefits can justify short-term individual investment. Motivations to invest in PES as long as the 'ES providers' are seen as part of the 'in-group' can be understood along these lines, and suggest that an appeal to fairness receptors in the human brain in the way ES issues are communicated can be effective in generating willingness to pay, over and beyond the efficiency perceptions of self-interest[5].

The concept of *common but differentiated responsibility (CBDR)* was formulated in the international agreements signed in Rio in1992 (including the UNFCCC climate change framework convention), but it took until the 2015 Paris Agreement before this was accepted by all parties with implications beyond a north versus south dichotomy. Will countries who

plead for CBDR at the international negotiation table implement the concept when applied within their country? The SDGs were embraced by national governments, and they have an obligation to their citizens to find efficient and fair ways to achieve them. This may include publicly-paid PES programmes, if these can be shown to deliver desirable outcomes, but only if these are well integrated with other government initiatives.

The three major instruments of policy are informally known as carrots, sticks and sermons and more formally as rights (regulatory), incentive-based (economic) and motivational (identity) approaches. This chapter discusses how essential ecosystem services for all citizens relate to existing policy, laws and incentive systems across scale and in the balance between private, club and public good. We focus on proposition **P1[4]:** "Leveraging multiple policy instruments, with a mutual 'do-no-harm' at the interface, is a necessary pathway for eliciting ES enhancement and delivery." The chapter will introduce the concept of common but differentiated responsibility, discuss the concept of club goods and its relationship to PES, followed by an analysis of property rights and 'commons', before returning to the conditions under which public sectors may consider to invest in PES to secure environmental outcomes (and ES security) for society at large.

Common but differentiated responsibility

The Brundtland report in 1987 established common goals in the face of limits to growth[11] identified in the early 1970s, and took significant steps to agree on common actions and differentiated responsibility. In the subsequent translation of these ambitions to a set of international conventions at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, however, the catch phrase 'common but differentiated responsibilities' (CBDR), became a central part of international environmental discourse and proved to be controversial. As a principle of international environmental policy, CBDR implies that all nations are responsible for global environmental problems but not equally so. In 2015, CBDR became a major stumbling block[12] in negotiations over the text for the Sustainable Development Goals for 2030. Many developed regions, including the EU, US, Japan and Canada asked to remove reference to the principle. Most developing countries, including China, India, Group 77 of developing countries (G-77) led by South Africa, called for retaining, or even strengthening, the draft text's language on CBDR. The US stated that its objections to incorporating CBDR were because it is 'a historical conceit steeped in the north-south divide' that does not apply to a universal development agenda, universally applied. However, India, in identifying six myths about CBDR[2], said universality does not mean uniformity. The myths presented were:

1) CBDR opposes the principle of universality;
2) It is a historic relic and no longer relevant;
3) It is only applicable to the environmental dimension;
4) It is only a political principle, with no technical relevance;
5) The north-south divide has vanished; and
6) It implies inaction by some countries.

In summary, CBDR is a call for action, ambition and equity, with equity being a fundamental principle that underpins the UN Charter[13] and the Millennium Declaration[14]. In the Paris Agreement[15] of the UNFCCC in December 2015 and in the declarations of many countries afterwards, the words fairness, transparency and CBDR were among the most frequently mentioned terms.

Amid all of this discussion at the Conventions of Parties to the Rio convention in the preceding decades, there is one question that never seems to be asked: "How is CBDR applied nationally and locally in those countries that emphasize its importance in the international arena?" In this era of polycentric governance[16], the legitimacy and effectiveness of any layer of governance is bounded by the way it treats the levels below it as well as how it negotiates with the levels above. CBDR can be interpreted as a cross-scale concept in polycentric governance, with a potential for ethical or moral high-grounds for those who can claim the Golden Rule ("Do unto others as you would have them do unto you").

PES and club goods

Payments for ecosystem services (PES) can hardly exist outside of a legal framework, as they involve mutual rights and obligations between parties. Sometimes, these are expressed in explicit contracts that operate within contract law and its litigation and enforcement rules; in other cases, they operate between public or semi-public institutions of the state and communities, households or individuals. Between private and public goods, the category of club goods is an important one in PES, both on the ES provider and ES beneficiary side. PES links the two in a higher-order 'PES club'. The ES beneficiaries may well be (informally) organized as a club on one side, the land users may be another, either based on inherited community membership, or on acquired cooperatives, operating *de facto* (informally, in practice) or *de jure* (in accordance with existing laws). The concern over 'free riders' stems from the club good perspective, as in public goods, all are expected to (be allowed to) benefit. CBDR refers to the public goods and universal rights interacting with the level of responsibility that clubs or nation states are willing to undertake as part of a 'new deal' type redefinition of social, economic and political relationships.

In relating public to private rights and responsibility, the concept of land ownership and land tenure needs to be unpacked from the bundle of rights that it contains in a given legal and societal (informal) context. A delicate balance was found[17] in water-resource management between plot-level issues that are indeed better handled with private-tenure security versus those that require collective action at the levels of streams and rivers. Larger rivers often form boundaries between subnational or national entities and require specific cross-border institutional arrangements once common interests have been identified.

Property rights and commons

A recent stock taking[18] of progress in the understanding of property rights added a sixth category (alteration) to the five that Schlager and Ostrom[19] had proposed in an influential paper in 1992. In this literature, property rights are defined as "a claim to a benefit stream that the state will agree to protect through the assignment of duty to others who may covet, or somehow interfere with, the benefit stream"[20]. The current list includes:

- ***Access***: entering a defined physical property
- ***Harvest/withdrawal***: obtaining 'products' of a resource
- ***Management***: regulating internal use patterns and transforming or improving the resource
- ***Alteration***: changing the set of goods and services provided (and stated objective reflecting this)
- ***Exclusion***: determining access rights for others
- ***Alienation***: selling or leasing some or all other rights

Box 21.2 Human right to water, privatization of water supply management and responses

As an essential and often scarce resource, water has a long history of contest and conflict, triggering institutional responses to clarify rights and responsibilities in local communities. A wide range of local rules and institutions emerged in response to local issues, power relations and concepts of fairness. As described in detail for the Andes region[21], the emerging legal systems of nation states dealt with the plurality of local water rights, and how official policies to recognize local rights involved politics of codification, confinement and disciplining. Similar processes took place in the Indonesian archipelago in the colonial period[22], with a very slow re-emergence after independence of formal recognition of local institutions[23,24]. Emphasis on blue water and rules for water extraction from rivers for irrigation linked agricultural intensification to centralized control over sources of water, with a desire to control upstream forests as a consequence[25]. This clashed with local perceptions of forest as opportunities for expansion[26]. The colonial state claimed to be the guardian of common-pool resources and after independence, the emergent nation-states inherited the argument (except where opposition to state-imposed soil conservation, as in East Africa, had become part of the struggle for independence). In practice, however, state enterprises became bureaucratic molochs with little accountability to their supposed beneficiaries.

Privatization of water has been strongly promoted by the World Bank as a solution to the problems commonly afflicting irrigation and water management. Protests have framed alternatives improving irrigation efficiency while protecting the rights of small farmers by returning to fundamental principles of indigenous resource management[27]. As with the concept of democratization and privatization of water resources for societal services, the Philippines' Water Regulatory Board (WRB) granted water-use rights to irrigation authorities, local governments, private companies, indigenous communities, and wealthy individuals for extracting water for private and commercial use. Conflict arose when overlapping rights over one water source were indiscriminately granted to multiple users, and a classic war over water rights occurred when water rights grantees could no longer obtain the exact volume of water assigned to them. Power played a key role in obtaining water rights, and conflict resolution is discursive—irrigation authorities, being the first water-rights grantees, claimed to have absolute rights over the volume of water granted to them, but indigenous communities argued for prior rights to resources as defined in the Indigenous Peoples Right Act (IPRA). They further claimed for disputes to be resolved under the premises of their customary laws and traditions. Discourse has power that can be tapped in many ways, and discourse framing has a silent presence underlying some engagements relevant to governance. It is used as a device by governing actors in attempting to seek legitimacy[28].

In response to the growth of private-sector involvement in water-supply management globally, which resulted from the neoliberal policies that trust markets to be more efficient than state-controlled institutions, anti-privatization campaigns have emerged in recent years, emphasizing the human right to water[29]. While the efficiency of urban domestic water-supply systems has clear opportunities for improvement, the private, profit-oriented control over areas providing water resources for downstream use was seen as part of a broader pattern of 'green grabbing'[30]. The alter-globalization and anti-privatization movements[19] have articulated protest against this from a 'moral' perspective, but this has had little impact on governments dealing with international development banks and their paradigms.

In returning to stronger local control over water resources, the issue of gender-differentiated rights, concerns and abilities to manage has emerged as a focus for discussion. On one hand privatization is seen as a way to deal with past gender imbalances in rights and responsibilities[31], on the other hand, a deeper understanding of both water and gender in a local context, rather than generic theories, is seen as essential to arrive at locally relevant solutions[32]. Gender is one of several dimensions of social, economic and political stratification that need to be recognized in rescaling environmental governance[33], where watersheds are seen as boundary objects at the intersection of science, neoliberalism/governance, and local stakeholder participation and associated knowledge systems[34]. Where international climate policy with regards to forests has followed a pathway similar to earlier water discussions[35], the current rediscovery of water as the primary dimension of the forest-climate relationship[36] suggests that further synergy between a post-REDD+ land-based climate policy[37] and polycentric watershed management can be beneficial to both.

Land rights, in any nation state, are partial. National club interests (confusingly called 'public' which is supposed to be global) in national security prevail over private ones, even on private lands. Environmental issues such as pollution, water, biodiversity or climate can impose restrictions to the rights to alter and rights to manage on any private land. Indeed, private

forests in much of Europe are prevented from alteration. Dominant traditions in law and legal analysis in this respect date back to concepts in Roman law, where the opportunity of private (or specified community) property based on a 'first come, first served' basis was differentiated from the *res publica*, i.e. rights and duties of the state in the public interest that the state cannot give up (also known as *res populi*).

The first category included a res nullius concept of ownerless property that can be claimed by the first settlers in the case of land (terra nullius), and has been at the heart of contention in colonial states where indigenous people were not recognized as humans having any such rights. Much of legal discourse is about balancing the interests of individuals (and/or the households, communities or private sector they are part of) and the public cause. In the case of intellectual property rights, the private claims tend to be time-bound. For rivers, the Romans already made a distinction between larger (navigable) rivers with direct public and security relevance, and smaller ones. Along the latter, a concept of riparian rights emerged as a system for allocating water among those who possess land along its path. According to a common interpretation, all landowners whose property adjoins a body of water have the right to make reasonable use of it as it flows through or over their property. If there is not enough water to satisfy all users, allotments are generally fixed in proportion to frontage on the water source. These rights cannot be sold or transferred other than with the adjoining land and only in reasonable quantities associated with that land. The water cannot be transferred out of the watershed without due consideration as to the rights of the downstream riparian landowners[38]. While legal systems that developed locally out of what was seen as good practice are diverse, elsewhere laws were transplanted to new countries and parts of the world where they did not connect to local norms and standards. To reconcile that, a perspective of legal pluralism has become a step towards reconciliation[39].

The interface of community and nation-state scales is contentious where the constitution of Indonesia, for example, ensured that the resources of the country are for the Indonesian people, the subsequent claim by the state to be the representative of the people and thus the right-holder was not accepted by local communities who sought international recognition under the indigenous people concept[20]. In the Philippines, forests, water and watersheds have been central to property-rights claims of indigenous peoples—as indicated in Box 21.2, under the IPRA, rights to withdraw resources within ancestral domains are conferred to indigenous people, but this often conflicts with statutory rights and the conservation priorities of protected-area management authorities. With prevailing contentions between community rights over local resources and state agencies representing society, it is of paramount importance to clarify, restate, and interface different jurisdictions, policies, programmes and projects of multiple state agencies that are all acting dialectically and discordantly, to address not only jurisdictional but also operational issues and conflicting claims between and among them[25].

A basic assumption in PES contracts is that both parties have rights to engage in such a contract. For land users (influencing ES), this means that they need at least some rights to use the land. This doesn't have to be the full package, however (Table 21.1). The right to manage is the most important one across all PES instruments, while the right to harvest is key to any product-related form of PES. Restrictions to the right to alter form the basis of compensation and stewardship agreements.

Table 21.1 Dependence of instruments for PES incentives[40] on explicit rights of land users influencing ES, following a recent revision[34] of a scheme popularized by Elinor Ostrom[35] (0 = neutral; + = required; X = essential)

Rights / PES instrument for providing incentives to land users	**Access:** entering a defined physical property	**Harvest/ withdrawal:** obtaining 'products' of a resource	**Management:** regulating internal use patterns and transforming/ improving the resource	**Alteration:** changing the set of goods and services provided	**Exclusion:** determining access rights for others	**Alienation:** selling or leasing some or all other rights
Ecocertification of traded commodities	+	X	X	0	+	0
Tradable, commoditized certified ES	+	X	X	+	+	0
Compensation for foregone exploitation, conversion and ES-harming rights	+	+	X	X	0	0
Voluntary, performance-based stewardship agreement (incl. tax cuts)	+	+	X	X	+	0

Public funding for PES schemes?

We will now return to the conditions under which public sectors may consider to invest in PES to secure environmental outcomes and ES security for society at large. The state, in the *trias politica* perspective[41], consists of three parts, legislative, executive and judiciary. For the public sphere to engage in PES, there must be a legal basis for doing so. The constitution of most countries refers to the well-being of a country's citizens, and can be a foundation for environmental laws as well as incentive-based mechanisms, but legal interpretation has to deal with many nuances and sometimes conflicting laws and interpretations. With the current global trend in executive and legislative branches moving away from global commitments and focusing more narrowly on national interests, the judiciary part may provide continuity and consistency in securing that public interests are still respected[42]. With the current articulation of environmental integrity alongside social justice and economic development in the SDGs, it is relevant to follow how national commitments, by signing up to the UN Agenda 2030, is translated into national legislation in the various countries. This is, at best, work in progress.

Where current environmental problems are at least, in part due to public-policy decisions of the past, some form of apology may be essential in trying to close the chapters of the past and move on to new targets. Where governments fail to issue a public apology and move to forms of PES without acknowledging its own past roles, public credibility can be low. An example can be found in the first large peatland carbon emission reduction scheme in Indonesia that failed after receiving bad press releases on its lack of free and prior informed consent[43,44,45].

China's Sloping Land Conversion Program (SLCP) was initiated in 1999 by the Chinese Central Government in response to the severe dry-out in the Yellow River basin and the devastating floods of 1998 in the Yangtze River Basin. By 2000, it became one of the biggest national government programmes with a total investment of USD 43 billion over 10 years (2000–2010). It aims to control soil and water erosion and to rehabilitate degraded mountains and wastelands through afforestation activities in critical areas of the watersheds of two largest rivers, namely the Yangtze and Yellow Rivers. As one of the first **payment for environmental services** programmes in China, the SLCP differs from other national reforestation programmes in its use of a public payment scheme that directly engages millions of rural households as core agents in project implementation[46]. While farmer participation is in principle voluntary, local governments often focus on entire villages. Compensation is given in cash and in-kind to private landowners of erosion-prone sloping lands greater than 25 degrees within the upper watershed of the Yangtze river and in the upper and middle parts of Yellow river, covering a total of 50 million hectares and spanning 1,710 counties in 25 provinces. Participating households were granted seedlings, as well as provided with techniques and guidance for tree planting, and received subsidies if 70% of the planted trees survived. The State Forestry Administration, the Ministry of Finance and the State Development and Planning Commission facilitate the programme. Given China's history of strong central government, there has not been major public debate on the programme itself and its mode of implementation, but the general sense is that it has been widely accepted (see also Chapter 27 in this book).

Conservation tender schemes have been the most widely applied market-based instruments for biodiversity conservation throughout Australia to date[47]. The programmes focus on converting land use for conservation purposes, and include activities such as revegetation, weeds management, and stream-bank rehabilitation. Landholders submit bids detailing estimated costs for their interventions. The bids are then assessed, ranked and funded based on a combination of environmental outcomes and value for money. Formal agreements between the funder and the land manager are then established regarding the activities to be undertaken.

Another tender programme initiated in 2001 in Victoria was the bush tender, which uses an auctions approach to protecting and improving native vegetation on private land[48]. The project received funding through the Our Environment Our Future - Sustainability Action Statement (ESAS) programme with additional funding from the Commonwealth's Environmental Stewardship Program. The management of remnant native vegetation on private land was prioritized as about 60 percent of this native vegetation is of high conservation significance, and about 29 percent of the remaining native vegetation on private land supports 30 percent of Victoria's threatened species populations. Under this scheme, landholders received payments for on-ground works and land-use changes to improve the condition and security of their native vegetation over a five-year period. Common activities include fencing to control grazing by stock and/or pest animals, excluding stock or adapting grazing practices to maximize vegetation quality, weed and pest-animal control, retaining trees, understory, logs, fallen branches and leaf litter, and supplementary planting in existing patches of native vegetation.

The conditions under which the public sector may invest in PES for the common good of society are based on a utilitarian principle linked to the duties, rights and responsibilities of the state to protect and harness the nation's natural capital to attain growth and secure the future of its people. Stated in different ways, this goal and principle is embodied in the constitutions of many nations, making environmental protection a constitutional right delivered by their leaders. The past portrayal of privately funded PES as a primary alternative

to public command-and-control approaches is no longer relevant, in the face of the dominance of publicly funded PES schemes. Their moral justification, often by reference to some form of common but differentiated responsibilities is key to success. As recently pointed out[49], there may be a substantial gap between communications to the outside world that portray PES schemes as efficiency-oriented, market-based efforts, and communications to local stakeholders that emphasize trust and common but differentiated responsibilities, especially where the state and public funding are involved.

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