

Advancing Conservation in a Social Context: Working in a World of Trade-offs

Conceptual Framework

Introduction

The need to make trade-offs among human livelihoods, biodiversity, and ecosystem services are the rule rather than the exception. This implies that informed choices must be made to achieve the best possible outcomes. The term “trade-off” used here does not describe a binary system of winners and losers, but management choices that intentionally or otherwise change the diversity, functioning and services provided by ecosystems over space and time. Trade-offs are made as a result of the interests, actions and ideas between different stakeholders or users, and between different geographic and social scales. Trade-offs exist among different interests and priorities, particularly among economic development, social welfare and conservation goals. Trade-offs also exist between long-term and short-term time horizons, where typically biodiversity conservation as a long-term objective (such as in national park creation) is traded off against short-term economic benefits (such as conversion to agricultural land). The spatial and temporal scales over which conservation and development benefits are realized – as an outcome of the trade-offs – are rarely commensurate with the scales over which costs are borne. In particular, the benefits may derive regionally or globally while costs are borne locally and costs may be imposed today while benefits are deferred to the future. Other situations may also hold true. For example, increased local genetic and species diversity in agricultural systems often leads to better control of pests and diseases, but the consequent incentive for local protection of biodiversity may not link to any important global values. Moreover, the current mechanisms (market or otherwise) for redistributing costs and benefits in space and in time are often inadequate where they exist at all.

Win-win scenarios, where both natural resources are conserved and human well-being is improved in specific places over time, have been difficult to realize. Compromise, contestation and even conflict are more often the norm. Although biodiversity conservation might be accomplished with no or minimal impact on human well-being or improvements on development at negligible cost to biodiversity, the challenge for conservationists is to explicitly acknowledge the need to share risks and costs and to find a balance between improving livelihoods and biodiversity conservation. Important issues include how to negotiate these trade-offs, what level of biodiversity loss is acceptable, how human costs might be mitigated and who takes part in the decision-making process. While conservation cannot ignore the needs of human beings, development that runs roughshod over the environment will eventually be unsustainable (or collapse).

Addressing conservation and development trade-offs are difficult because the relationship¹ between people and nature is so strongly influenced by where they are raised, how they are educated, their life experiences and the survival conditions and options they have faced. Though not necessarily fixed over time in the face of catalytic events, evolving normative frameworks, or other factors, these different beliefs exert a strong influence on behavior. Moreover, they are often contested and typically underlie difficulties in integrating conservation and development aims. In addition, lack of conceptual clarity about terms such as “biodiversity” and “poverty” inhibits systematic analysis. Shaky assumptions based on piecemeal evidence obscure legitimate differences in preferences and limit the effectiveness of policy and programmatic interventions. We need to better understand how groups with different values, points-of-view and backgrounds formulate their approaches to conservation and development challenges and how this, in turn, affects responses.

In an effort to address these issues, the John D. and Catherine T. MacArthur Foundation have supported the development of an interdisciplinary research initiative called *Advancing Conservation in a Social Context (ACSC)*. The ACSC research initiative is designed as a five year project. In order to reach the overall goal of *improving the ability of key actors to identify, analyze, and negotiate future conservation and development trade-offs*, the initiative will take place in two phases. During the three-year first phase of the project, the ACSC initiative will undertake a program of formative research to increase understanding and the applicability of knowledge about trade-offs by key actors. This approach will be grounded in a comparative analysis of three case study countries – Vietnam, Tanzania and Peru – that is designed to build knowledge that contributes to addressing such trade-off issues within those countries and more broadly in other country contexts and the international arena. The two-year second phase of the project seeks to accelerate the pace at which the findings from the research is adopted, adapted and implemented by practitioners. The strategy for this process of investigation and diffusion will be to engage a range of institutions and organizations, including multi- and bilateral development agencies and banks, government departments, conservation and development NGOs, community-based organizations, the private sector, academic institutions, and foundations and other donors, in order to learn from their experiences – both the positive and negative lessons – and work with them to enhance collective understanding of and ability to address possible trade-offs between biodiversity conservation and human well-being.

The ACSC Research Initiative is organized around three functional units: 1) A host institution providing a fertile intellectual milieu and financial and administrative oversight to the initiative – the Global Institute of Sustainability at Arizona State University; 2) An implementation team, led by a principal investigator with technical support and research coordination in the three case study countries, working under the host institution but fully responsible for implementation of the initiative. Case study country research will be hosted by local institutions with extensive experience in the conservation and development fields in each country (e.g., in Vietnam – the Centre for Natural Resources and Environmental Studies at the Vietnam National University, Hanoi; in Tanzania –

¹ (or the views people hold about this relationship)

Sokoine University of Agriculture, Department of Wildlife Management, Morogoro; and in Peru – Sociedad Peruana de Derecho Ambiental, Lima; and 3) An advisory committee made up of selected experts in the field of conservation and development providing technical input and rigor during the research phase.

Conceptual Framework

Global Policy Discourse

The ACSC initiative is based on the recognition that conservation and development are integrally related and that their linked trajectories have varying implications for biodiversity, livelihoods, and human well-being. While conservation and development can be mutually supportive, under many conditions in time and space, they can be discordant, entail trade-offs and require contestation and negotiation. The initiative focuses on the interstices of conservation and development in its myriad forms, with particular attention to locales, dimensions and relationships that shape conservation and development trade-offs and their associated livelihood and biodiversity conservation outcomes.

The term “win-win” has been widely used in a number of disciplines, most notably marketing and communications, as a way of generating positive thinking and results towards a variety of different goals – usually economic. More recently, “win-win” has become a common term applied by international organizations (multi-lateral and bilateral aid agencies, development and conservation organizations) to describe achieving both conservation and development simultaneously (Box 1).

Box 1: Trade-offs and the Global Environment Facility

A recent review of projects supported by the Global Environment Facility (GEF) found that expectations of win-win situations for global and local benefits proved unrealistic in most cases. It has been difficult to attain in practice win-win situations that are sustainable and replicable partly because of insufficient attention to the development of alternative courses of action and trade-offs, the potential for negative impacts, and the need to develop mitigation strategies. Many GEF interventions require trade-offs to be made between environmental conservation or restoration and existing local or national resource uses.

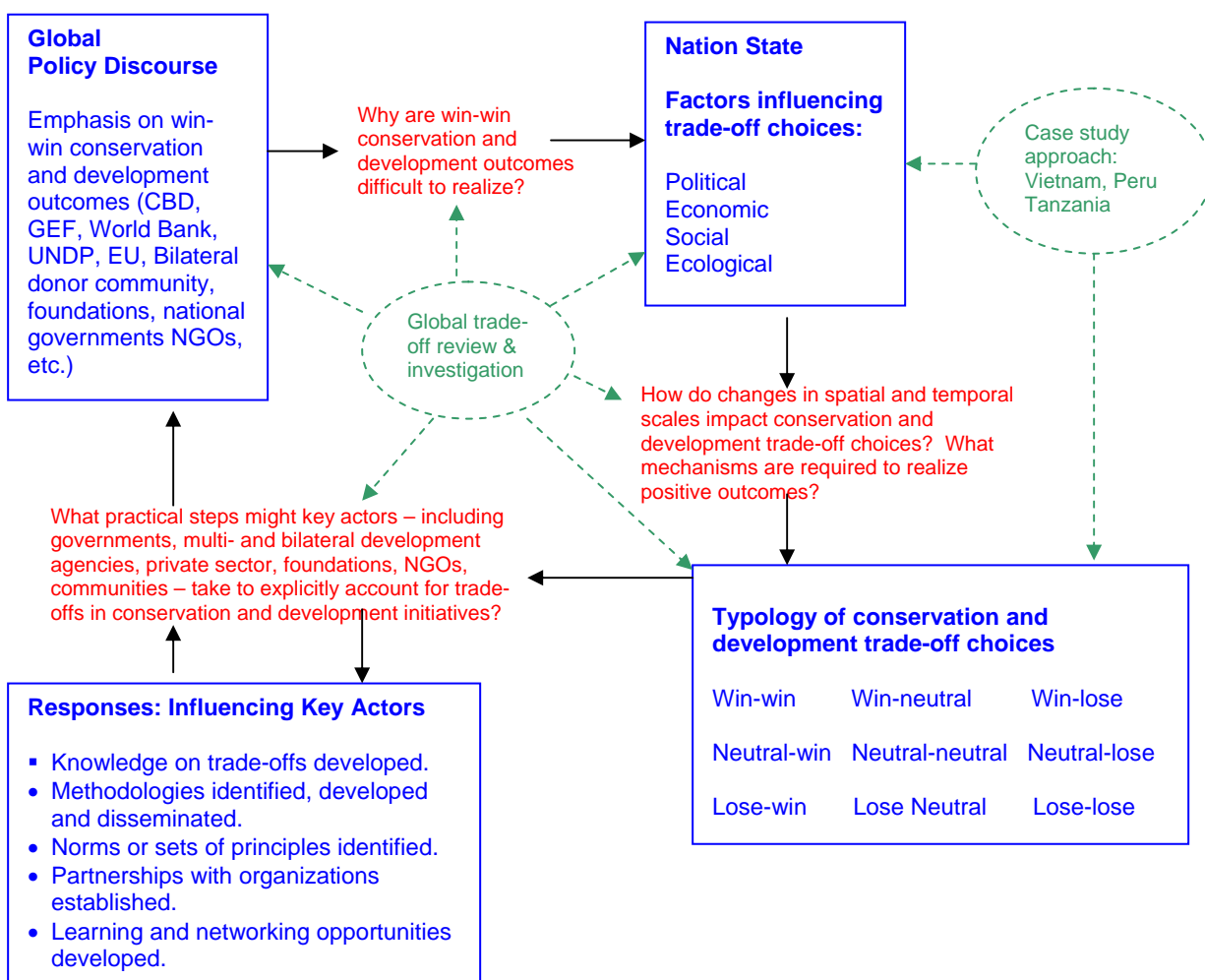
Most GEF projects in the biodiversity portfolio and many in international waters involve some form of restriction of existing patterns of resource exploitation, which will lead to a loss of livelihood to communities or sections of communities. Indeed, the provision of alternative income-generating activities and ecotourism incentives in many projects *implicitly* acknowledged trade-off relationships, but such interventions often lacked analyses.

The result of the GEF review is a recommendation that GEF activities should include processes for dealing with trade-offs between global and local benefits in situations where win-win results do not materialize.

Source: GEF 2005

The use of this language has been most pronounced in the policy discourse about the environment and poverty reduction which is acknowledged today as the primary goal of most development efforts (e.g. Millennium Development Goals, UNDP-EU Poverty Environment Initiative, Convention on Biological Diversity, etc.). Many development assistance agencies aspire to the dual mission of reducing poverty and conserving the environment. Meanwhile, conservation organizations state that their activities yield benefits for the poor. Many imply that natural resources can be managed in ways that achieve benefits for local people while sustaining local and global biodiversity conservation values. What is most notable about this discourse is how the language and terminology have become conventional wisdom without having been critically examined. Only recently has it been acknowledged that expectations for “win-win” outcomes have proven unrealistic in many cases and that greater understanding of the relationships between political, economic, social and ecological factors are required.

Figure 1 illustrates the ACSC Research Initiative’s conceptual framework.



Research Questions

In-depth research about the trade-offs between conservation and development goals have been limited at best. In order to examine the relationship between conservation and development within the current climate of uncritical belief in the wide availability of win-win solutions, the ACSC Research Initiative will be guided by the following research questions:

- Why are win-win conservation and development outcomes difficult to realize?
- How do changes in spatial and temporal scales impact conservation and development trade-off choices? What mechanisms are required to realize positive outcomes?
- What practical steps might key actors – including governments, multi- and bilateral development agencies, foundations, NGOs, and communities – take to explicitly account for trade-offs in conservation and development initiatives?

The Nation State and the Factors Influencing Trade-off Choices

The nation state is the key context for any analysis or negotiation of trade-offs between biodiversity conservation and development goals and the ACSC research initiative will be grounded within specific national contexts. Most conservation priority-setting approaches, such as ecoregions and hot spots, transcend national boundaries and do not directly consider the political and institutional structure of the nation state. Countries are critically important to tackling the political and power problems that appear to lie at the core of the conservation and human well-being issues motivating this effort.

The nation state provides the base unit in and through which trade-off choices are made sometimes explicitly, but often implicitly. We categorize the factors influencing these choices as political, economic, social and ecological. Some examples of specific factors in these broad categories are as follows:

Political: international treaties, national legal and institutional frameworks, policy discourse, customary law, ideology and public administrative capacity.

Economic: macro-economic and fiscal regimes, wealth, market integration, trade policies, availability of credit, and the valuation of environmental services.

Social: power relationships, social customs, social cohesion, norms, equity, demography and public education and awareness.

Ecological: ecosystem function, ecosystem services, species populations, soil quality, water availability and quality, and climate change.

The initiative is based on the recognition that different individuals, groups and institutions have varying perspectives, knowledge, needs and capacities. It also recognizes that these, along with the complex interplay between biological resources, human motivations, institutions and organizational behaviors together create the frameworks within which conservation and development choices are made. Box 2 illustrates some of this complexity of relationships between conservation and development.

Box 2: Complex stakeholder interests and conflict on Lake Tanganyika, Tanzania

Lake Tanganyika is a globally important biodiversity site with 300 endemic fish species and over 1,200 in total, the second highest species count of any lake. The lake's global importance prompted the establishment of a major UNDP / GEF funded biodiversity conservation project aimed at identifying major threats and preventing biodiversity loss. The project reflects the high non-use (existence and option) value placed on it by the international community. However the lake's fisheries are also an important local natural resource with high use values to local people. These differing values have led to a number of conflicts between stakeholders. Local people have little or no appreciation of global biodiversity concerns and why outsiders deem conservation so important, nor apparently do outsiders appreciate the livelihood concerns of local people.

When one area was designated as a national park, changes in fishing regulations gave rise to conflict over fishing rights between the national park authorities and neighboring villages. Traditionally, fishermen had followed the movement of fish into the newly designated exclusion zone but with the changed status this was no longer permitted. The problem was magnified by the absence of markers or buoys indicating the boundary leading to unintentional entering of the park and the confiscation and destruction of equipment. While the new status has led to widespread and unforeseen problems, the fishermen from one village have apparently benefited from the exclusion, as the sanctuary acts as a reservoir for the particular type of fish they catch.

To offset the loss of fishing rights, compensation payments have been made in the form of building materials for classrooms and teacher's offices. While the provision of improved educational facilities is welcome and potentially beneficial to the communities, the impact is seen as indirect and long-term and not focused on the specific fishermen who suffer the loss. The villages do not consider such help as sufficient compensation for the loss of fishing rights, which has severely affected their livelihood-sustaining activities. Nor does it provide any incentive for fishermen to reduce their fishing intensity. To maintain their livelihood, the fishermen must either continue to fish (illegally) in the exclusion zone or increase their catch from other parts of the lake.

Source: Lamboll and Van Broekhoven, in press.

A Case Study Approach

Case studies of three countries will form the core of the ACSC research program, particularly during the first three years of implementation. These three countries are: Vietnam, Tanzania and Peru. Focus on case study countries will allow depth of analysis of the political, economic, social and ecological choices that is not possible at a global scale.

To complement this core, in-country work, research will also be conducted that is global in scope. Relevant information will be primarily collected through a synthesis of the current literature. For example, research on how spatial and temporal scales influence trade-off decision-making could assess the global costs and benefits of such decisions since this is a scale at which the benefits of conservation are often delivered (e.g. too many of the costs of conservation are borne by local people in the near term, while the benefits are distributed globally to those alive today, and possibly locally to those in the future). Currently there are few, if any, mechanisms for distributing costs and benefits so

that beneficiaries pay and stewards are appropriately compensated. Such analyses need to be complemented with an assessment of costs and benefits on local and near-term scales in the case study countries, so that the magnitude of the 'mismatch' can be assessed (e.g. some indication of the size of the resource transfer required to get conservation to occur locally, and whether or not that resource transfer is of value to the global or future community). Where the benefits are greater than the costs, mechanisms (markets or other institutions for valuing the benefits of conservation and for transferring resources from beneficiaries to stewards) need to be assessed. The global review and investigation of trade-offs will help to guide and enrich the case studies, and ensure that the analyses includes sufficient attention to emerging critiques and trends on trade-offs, conservation, development and other relevant fields.

The decision to focus on three countries was made in order to balance the need for programmatic coherence and practical research with the recognition of the complexity of work in different political and social settings. Despite a large literature and far-reaching practical experience, there remains a paucity of rigorous comparative case study work on efforts to meet both conservation and development goals. Systematic analysis of trade-offs and synergies between these two goals are rarer still. The case study approach proposed here aims to fill these gaps and contribute to building a solid evidence base that can inform policy and practice under different conditions. Systematic gathering of contextual details of particular cases will enable a richer and more generalizable understanding of outcomes that are more or less likely across a range of scenarios.

In order to enhance broad understanding of the trade-off issues that animate this research proposal, the selected case study countries include a number of conditions in common. These include:

- A significant relationship between biodiversity and human well-being (situations where livelihood security is directly reliant on the natural resource base and where trade-offs are particularly challenging);
- A relatively long and well-documented history of experience in dealing with conservation and development issues in order to allow for temporal and evolutionary analysis;
- A significant potential to engage with conservation actors along with good prospects to transfer experiences and share in learning.

Concurrently, the three case study countries differ across other important variables. These include:

- Geographic spread (cases in Asia, Africa and Latin America);
- Governance structure and type (e.g. centralized, decentralized, etc.);
- Systems of land tenure and resource ownership;
- The role and influence of external actors as they impact national choices;

- Ecological characteristics (tropical forest, grassland, montane forests, wetland and marine biomes) recognizing they provide different opportunities and constraints in negotiating resource choices;
- The nature of conservation and development conflicts (land conversion to agriculture, wildlife tourism and use, transnational commercial resource exploitation, local access to resources).

Each country represents a range of ecological and social situations found in the developing world. The three cases were chosen for their data richness, prototypical background characteristics, and two of the three are located in current MacArthur geographic priority regions. Selecting cases based on these attributes will help increase applicability of results in other national contexts and enable synergies with other MacArthur grant making in these regions.

Typology of Conservation and Development Trade-off Choices

The initiative is mindful that different levels of knowledge, power and capacities among actors influences: (1) how conservation and development options are articulated, (2) how decisions are made, (3) who makes them, (4) how they are implemented and, (5) how the consequences and impacts are distributed. The initiative is particularly interested in identifying, understanding and informing processes and approaches to conservation that recognize the values of those affected, ensure that decision-making is transparent and accountable, and negotiate trade-offs by drawing on a wide spectrum of relevant knowledge and information.

A typology of trade-offs has been developed for the purpose of evaluating both the opportunities and constraints presented by the interactions among the political, economic, social and ecological factors described above operating at a particular time, with a particular history. A typology is simply a classification of things (in this case conservation outcomes and development outcomes) into groups. In the case of trade-offs they are often grouped as either win-win or lose-lose but the range of choices is considerably greater. Broadly, trade-offs can be grouped in combinations of win, neutral or lose resulting in a nine-boxed matrix (Figure 2). Such a typology of conservation and development trade-offs will aid in drawing general conclusions about the nature of trade-offs across the three case study countries focusing on the key relationships between political, economic, social and ecological factors. The typology of trade-off choices can be used to explore how these factors are sensitive to, and reflective of, changes in spatial and temporal scales and to suggest mechanisms that could result in positive outcomes. For example, helping key actors to recognize and negotiate the inevitable short-term and local trade-offs between development and conservation, and to identify new mechanisms for transferring benefits and costs across space and time. If the global community benefits and the local community incur costs, then mechanisms must be identified for the global community to compensate the local community. Similarly, if the benefits of conservation are deferred in time, but the costs are felt in the present, mechanisms to address this mismatch between costs and benefits need to be identified.

The resulting response options will be used to demonstrate the importance of trade-offs in conservation and development and to influence key actors.

Figure 2: Typology of conservation and development trade-offs²⁻³

Development / Conservation	Win	Neutral	Lose
Win	a. Win-Win	b. Win-Neutral	c. Win-Lose
Neutral	d. Neutral-Win	e. Neutral-Neutral	f. Neutral-Lose
Lose	g. Lose-Win	h. Lose-Neutral	i. Lose-Lose

Responses: Influencing Key Actors

Conclusions drawn from the case studies and global analysis will be used to develop and identify response options to help key actors better address trade-offs in their implementation of conservation and development initiatives. These responses are human actions, including policies, strategies, and interventions, to address specific issues, needs, opportunities, or problems. In the context of trade-offs, responses may be of legal, technical, institutional, economic or behavioral in nature and will operate at various spatial and temporal scales. In general, response options may take the following form:

Knowledge on trade-offs researched by and between researchers and practitioners, and synthesized and disseminated in forms useful to key actors, and promoted to change how trade-off decisions are made.

² This typology is static and of course conservation is dynamic, so a project that is a “win” for development and “lose” for conservation (box g) in the near term could, over time, turn into lose-lose (box i) if the resource base eventually collapses as a result of the project leaving people worse off. In addition, a specific project could be assessed differently by various stakeholders, so a forestry project seen as a development “win” could be a win for the country by gaining desired foreign exchange but a development loss for a local community that relied on the forest for fuelwood.

³ Broad examples looking at conservation and development trade-offs from a community perspective include: box a – legal tenure resolved leading to sustainable resource use; box b – protected area established and zoned so that traditional use is not negatively impacted; box c – the establishment of a park with the forced eviction of local people with no provision for their future; box d – an increase in agricultural productivity and income to farmers with no impact on biodiversity; box f – paper park established with no improvement in conservation but people’s use rights lost; box g – the opening of an open-pit mine that brings jobs and income to local people but clears critical wildlife habitat (though this could rapidly become box i if the mine pollutes the main water sources for consumption over time and closes resulting in the closing of the mine and job losses); and box h – a badly managed ivory trade.

Methodologies identified, developed and disseminated to improve the ability of key actors to formulate more adaptive natural resource strategies in a complex and uncertain world, and to recognize and navigate trade-offs.

Norms or sets of principles identified about how trade-off choices are reached, who participates in the decision-making, and who is accountable for the outcomes. Given the complexity of local and national social settings it is not expected that one universally applicable and agreed standard or norm will emerge about what is the best outcome in balancing possible biodiversity loss against human well-being or the level of conservation gain that might justify a defined human cost in specific situations. The complexity of choices is too great, the stakeholders too many and the range of values too numerous for one formulistic answer. However, the initiative could well lead to norms under which there is widely accepted recognition within the conservation and development community of (1) the need/obligation to identify possible trade-offs between global goods like biodiversity conservation and local social costs, (2) the obligation to resolve the such trade-offs and (3) some more specific guiding principles on how this should be done. Box 3 includes examples of related emerging norms, and supporting practices, that seek to balance competing economic objectives and social or environmental obligations that have emerged in recent years.

Box 3: Recent examples of norms that have emerged to balance competing objectives and obligations.

The "Equator Principles" were developed as a common benchmark for the private financial industry to determine, assess and manage social and environmental risk in project financing. The norm being invoked is the responsibility to identify possible negative impacts from projects on ecosystems and communities that should be avoided where possible, and if unavoidable, should be reduced, mitigated and/or compensated for appropriately. Originally pushed by international NGOs, these principles are increasingly being accepted within the financial community as the behavior expected from responsible international lenders. ACSC will look at the issue of whether, and if so how, these principles and norms might apply to the possible social impacts of conservation projects.

The concept of a "social license" has been developed particularly in the international mining sector (but also in pulp and paper manufacturing). The license establishes a means through which corporations seek to address social costs or expectations over shared benefits while pursuing their primary corporate economic objectives. The requirement for having a "social license" is not yet a fully accepted norm within the mining sector but is an interesting example of an emerging attempt to create a norm that balances the trade-off between a multinational corporation's desire for a profit and the social expectations or obligations of the host country. The concept might be applicable to NGOs that desire to conserve biodiversity as well as meet the social agenda of the host country.

The World Bank's Relocation Policy that applies to all Bank and GEF-funded projects (referred to as its social safeguards policy) details obligations of the funders and fund recipients to address the social impacts caused by relocation from development projects. Originally applied only to the World Bank, with the adoption of similar requirements by most multilateral, many bilateral and some private financial institutions, the basic obligation is now considered the expected norm for all development projects (but not yet so for environmental projects).

The "Aarhus Convention" is an elaboration of Principle 10 of the Rio Declaration, which seeks to establish the need for citizen's participation in environmental issues and for access to information held by public authorities as an international norm. The Convention seeks to create a framework and articulate practices for the public to participate in decisions that directly affect their lives. The objective is to allow citizen participation in development projects, but the norms might be equally applicable to environmental projects. A similar but more specific and still incipient example under the Convention of Biological Diversity seeks to establish free, prior and informed consent applied to the use of genetic material and traditional knowledge.

Partnerships with organizations established that have explored and tested market, mediation, adjudication and other mechanisms for distributing the costs and benefits of conservation in space and time and across different actors, with testing of these mechanisms in particular cases.

Learning and networking opportunities developed through courses, workshops, exchange programs, and other opportunities for interaction and exchange.

Conclusion

The question of how to balance the well-being of human communities, particularly the poorest who rely on proximate natural resources to survive, with the maintenance of the rich variety of life on earth remains one of the most vexing issues facing the field of biodiversity conservation. We need to begin to understand how groups with different values, points-of-view and backgrounds formulate their approaches to conservation and development challenges and how this, in turn, affects outcomes. The ACSC research initiative has been designed to help better understand these complex issues and to change the way the conservation community addresses them.

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