

An Integrated Framework for linking wetland conservation and wise use with poverty eradication

(Resolution XI.13, 2012)



I. Introduction

1. In 2005, Ramsar Contracting Parties adopted Resolution IX.14 on *Wetlands and poverty reduction*, which recognized the relevance of wetland conservation and wise use (and thereby of the Ramsar Convention as an instrument) as an important element for achieving internationally agreed development strategies, including the Millennium Development Goals (MDGs). In the subsequent Resolution X.28 (2008) on *Wetlands and poverty eradication*, the Parties requested the Scientific and Technical Review Panel (STRP) to develop an integrated framework for linking wetland conservation and wise use with poverty eradication and to identify the most appropriate scale at which each type of poverty eradication action should take place.
2. Within this framework, poverty is recognized as a multi-dimensional, value-laden, context-specific, and dynamic phenomenon. This is consistent with current thinking on the concept and measurement of poverty, which over the past four decades has evolved from an emphasis on access to physical commodities to an approach which includes capabilities, or the ability to achieve human well-being.
3. Some of the dimensions used to describe poverty include “inability to satisfy basic needs, lack of control over resources, lack of education and skills, poor health, malnutrition, lack of shelter, poor access to water and sanitation, vulnerability to shocks, violence and crime, lack of political freedom and voice”¹. Poverty has also been expressed as “pronounced deprivation of well-being”². The Millennium Ecosystem Assessment³ identified poverty and well-being as two extremes of a multi-dimensional continuum. Poverty is also considered to be a dynamic phenomenon, with some people remaining in a state of chronic poverty over time whilst others experience a more transient state and may move in and out of poverty.
4. Whilst absolute poverty in terms of the more conventional, financial dimensions of poverty measurements of income/consumption levels can be compared in relation to a poverty line, other dimensions of poverty are context-specific, and what is perceived as poverty can vary between different individuals, sites, regions and countries, and may also vary over time.

¹ World Bank (2001) *Poverty Trends and Voices of the Poor*. 4th Edition. The World Bank, Washington DC, USA.

² World Development Report (2001) *Attacking Poverty: Opportunity, Empowerment and Security*, World Bank, Washington DC, USA.

³ Millennium Ecosystem Assessment (2005). *Millennium Ecosystem Assessment Synthesis Report*. Island Press, Washington, DC.

5. Ramsar Resolution IX.14 (2005) refers to poverty reduction, which implies lifting people beyond a defined poverty line and transforming them from poor to non-poor, while the subsequent Resolution X.28 (2008) talks about poverty eradication, which usually refers to moving people who are in extreme poverty (below a US\$1.25 per day poverty line) to above this line.

II. Wetland-poverty interlinkages

6. Wetland management seeks to ensure “wise use” of wetlands, which in Ramsar’s definition of wise use means “the maintenance of ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development”(Resolution IX.1 Annex A, 2005).
7. An explicit recognition of ecological character as a relatively value-based, cultural and normative social construct forms the basis of wetland-poverty interlinkages. Human societies are fundamentally linked to wetlands, from the core human requirements for water, food and livelihoods, through the choices and tradeoffs they make and the governance systems that influence their behaviour in and around wetlands. The existence of poverty in its various forms may therefore influence, and be influenced by, wetland ecological character and associated cultural values.
8. Wetland ecosystem services (the benefits people derive from wetlands) form an integral part of the livelihood strategy of wetland-dependent communities. Their livelihood systems often involve adapting to the overall ecological character of the wetland so as to optimize livelihood outcomes. The ways in which ecosystem services integrate with other livelihood capitals, particularly the social, economic and political contexts under which ecosystem services accrue to the livelihoods of dependent communities, become important variables in influencing the sustainability of livelihood strategies as well as poverty within wetland communities.
9. Conversely, livelihood strategies of communities living in and around wetlands may also influence a wetland’s ecological character. Failure to follow wise use principles can exacerbate the problem by pushing people into poverty (transforming the non-poor into the poor), by maintaining the status quo for those who are already in poverty, and by pushing already poor people further into poverty.
10. The relationship between wise use and poverty eradication can be direct (e.g., wise use of resources that support livelihoods) and indirect (e.g., wise use of wetlands contributes to climate change mitigation and thus can improve human well-being). Similarly, degradation of ecological character can have direct relationships with poverty (e.g., resource depletion that negatively impacts on livelihoods of local wetland-dependent communities) or be indirect (e.g., pollution that impacts on the livelihoods of downstream communities through the deterioration of water quality and/or increasing costs of water treatment).
11. Given the multi-dimensional nature of poverty, however, achieving a change in poverty status is dependent on several factors which are beyond the domain of just ensuring wise use of wetlands or maintaining and enhancing ecological character. So whilst ensuring the wise use of wetlands can serve as an important constituent of poverty-related policy making, it can seldom be the single instrument.

12. As well as wetland loss and degradation impacting upon human well-being, poverty can often result in interventions that impact upon wetlands. These impacts can be both direct (over-exploitation of a natural resource that reduces livelihood options; absence of sanitation, which forces people to use wetlands for waste disposal) and indirect (destructive agricultural practices in the catchment leading to changes in wetland sedimentation). Such interventions can also take place at a range of geographical scales, from local (e.g., poverty of local wetland dependent communities resulting in unsustainable exploitation) and national (e.g., national government efforts to reduce poverty may result in unwise use of wetlands) to global (e.g., focusing on MDG goals on hunger, poverty, and water may result in the failure to achieve targets for wetland ecosystem services).
13. Where poverty exists, it is possible for a vicious circle to develop, whereby poverty impacts upon ecological character to the extent that the potential for wetlands to deliver their ecosystem services is degraded or even lost.
14. The impact of conservation/development interventions on wise use (maintaining ecological character) and poverty eradication have a number of potential outcomes. The range of potential scenarios is dependent on the starting point on the poverty/well-being and ecological character axes, as shown in Figure 1. The nature of any intervention will depend on the relevant institutional, social, economic, and ecological factors at play.
15. It is clear that policy changes that bring the communities into the domain of well-being (lifting people out of poverty) and maintain good ecological character provide a win-win situation. Conversely, a policy change that triggers deterioration in ecological character beyond the limit of acceptable change and pushes communities into poverty lies in the “no-go” zone.
16. Between these two options there is a range of scenarios which deliver one of the two objectives at the cost of the other, thereby indicating that tradeoffs have to be made. It is in these zones that a systematic assessment of wetland-poverty interlinkages becomes highly relevant, as too does developing policy options that ensure optimal achievement of both objectives, poverty eradication and maintenance of ecological character.
17. For further description of the interactions between wetland ecological character and the human health aspects of poverty eradication and human well-being, see Ramsar Technical Report No. 6 (2012)⁴.

⁴ Horwitz, P., Finlayson, C.M. & Weinstein, P. (coordinating authors) 2012. *Healthy wetlands, healthy people: a review of wetlands and human health interactions*. Ramsar Technical Report No. 6/World Health Organization Report. Ramsar Convention Secretariat, Gland, Switzerland.

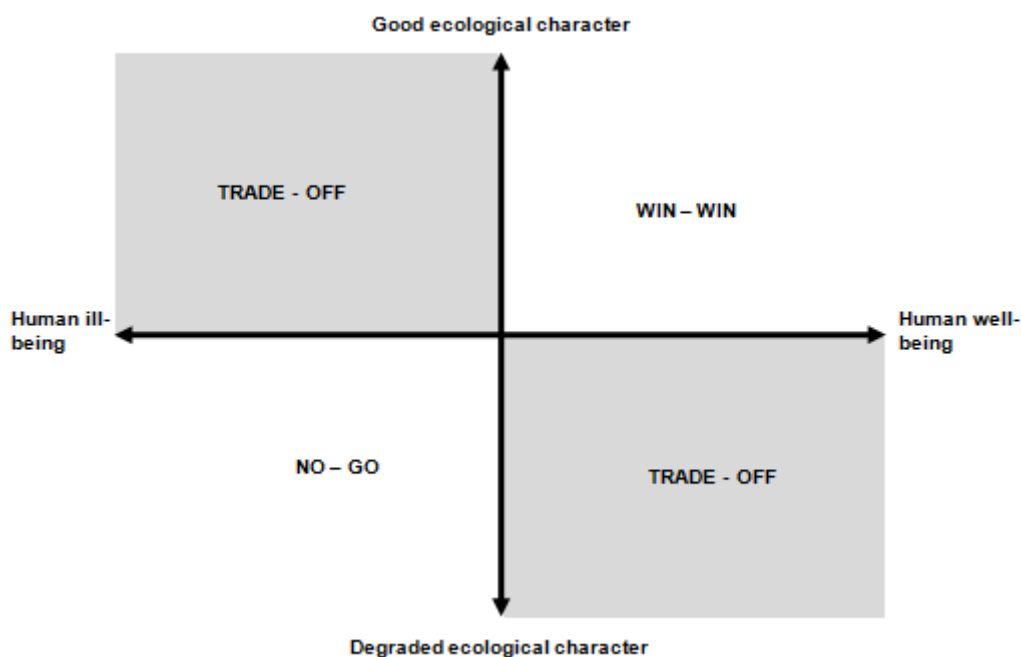


Figure 1. The range of potential scenarios of changes in wetland ecological character and poverty due to policy interventions

III. A general framework for integrated assessment of wetland-poverty interlinkages

18. This general framework for assessing wetland-poverty interlinkages builds upon recognizing the tradeoffs involved in the transition from a state of ill-being to a state of well-being, with an underlying change in ecological character. The framework builds on the concepts of justice, equity, sustainability, livelihoods, capability, and ecosystem stewardship, along with the Ramsar definitions of ecological character and wise use of wetlands.
19. The framework is based on a set of design principles derived from a review of existing frameworks on poverty-environment linkages. The review reinforces the idea that a two-way interaction between livelihoods and environment is essential.
20. The framework progresses from understanding poverty as an expression of vulnerabilities to exposure to environmental change, to more meaningful expressions of well-being and ecosystem services and how a systems approach can reveal interventions which can alleviate poverty.
21. The five general principles underlying the framework are:
 - i) **Poverty as a multi-dimensional concept.** Poverty and well-being are two ends of a multi-dimensional, value-laden and context-specific spectrum. Conceptualizing poverty requires a clear emphasis on capabilities (ability to achieve livelihood conditions) as differentiated from functioning (livelihood conditions). The relationships between ecosystem services and poverty are complex, and not all drivers and constituents of poverty are addressed by sustainable provision of

wetland ecosystem services. Sustainable management of wetlands should be seen as a part of a number of broad-scale strategies for addressing poverty.

- ii) **Wetland management as a process to promote and encourage participation of the poor.** Existing evidence on the relationship between biodiversity and poverty indicates that in general the poor carry an unequal burden from the impact of wetland degradation. Exclusion or inclusion, at multiple levels and forms, in natural resources management constitutes one of the key determinants of poverty. At the same time, owing to their relative location and relationship with resources, the poor also provide opportunities for promoting stewardship and contributing traditional knowledge to support conventional understanding of ecosystem functioning. One of the key purposes of wetland management planning is to provide a voice and a mechanism for the poor to participate in decision making. Ramsar guidance promotes full local community participation in wetland management planning (see Ramsar Wise Use Handbook 7, 4th edition, 2010).
 - iii) **Sustainability of livelihoods as an important precondition to achieving wise use of wetlands.** Several components of ecological character are manifestations of livelihood systems with direct or indirect linkages to wetlands. Poverty is influenced by, and also influences, wetland ecological character. Livelihoods need to be sustainable, in social as well as ecological terms, to achieve the wise use of wetland ecosystems.
 - iv) **The interconnectedness of ecosystems services and livelihood capitals – the dynamic nature of wetland ecosystem services as a livelihood capital base for the poor.** People obtain livelihoods using various capitals. Capabilities help define access to various forms of capitals. Wetlands form a dynamic capital base that contributes to all forms of capitals. Institutions and levels of freedoms available to a community play an important role in defining access, allocation and overall resource management.
 - v) **The inherent relationships amongst livelihood systems across various socio-political, spatial and ecological scales.** It is apparent that livelihood-related issues where the environment is implicated cannot be solved exclusively by approaches in a ‘traditional’ development domain which focus on people and their assets. Rather, broader approaches are needed, drawing on ecological and social sciences, accepting that humans are not separable from their natural environment and that socio-economic factors mediate human health and well-being. The drivers and pressures on livelihood systems act at multiple scales and through several direct as well as indirect pathways. An important consequence for wetland management is therefore to be able to recognize these pathways and develop appropriate response strategies as a part of management processes.
22. The framework for integrated assessment of wetland-poverty interlinkages comprises five elements:
- a) wetlands as settings for livelihood-ecological character interactions;
 - b) linkages with external environment-vulnerability contexts;
 - c) livelihood strategies;

- d) institutions and freedoms; and
- e) human well-being outcomes.

23. The framework is presented in Figure 2. Description of each of the framework elements follows.

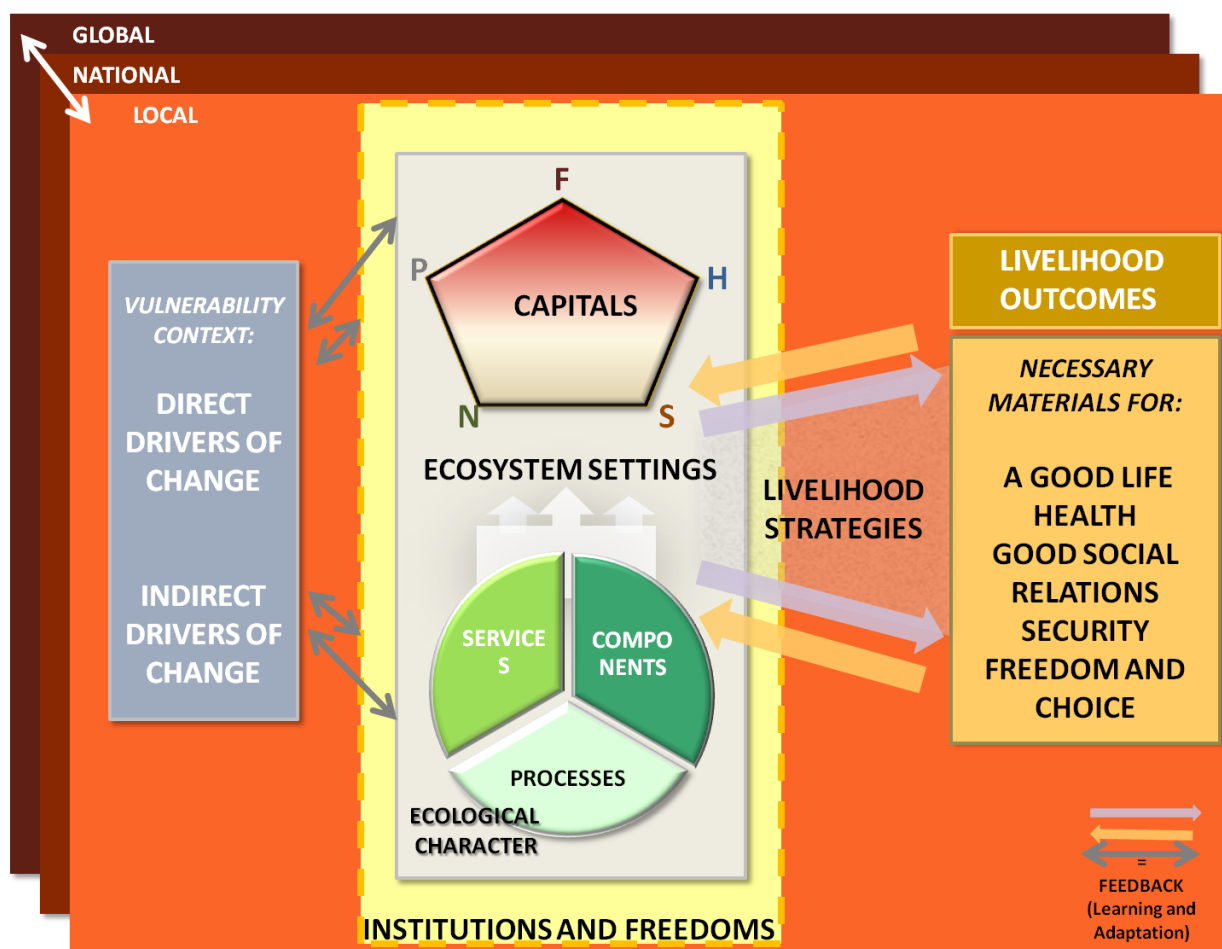


Figure 2. The framework for integrated assessment of wetlands-livelihoods interlinkages (derived from the Millennium Ecosystem Assessment's conceptual framework for ecosystems and human well-being)

A. Wetlands as settings for livelihood-ecological character interactions

24. The framework emphasizes wetland ecosystems and their services as *settings* determining human health and well-being because they provide (safe) water, nutrition, fibre, shelter and medicinal products. They are the places from which people derive their livelihood and the places that enrich people's lives, enable them to cope and to help others. The ecological character of wetland ecosystems is the foundational construct of these settings. Livelihood systems interact with wetlands at multiple spatial and temporal scales, mutually shaping and reinforcing ecosystem services embedded within ecological character, as well as livelihood capitals which form the basis of livelihood strategies.

25. The livelihood systems can be seen as based on a set of capitals⁵, broadly categorized into:
- i) **Natural Capital**, representing capital stocks derived from nature from which resource flows and services useful for livelihoods are derived;
 - ii) **Human Capital**, representing the skills, knowledge, ability to labour, and good health that together enable people to pursue different livelihood strategies and achieve livelihood objectives;
 - iii) **Social Capital**, comprising the social resources upon which people may draw in pursuit of livelihood objectives (such as opportunities for participation);
 - iv) **Physical Capital**, comprising the basic infrastructure and producer goods needed to support livelihoods; and
 - v) **Financial Capital**, comprising the financial resources that people use to achieve livelihood objectives.
26. Ecosystem services from wetlands are flows parallel to those from other livelihood capitals. While forming a part of the natural capital, these services, through transforming structures and processes, contribute to all other forms of capital. An understanding of these interactions helps to conceptualize the extent to which wetlands can contribute to poverty reduction for a given livelihood system. Maintenance of ecological character forms the basis of the continued provision of these ecosystem services to people. A mapping of wetland ecosystem services and livelihood capitals is provided in Table 1.

⁵ These are further described in DFID (UK Department for International Development) (2001) *Sustainable Livelihoods guidance sheets*. Downloadable from www.eldis.org/index.cfm?objectid=07D70938-0664-EE3F-F57D2FF787FF2F9A

Table 1. Linking wetland ecosystem services to livelihood capitals

		Livelihood Capitals				
		Natural: Land, soil, water, fisheries, etc.	Physical: Basic infrastructure & producers' goods	Human: Skills, knowledge, health & ability to work	Social: Informal networks, formalized groups membership, relationships	Financial: Savings, credit, incomes, trade & remittances
Ecosystem services from wetlands	Provisioning	Food & water security (subsistence) Drinking water for humans & livestock; water for agriculture; food for humans & livestock		Wetlands & human health: Medical products		Products for trading: Food for humans; food for livestock; water, reed fiber & peat; medicinal plants
	Regulating	Water purification; flood control; flood storage; soil; sediment & nutrient retention; coastal shoreline stabilization; storm protection; carbon storage; climate buffering	Wetlands as water infra-structure: Flood control; flood storage; coastal shoreline stabilization; storm protection	Biological control agent for pest diseases		Insurance values of wetlands: Coastal shoreline protection; carbon storage
	Cultural	Recreational hunting & fishing; cultural heritage; contemporary cultural significance; spiritual & religious values; water sports; nature study; educational values; aesthetic & sense of place values; knowledge systems; other recreation & tourism		Wetlands & human health: Water sports; nature study; educational values; aesthetic & sense of place values; knowledge systems	Recreational hunting & fishing; cultural heritage; contemporary cultural significance; spiritual & religious values	Revenue generation opportunities Other recreation and tourism
	Supporting	Primary production; nutrient cycling				

B. Linkages with external environment-vulnerability contexts

27. The capitals are linked to an external environment domain, which consists of direct and indirect drivers of change. Operating at multiple scales and across stakeholders, the indirect drivers may include demographic, economic, socio-political, scientific and technological, and cultural and religious drivers. Direct drivers include changes in local land use and cover, species introduction or removal, technology adaptation and use, external inputs, harvest and resource consumption, climate change, and other natural, physical, and biological drivers.

C. Livelihood strategies

28. The capability of the communities to employ livelihood capitals, as well as the wetland ecosystem services embedded within the capital set, define their livelihood strategies. Livelihood analysis starts from the premise that access to services and benefits, and therefore well-being outcomes, is likely to be distributed in an unequal way along prevailing socio-economic circumstances. Management interventions for wetlands must also seek to address these inequities through a range of possible options, for example, use of payments and incentive systems linked to ecosystem services.

D. Institutions and freedoms

29. The capability to access livelihood capitals is influenced by institutional arrangements, formal and informal (referred to in DFID 2001 as transforming structures and processes). Inequality in access to resources, often attributed to scarcity, as well as opportunities of value addition, create incentives for powerful groups to gain privileged access by influencing political, economic and social institutions that govern their access, management, and use. The ability to create, revise, and/or modify institutions is linked to the degrees of freedoms in the community. These freedoms play an important role in providing space for the poor to define their rights and create institutions that will ensure and fulfil fair distribution of rights, finally leading to an ability to make their own choices for self-determination.
30. Six broad categories of freedoms⁶ have been articulated as:
- i) **participative freedom** which allows people to be involved in an active manner without intimidation or fear in deciding issues related to their well-being;
 - ii) **economic facilities**, enabling people to convert ecosystem services for production and exchange;
 - iii) **social opportunities** such as arrangements societies make for education, health and other related sectors in order to allow people to live better lives and be productive members of society, with specific reference being made to gender equality;
 - iv) **transparency guarantees**, encouraging openness and trust;
 - v) **protective security**, creating safety nets against adverse events that make individuals helpless; and
 - vi. **ecological security**, the minimum levels of ecosystem services required to sustain livelihoods.

E. Human well-being outcomes

31. The livelihood strategies finally lead to a livelihood outcome, or change in well-being status. A strategy can therefore be leading to a certain change in poverty status depending upon the changes induced in the five broad elements of human well-being, i.e., the necessary material for good life, health, good social relations, security, and freedoms and choice.
32. The sustainability of the wetland-livelihoods interlinkages can be assessed for a livelihood system in terms of achieving at least three preconditions:

⁶ For a detailed discussion, refer to UNEP-IISD (2004). *Exploring the Links: Human Well-Being, Poverty and Ecosystem Services*. IISD, Winnipeg, Canada.

- i) **Internal sustainability**, when there is the ability to cope and recover from stresses and shocks and maintain or enhance capabilities and assets both now and in future;
- ii) **Social sustainability**, when the livelihood of others are enhanced, or not diminished; and
- iii) **Ecological sustainability**, when there is no depletion or disruption of ecosystem services to the prejudice of livelihoods and the well-being of others, now or in future. Inherent in this definition is that livelihood systems are enabling maintenance or enhancement of wetland ecological character.

IV. Response strategies

- 33. The framework for integrated assessment of wetland-livelihoods interlinkages can be used to develop response strategies for addressing unsustainable wetland-livelihood interlinkages by identifying causative factors at the levels of framework elements.
- 34. A suitable problem analysis tool – for example, the Driver-Pressure-State-Impact-Response (DPSIR) framework – can be employed to identify the causal links between the human well-being outcomes and various framework elements.
- 35. Although any specific intervention will vary depending on the characteristics of the site-level interaction, it is understood that a multiscale response strategy will be required that involves multiple stakeholders. The wetland management planning processes and the enabling institutional arrangements would need to ensure that sufficient linkages are maintained to be able to initiate and implement these response strategies to achieve desired wetland management and poverty eradication outcomes.
- 36. A generic response framework for addressing wetland-poverty interlinkages based on the framework elements is provided in Table 2. The response options can form the basis of development of a set of indicators for assessing the sustainability of wetland-livelihoods interlinkages for poverty eradication.

Table 2. A generic response framework for addressing wetland-poverty interlinkages based on the framework elements

Framework elements	Proximate factors affecting sustainability of wetlands-poverty interlinkages	Response Options		
		Local	National	Global
Linkages with external environment – vulnerability contexts	Land use change adversely affecting wetland ecological character & ecosystem services		Including wetlands fully in spatial planning, distinctly considering impacts of basin-level land use changes on wetland ecological character & the livelihood capitals of dependent communities	Enhancing international cooperation to address the drivers of land use change

<p>Livelihoods-wetland ecological character interactions</p>	<p>Degradation of wetlands leading to negative impacts on livelihood capital base</p> <p>Resource use practices negatively impact wetland ecological character</p>	<p>Improving measures to access & develop capacity of communities to sustainably use wetland resources based on wise use principles</p> <p>Rationalizing incentive systems to promote wetland ecosystem stewardship</p> <p>Ensuring that wetland management planning processes provide opportunities for sustainable livelihoods for wetland communities</p>	<p>Integrating the conservation & wise use of water & wetlands into national poverty reduction strategy papers</p> <p>Creating partnerships between wetland managers, indigenous peoples, local communities & national level policy planners to ensure that local perspectives & existing sustainability strategies are respected</p> <p>Establishing financial mechanisms that improve wetland management as well as contribute to tangible poverty reduction</p> <p>Ensuring that gender equality & sensitivity are taken into account in sustainable wetland management strategies</p>	<p>Developing new financial mechanisms for wetland management as a means of addressing poverty alleviation / reduction / eradication</p>
<p>Livelihood strategies</p>	<p>Lack of capacity of wetland communities to access livelihood capitals, including wetland ecosystem service flows</p>	<p>Ensuring that wetland-dependent communities have adequate freedoms to be able to create, revise or modify institutional arrangements</p>		