

Gender in Conservation

Does a gender aware approach lead to an improvement in the achievement of conservation outcomes?

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Contents

1	Executive Summary	3
1.1	Introduction.....	3
1.2	Methodology.....	3
1.3	Key Findings.....	3
1.4	Conclusions.....	3
2	Introduction	4
3	Methodology	5
3.1	Selection of Materials	5
3.2	Analysis of Materials	7
4	Gender Awareness and Conservation Impact within each Ecological Domain.....	8
4.1	Forestry	8
4.2	Marine	9
4.3	Freshwater	10
4.4	Species.....	10
4.5	Climate Change	11
5	Selected Case Studies	11
5.1	Community Forest Groups in India and Nepal.....	11
5.2	The TRY Oyster Women’s Association, The Gambia	11
6	Concluding Remarks	12
7	References	14
8	Appendices	16
8.1	Terms of Reference	16
8.2	Keywords.....	17
8.3	Acronyms.....	17
8.4	List of Titles analysed in the Study	18
8.5	Useful Websites and Online Resources	22
8.6	Acknowledgements.....	22

1 Executive Summary

1.1 Introduction

This report documents the main findings from a desktop literature conducted over a three month period from 2012-2013. The purpose of the study was to establish an understanding of the extent to which empirical evidence exists to support the view that a gender aware approach, particularly one which takes account of the role of women, is a prerequisite for the achievement of improved conservation outcomes. The study was undertaken as part of a wider gender mapping exercise conducted by WWF-UK at time when conservation organisations increasingly find themselves under pressure from external donors and international bodies to demonstrate that their policies and programmes are both equitable in terms of the people and communities involved and effective in terms of conservation outcome.

1.2 Methodology

Materials were gathered as a result of extensive online literature searches carried out using keywords linking conservation and gender with a number of ecological domains relevant to the work of WWF, including forestry, fisheries, freshwater, species and climate change. Documents were also obtained directly from colleagues at WWF-UK and as a result of personal communication with academics and employees of other conservation organisations. The results of online searches suggest that across the ecological domains addressed in the review, the number of studies which incorporate a gender dimension, most typically exploring the role of indigenous women, amounts to no more than 0.5% of the body of literature addressing conservation issues across these same domains. Nevertheless, around 110 documents were eventually selected for inclusion in the study, just under one third of which was drawn from academic, peer-reviewed journals. Materials were sorted and catalogued according to document type, ecological domain, evidence of empirical data, and the extent to which meaningful conclusions could be drawn about the adoption of a gender-aware approach to conservation.

1.3 Key Findings

Of the small proportion of literature on conservation which included a gender dimension, most was typically in favour of adopting a more gender-aware approach to conservation. This was usually on the basis of the widely recognised overlap between conservation, development and livelihood concerns, many of which are considered particularly relevant to the everyday lives of indigenous women due to their gender-specific knowledge of biodiversity as well as their social and economic roles which remain dependent upon the sustainability of local, natural resources. What was striking, however, was the lack of empirical data to support these assertions. At best, conclusions were based on the findings from small, isolated case-studies. Furthermore, the study found an imbalance in the quantity and quality of empirical research across ecological domains. The most extensive and well-documented studies appear to be those which consider gender, especially the role of women, within the context of forest conservation and even then, it is evident that the gender roles of men and women differ across time and space and between different social classes, ethnic groups and communities, making it hard to draw any kind of broader conclusions. Two case-studies, one documenting Agarwal's extensive research on community forest groups in India and Nepal and the other outlining the role of women engaged in oyster fishing in the Gambia are presented as examples of ways in which a deeper understanding of gender, alongside other social, economic and cultural variables may lead to better conservation outcomes.

1.4 Conclusions

Due to the paucity of research and empirical evidence in the area of gender and conservation, it is difficult to answer with any certainty the question posed at the outset. In terms of achieving a clearer understanding of the extent to which the adoption of a gender aware approach to conservation is a prerequisite for improved conservation outcomes, the report therefore concludes that the need remains for rigorous, long-term empirical research to enable a clearer distinction to be drawn between the rhetoric of much the policy linking gender and conservation and the attainment of quantifiable conservation outcomes.

2 Introduction

‘Doing research is the easy part of conservation; the most challenging and exciting thing is linking findings with the conservation actions, and this will always include people. Do not stop until you get to that point’.

These are the words of Madagascan conservationist, Julie Hanta Razafimanahaka, during an interview for the UK based conservation charity, Flora and Fauna International (Rakowski, 2012). Importantly, the people to whom she refers are the men and women across the planet whose daily lives are inextricably linked to the resources and environments in which they live and who make up the local communities with which conservation organisations must work successfully in order to achieve their stated objectives. The question this paper sets out to explore is the extent to which policies and programmes which include in their design an awareness of gender are more likely to achieve successful conservation outcomes. Gender is defined in this context as the culturally and socially constructed attributes, behaviours, roles and responsibilities associated with being female or male in any given society at a particular point in time.

For at least a decade, it has been argued that the support of local communities is vital for the effective conservation of resources because, unless the immediate livelihood needs of local stakeholder populations are met, longer term conservation objectives are considered to be unattainable. There has, therefore been increased emphasis on linking conservation with development objectives; even within organisations whose primary stated objectives are conservation. For example, in an evaluation of a biodiversity conservation project in the Gashaka Gumti National Park, Nigeria, Dunn, Mamza, Ananze and Gawaisa, (2000, p. 143) cited by Flintan (2003b), suggest that ‘WWF has undergone significant changes in recent years...although biodiversity concerns remain paramount, it is realised that these objectives will only be achieved by linking conservation with human needs’.

As a result, more and more conservation work takes place in the form of what are now widely known as Integrated Conservation and Development Projects (ICDPs), typically geared towards Community Based Natural Resource Management (CBNRM) (Flintan, 2003b) and conservation organisations increasingly find themselves under pressure from external donors and international bodies to ensure a more equitable conservation and development process which takes into account social issues such as gender. For example, the Convention on Biological Diversity argues in favour of recognising the vital role that women play in the conservation and sustainable use of biological diversity. It also affirms the need for the full participation of women at all levels of policy-making and implementation in order to achieve effective biological diversity conservation (WEDO, 2012b). The rationale behind this approach rests on the understanding that men and women have different roles and relationships with respect to natural resources. Not only do men and women each have different knowledge of biodiversity, their control over resources and access to decision-making also varies and failure to recognise this may compromise the attainment of conservation goals.

However, while gender concerns have been mainstreamed to the extent that they are included in project planning, there still remains a lack of disaggregated empirical data and a shortage of academic peer reviewed papers which provide concrete evidence as to whether, and if so, how, and to what extent, the adoption of a gender aware approach with respect to programmes and institutions, ultimately achieves better conservation outcomes. Roe (2012) attributes this to a lack of political will, the multiplicity of objectives across donor and implementing agencies, a lack of knowledge and understanding of policy evaluation methods amongst conservation practitioners and misconception that policy evaluation diverts scarce funds to nonessential ‘academic’ activities. It may be noted that within the academic literature, gender perspectives in relation to conservation and development are typically discussed from one of two prominent theoretical perspectives related to feminist political ecology: Women in Development (WID) and Gender, Environment and Development (GED) but it is beyond the scope of this paper to explore these in any greater depth (Bosold, 2012).

In the light of the above, this report sets out to explore current levels of understanding regarding the extent to which the adoption of a gender aware approach, especially with respect to the contribution made by women, can be shown, not only in theory but also in practice to support effective conservation work. Particular emphasis is placed on gauging the extent to which effective monitoring and assessments have been carried out which can, in turn, provide a sound empirical rationale for linking a gender approach to conservation impacts across a variety of ecological domains in which WWF-UK is actively involved, including programmes relating to forestry, fisheries, water resources, species and climate change.

3 Methodology

3.1 Selection of Materials

This report represents the results of a desktop review of academic and grey literature,¹ including web links and downloaded research, project and programme reports, which took place between November 2012 and January 2013. The material was gathered and organised around a number of themes or domains which were considered to be particularly relevant to the conservation work of WWF, including forestry, fisheries, freshwater, species and climate change. With the exception of species, summaries of these key policy areas in terms of theories of good practice and the desirability in principle of adopting a more gender aware approach to conservation and natural resource management may be found on the WWF-UK website (WWF-UK, 2012a, 2012b, 2012c, 2012d, 2012e).

An initial search was conducted using the open access EBSCO database, *GreenFILE*, (www.ebscohost.com/academic/greenfile) which combined keywords relating to the ecological domains with the words 'conservation' and 'women' [see Table 1]. The aim of this was to establish an overview of the percentage of scholarly papers in any given ecological domain which include a gender/conservation angle. Some, but not all, of these papers were considered relevant for the study. It was particularly striking that only a tiny percentage of references within any given ecological domain included a relevant gender focus, most typically an analysis of women as part of the community. Substitution of the keyword 'women' with the term 'gender' as a search term was found to be less reliable since searches using the term 'gender' also identified articles describing natural biological processes which were clearly not relevant to the current study.

An online literature search based on chosen keywords and previously cited authors was then conducted using search engines such as *Google* and *Google Scholar*. Relevant cited works were accessed and downloaded electronically. In addition to the online literature searches, personal communication took place via email with a number of researchers based at NGOs and universities in Canada and the USA. These contacts shared details of their own research and recommended additional academic material. Further snowballing and following up web-links on resource pages of relevant conservation-oriented websites eventually resulted in the collection of over 100 relevant references which ranged from two-page bulletins and web-pages to peer-reviewed journal articles and lengthy policy documents [see Figure 1].

All the collected material was selected on the basis that it included a gender and/or women and conservation focus. While the majority of material was produced by NGOs and international organisations with an interest in gender and/or women and conservation/development issues, just under one third of the publications were drawn from peer-reviewed academic journals [see Figure 2].

¹ The term 'grey literature' refers to the body of literature which is produced by government institutions, non-governmental organisations, academics and businesses but which falls outside the control of commercial publishers. Such literature may include briefings and reports, conference proceedings, bibliographies and official documentation.

Search Term (s)	Total Hits	% of Total Hits per Ecological Domain
forestry	27,673	100.00%
forestry AND conservation	6,841	24.72%
forestry AND conservation AND women	23	0.08%
marine ecology	1,260	100.00%
marine ecology AND conservation	327	25.95%
marine ecology AND conservation AND women	0	0.00%
mangrove	939	100.00%
mangrove AND conservation	289	30.78%
mangrove AND conservation AND women	5	0.53%
freshwater ecology	1,049	100.00%
freshwater ecology AND conservation	175	16.68%
freshwater ecology AND conservation AND women	1	0.10%
fisheries	9,905	100.00%
fisheries AND conservation	3,621	36.56%
fisheries AND conservation AND women	8	0.08%
species	69,420	100.00%
species AND conservation	25,588	36.86%
species AND conservation AND women	67	0.10%
wildlife	42,138	100.00%
wildlife AND conservation	21,394	50.77%
wildlife AND conservation AND women	74	0.18%
climate change	31,838	100.00%
climate change AND conservation	4,786	15.03%
climate change AND conservation AND women	13	0.04%

Table 1: Results of *GreenFILE* Database search by Keyword.

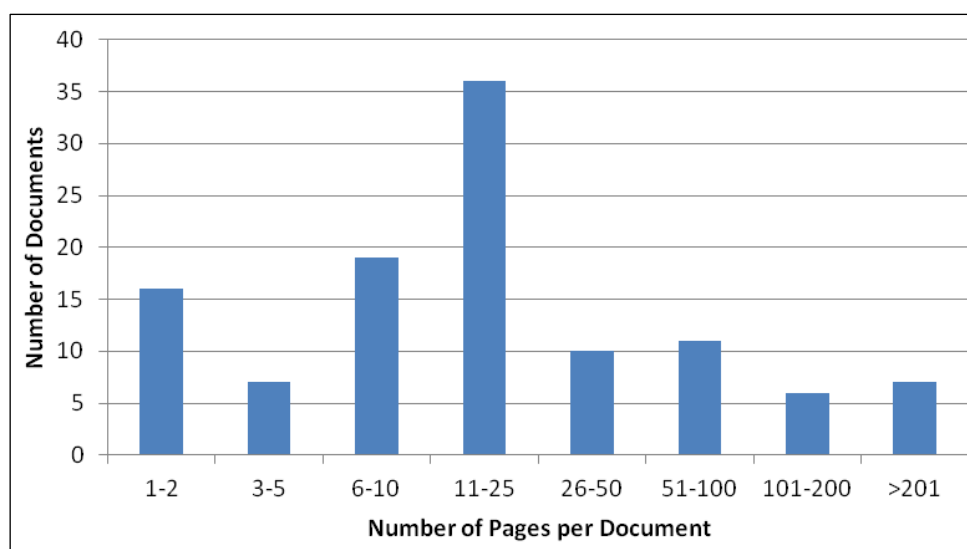


Figure 1: Overview of the length and number of publications reviewed for this report.

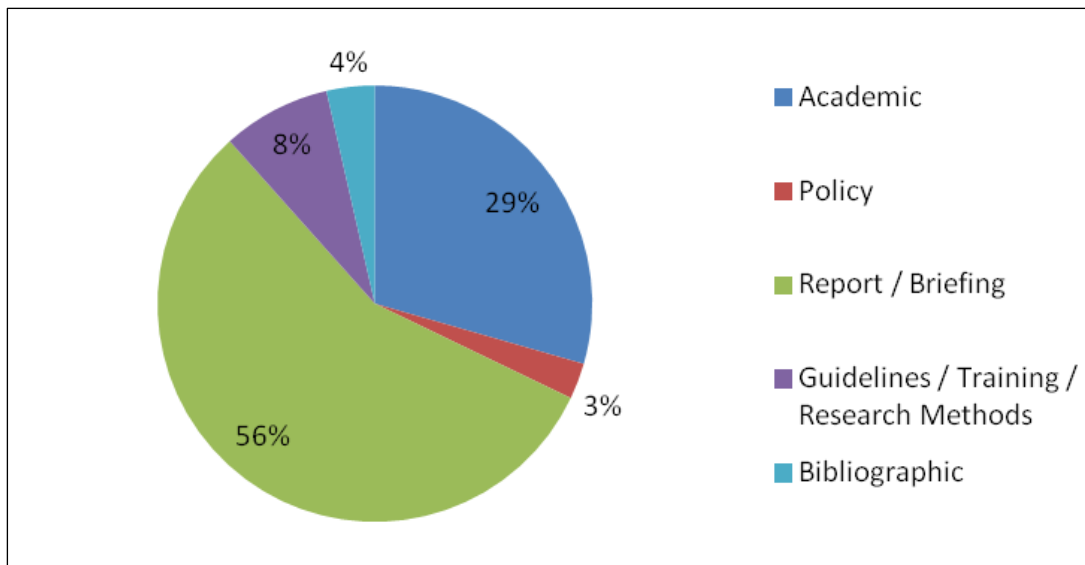


Figure 2: Breakdown of Reviewed Documents (by type)

Each document was catalogued electronically using the bibliographic referencing software, Endnote X5. PDFs were also stored electronically. In addition, brief details of each document were included in an annotated bibliography recording the subject area, keywords, details of any empirical research or case studies mentioned, key findings, and conclusions. A summary table of the annotated bibliography was then created using *Excel* to enable rapid searching and sorting of documents to support the writing up of the final report. For an overview of this table see Figure 3.

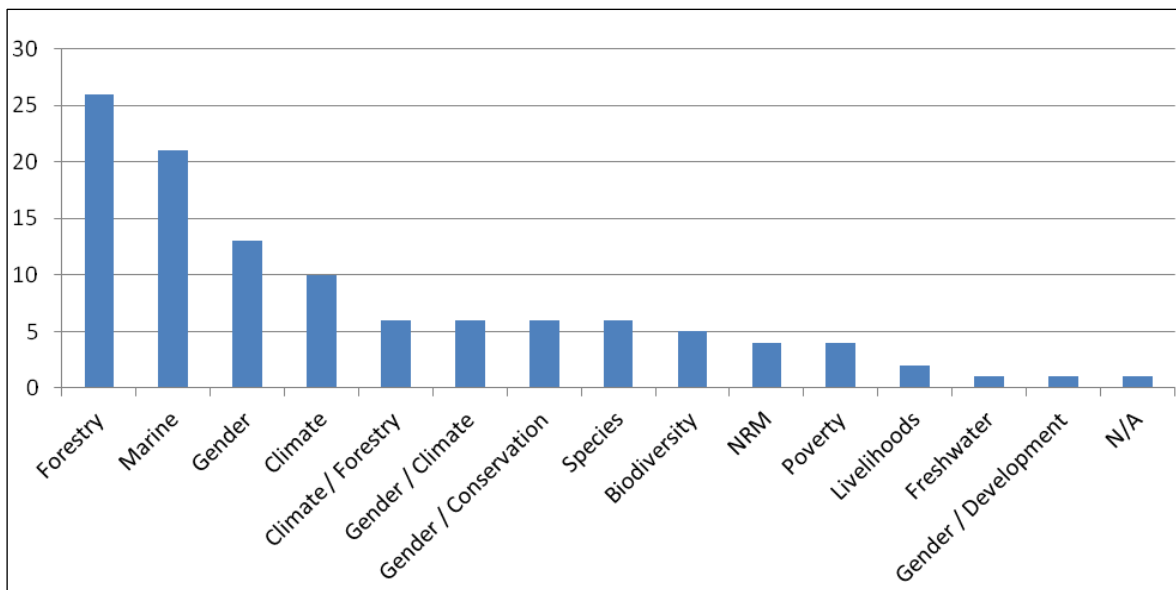


Figure 3: Focus of Reviewed Documents across Ecological Domains

3.2 Analysis of Materials

Collation of all references into a single spreadsheet enabled quantitative analysis to be carried out with respect to document type, whether or not the material was peer-reviewed, the ecological domains discussed, the geographical area of the study, the extent to which the material was more about policy than practice, whether or not any empirical research had been conducted, and the extent to which meaningful conclusions could be drawn from the data with respect to a the adoption of a gender aware approach and conservation outcome. Apart from the few academic studies which adopted a comparative case-study approach, counterfactual evidence could not be ascertained. Figure 4 shows the ways in which gender featured as a topic across the literature analysed in the study.

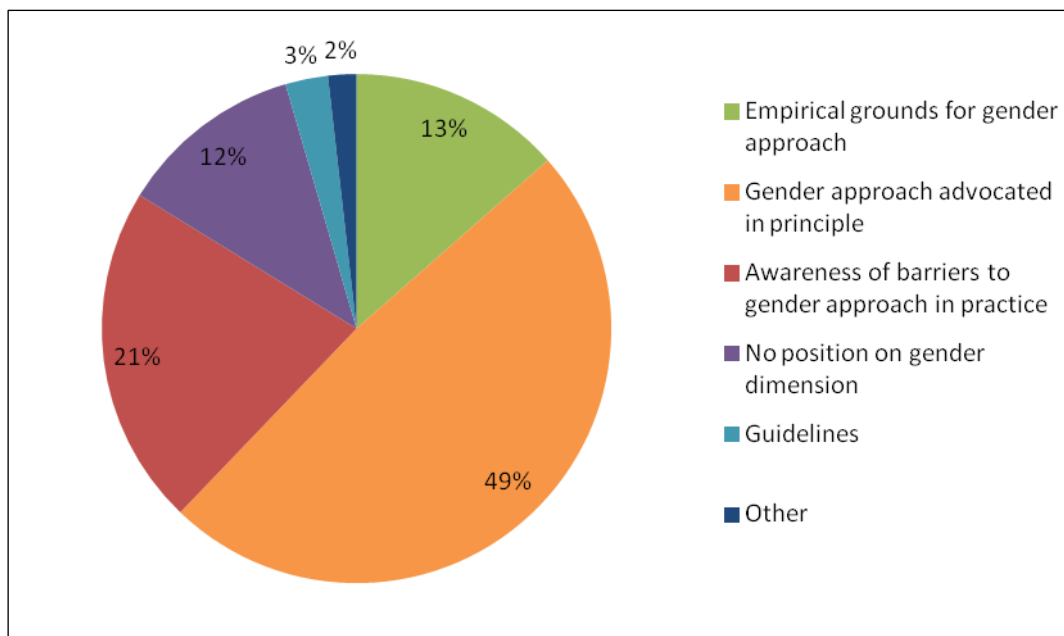


Figure 4: Presentation of gender as a theme within the reviewed documents across all ecological domains

4 Gender Awareness and Conservation Impact within each Ecological Domain

4.1 Forestry

At least one third of the documents sourced during the present literature review consider the role of gender with respect to forestry, with at least half of these reporting original empirical data gathered from field studies across Asia, Africa and Latin America. This suggests that the role of gender in forest conservation has received comparatively more attention than the role of gender in other ecological domains. See also Lyren's extensive bibliography on gender and forestry (2006).

The rationale for adopting a gender approach to the sustainable management and conservation of forests is based on an understanding of the importance of taking into account the knowledge and livelihood needs and of both men and women in the design of forest management programmes, thereby ensuring that conservation goals are supported and understood by all forest users. From a conservation perspective, the inclusion of women is further advocated at a policy level since many of the world's poorest people who depend on forests for their basic subsistence in the form of fuel wood and fodder are women and unless these needs are understood and accommodated, successful conservation outcomes are uncertain. A limited number of studies have explored the benefits of involving women in tree planting (Adeniji, 2011; Aguilar, 2009; Aguilar, Araujo, & Quesada-Aguilar) and agro-forestry programmes due to their enhanced understanding of the role of trees in soil and water conservation (Banana, Bukenya, Arinaitwe, Birabwa, & Ssekindi, 2012).

By far the majority of gender-based forest research, however, has typically focused on institutional arrangements within community-based forest management programmes with empirical studies setting out to examine the extent to which the presence of women on forest management committees results in better conservation and regeneration of forest resources. (Agarwal, 2009, 2010; Aguilar, Quesada-Aguilar, & Shaw, 2011; Mwangi & Mai, 2011; Mwangi, Meinzen-Dick, & Sun, 2011). Agarwal's research in India and Nepal, for example, concluded that where forest management executive committees contained a high proportion of women, significantly greater improvements in forest condition were observed. Better conservation outcomes in Agarwal's study were attributed to the role played by women in forest protection, rule compliance and higher levels of cooperation as well as their knowledge and understanding of plant species, forest products and sustainable extraction methods (Agarwal, 2009, 2010).

Other studies conducted in Africa and Latin America (Mwangi, et al., 2011; Sun, Mwangi, & Meinzen-Dick, 2011) have similarly found that the inclusion of women in forest management groups leads to forest enhancing behaviour. However, while Agarwal found that an all-women presence in executive committees in Nepal resulted in better forest regeneration and canopy growth, the East African and Latin American studies found that forest user groups dominated by women performed less well than mixed or male-dominated groups (Sun, et al., 2011). Whilst these findings suggest grounds for a gender approach to forest management, it is important to recognise that they do not necessarily advocate positive discrimination in favour of women on the assumption that women are closer to nature and therefore more effective conservationists.

4.2 Marine

In line with the WWF-UK briefing note on gender and fisheries (WWF-UK, 2012b), a glance at the broad body of knowledge confirms that the roles of men and women in coastal zones are highly segregated, with men tending to fish offshore or in major inland water bodies while women fish close to shore and are typically more involved than men in post-harvest activities, particularly in small-scale fisheries (Khosla & Ahmed, 2006). It therefore would follow that any comprehensive approach to conservation in marine environments ought to take these fundamental gender distinctions into account.

Until recently, however, there has been a lack of empirical research which takes a balanced gendered approach to marine environments and this has made it hard to tease out the empirical data required to inform a gendered approach to marine conservation. According to Khosla and Ahmed (2006), research in the past has typically been production-oriented and has therefore focused exclusively on the male-dominated catching sector rather than exploring the interactions between women and on-shore habitats such as mangrove forests and the role of women in the female dominated processing and marketing sectors, all of which also have important implications for conservation outcomes in and around marine environments.

In the context of the present review of the literature, it was therefore encouraging to see that there is now a growing interest in the gender aspects of marine conservation with around one fifth of the references referring to marine environments and fisheries. At least half of the documents cite empirical data gathered from field studies across Africa, Asia and, to a lesser extent, Latin America, two thirds of which is peer-reviewed.

Almost all of the reviewed studies which consider the role of gender with respect to conservation focus on the ecologically significant mangrove forests which are both a source of fuel wood and provide rich breeding grounds for molluscs which grow among the roots of mangrove trees. Conservation activities revolve around working with community associations to ensure sustainable harvesting methods of both shellfish and mangrove wood and this invariably means working with the communities of women whose livelihoods depend on the sustainability of the mangroves and the stocks of shellfish which they support.

Beardon's study in Colombia discusses the conservation benefits of involving the local *pianguera* women in mangrove ecosystem management (Beardon, 2008) while numerous studies of mangrove restoration initiatives along the west coast of Africa highlight the importance of involving local communities of female oyster harvesters in conservation of marine resources (Bosold, 2012; Khosla & Ahmed, 2006; USAID, 2012; Zaleski, 2011), albeit in ways which take an informed account of varying levels of indigenous knowledge across different communities of women, particularly where NGOs and external donors become involved in programme development. For a particularly critical and thought-provoking account of the WWF Gambia-Senegal Fisheries Program in the Tanbi Wetland National Park, see Crow and Carney's article which appeared recently in the radical geographical journal, *Antipode* (2012).

Research by D'Agnes (2005) and D'Agnes (2010) has also established a clear link between gender and conservation outcomes, demonstrating a number of successful programmes to conserve marine environments which have been tied in with public health messaging programmes promoting the use of birth control in order to reduce local population pressures on threatened ecological resources.

Finally, a number of studies have indicated that a gendered approach may also be extremely valuable in monitoring conservation outcomes and evaluating marine restoration programmes, one exception being Warren-Rhodes *et al* (2011) whose research in the Solomon Islands found that village affiliation and religion were more salient than gender in determining the use and importance of mangroves. Maliao's research in the Philippines, for example, found that women were particularly effective in assessing marine protected areas due to their close affinity with the natural environment (Maliao & Polohan, 2008) while Rönnbäck, Crona and Ingwall (2007) noted the importance of taking account of the gender heterogeneity amongst stakeholder groups when evaluating mangrove rehabilitation programmes in Kenya.

4.3 Freshwater

Consistent with the results from the *GreenFILE* database search which returned only one reference, the extended literature search produced very little in the way of findings which address freshwater conservation from a gender angle. The most significant find was a resource guide published by the Gender and Water Alliance which sets out strategies for mainstreaming gender in water resource management (Khosla & Ahmed, 2006) including a selection of 30 case studies outlining the challenges which communities face in terms of guaranteeing sustainable water supplies and suggesting how the adoption of a gender approach has helped to overcome some of these issues. The emphasis is, however, one of development rather than conservation. Within the gender and conservation literature, problems of water scarcity and their solutions are often discussed within the context of tree planting initiatives, the most frequently showcased example being the Kenyan women's NGO, the Green Belt Movement, founded in 1977 by the late environmentalist and political activist, Wangari Maathai (WEDO, 2012a).

4.4 Species

In comparison with the level of research interest around gender and conservation in the areas of forestry and marine protection, and despite the number of apparently relevant articles yielded by the *GreenFILE* search, only a handful of articles directly address the question of gender with respect to the protection of wild animals and big game in particular. Flintan (2003a) has suggested that one reason for this may have been the tendency in the past for ICDPs to focus on the conservation of big game and because of cultural, social and physical constraints, women are less likely to have been involved, meaning that any kind of gender assessment is difficult to obtain. Similarly, there is no clear link between gender and conservation in documents which focus on regulation of the wildlife trade, see for example Roe (2008) and only occasional reference is made to gender in connection with the consumption of bush meat where it is likely that public health messaging about the health risks of consuming bush meat may play a greater, albeit indirect role, in safeguarding the future of endangered wild animals (LeBreton, et al., 2006)

Ogra recently identified this apparent gap in the literature, noting the lack of relevant empirical research and ambiguities regarding the concept of gender which have contributed to an apparent disconnection between international policies and practice on the ground with respect to gender and community-oriented wildlife conservation. She notes in particular the need to consider gendered aspects of human-wildlife conflicts which can arise within communities which border wildlife conservation areas. Empirical research conducted in India found that women typically bear a disproportionate burden of the social and economic opportunity costs which arise as a result of crop raiding and attacks by wild animals, both of which can undermine local support for conservation resulting in retaliation killings and habitat degradation (Ogra, 2008). While the gendered aspects of these findings are still not widely recognised, Ogra argues that experience and attitudes relating to the gendered use of space in conservation areas must not be overlooked (Ogra, 2008, 2012a, 2012b). This position is supported by Gnyawali (2011) whose case-study research in the Khata Community has demonstrated the advantages of working with communities in a gender inclusive way in order to reconcile the needs of both humans and wildlife within a conservation setting. Similarly, support for a gender approach to biodiversity conservation is provided by Rajasekharan Pillai and Suchintha (2006) in their study of women self-help groups in the Periyar Tiger Reserve in the Kerala where groups of women regularly patrol the forests to discourage illegal entry and control biomass extraction.

4.5 Climate Change

Not surprisingly in the light of the centrality of climate change on the global environmental agenda, the literature search produced a wide selection of materials with a climate focus which were in favour of taking account of gender issues in the formulation of climate policy, especially with respect to adaptation. The main argument for a gendered approach to climate policy rests on the understanding that women, who make up the majority of the world's poorest populations, are more at risk of the devastating consequences of climate change than men (Denton, 2002). Persuasive arguments are also put forward for including women in climate mitigation projects, especially those involving the conservation of the world's carbon sinks (Aguilar, et al., 2011). However there remains a lack of original research and empirical data to support these arguments. Moreover, it is argued that market based mechanisms to mitigate climate change, most recently in the form of the REDD+ agreements and carbon offsetting, which will channel vast resources into forestry institutions of Africa, Asia and Latin America, typically exclude women by virtue of the fact that they own considerably less land than men (Cardenas, 2008) and are therefore unable to participate effectively. It might therefore be concluded that the debate around gender and climate remains, for the time being at least, one of policy and principle rather than one of hard evidence and practical understanding.

5 Selected Case Studies

5.1 Community Forest Groups in India and Nepal

Agarwal's recently published study of community forestry groups in India and Nepal has been widely acclaimed as path-breaking in that it represents a departure from earlier work on gender and local forest governance which focused mainly on the absence of women from forest governance despite their reliance on forests for subsistence supplies of firewood, fodder and supplementary food. It is described here in greater detail since Agarwal's work demonstrates empirically that challenging existing power relations by increasing women's presence in community forestry institutions reliably resulted in improved conservation outcomes in terms of forest health. Women in decision-making positions were typically able to balance 'self-interest with-community-interest and immediate needs with long-term forest conservation goals' (Chellani, 2012).

Agarwal's findings are based on a sample of 135 community forestry groups with responsibility for forest protection in Gujarat, India and in Nepal. Significantly, she found that groups with larger proportions of women in their executive committees, at least 25 – 30%, outperformed those with few or no women with respect to forest regeneration (Agarwal, 2009; Chellani, 2012), thereby establishing a positive correlation between the gender composition of executive committees and forest conservation outcomes. Explanatory factors include the suggestion that the inclusion of women on executive committees increases the number of members who are committed to conservation, increases women's sense of ownership, enhances the flow of information regarding forest regulations, increases the numbers keeping watch and enforcing protective measures, and gives women a real opportunity to share their knowledge of plants and conservation practices. Older women with more experience and more authority made a particular difference as did the poorest with nothing to lose and everything to gain.

5.2 The TRY Oyster Women's Association, The Gambia

Whereas the first case study showcased in this report is based on an understanding of the ways in which securing the correct gender balance at the institutional level can have implications for the success or failure of a given conservation initiative, the story of the TRY Oyster Women's Association provides an impressive example of a conservation effort which came about initially as a result of a self-help community initiative by the women whose livelihoods depend on the long-term sustainability of a wetland resource. As a result of their conservation successes, the Association was recently chosen to be one of 25 winners of the UNDP Equator Prize 2012 and has been showcased by USAID as a positive example of involving women in conservation.

Founded in 2007, the TRY Oyster Women's Association is an almost exclusively female producer association with exclusive rights to the cockle and oyster fishery within the Tanbi Wetlands National Park (TWNP) area of The Gambia on Africa's West Coast. The Association aims to reverse the problems of overharvesting and to improve the sustainability and profitability of the oyster harvest, on which the women depend for their livelihood, while better managing 6,300 hectares of coastal mangrove forest, recognised under the RAMSAR convention as a wetland of international importance in 2007. Mangroves represent an important ecosystem because they play an important role in carbon sequestration, pollution filtration and protection from coastal erosion while oyster reefs act as natural filters for estuaries, providing habitats and nurseries for other fisheries and protecting shores from erosion. Alarmingly, with experts estimating that more than 85% of the world's oyster reefs have been lost, they represent one of the most endangered marine habitats on earth (Beck, et al., 2009).

The Association currently brings together 500 female oyster harvesters from 15 villages, in cooperatives where they exchange sustainable oyster harvesting techniques and receive training in business development. Furthermore, since 2009, with the support of donor funding from USAID as part of USAID's Gambia-Senegal Sustainable Fisheries Project, *Ba Nafaa*, (USAID, 2012) the Try Oyster Women's Association has worked successfully in partnership with local authorities to develop a co-management plan for the TWNP (USAID, 2012). The project has been also been supported locally by WWF-WAMER (West African Marine Eco-Region) and has resulted, not only in restoration of the oyster stocks through the establishment and enforcement of an optimal harvest season and size limits for harvested oysters, but also in the reforestation of local mangroves, thereby impacting positively on the conservation of marine forest biodiversity. It provides a valuable example of a gender aware approach to conservation which ensures that measures to regulate the harvesting of a common pool resource are drawn up and agreed upon together with representatives of the communities whose livelihoods depend on it.

6 Concluding Remarks

Based on extensive literature searches and a review the body of literature which incorporates a gender dimension with respect to conservation in domains relevant to the work of WWF, the aim of this study was to seek to draw supported conclusions as to the likelihood of better conservation outcomes when a gender disaggregated approach informs engagement with local communities.

In sheer numerical terms alone, the study yielded some striking results, finding most importantly that across all of the ecological domains, the number of peer-reviewed studies which currently include a gender dimension, often one which focuses on the role of indigenous women in conservation, is a tiny fraction (typically less than 1%) of those dealing with conservation issues more generally. Extending the literature search to include a wider body of non-academic publications and policy documents yielded a larger proportion of documents and briefings adopting a gender aware approach and eventually accounted for just under two-thirds of the publications considered in the study. Peer-reviewed, academic material accounted for less than one-third.

Typically, the literature which incorporates a gender dimension is supportive of a gender approach in principle, often highlighting the importance of increasing the visibility of women. The basis for this would appear to be linked to matters of livelihoods and equity and strongly echoes much of the literature on conservation and development issues more generally. Only a very small proportion of the literature, however, seeks to draw conclusions relating primarily to gender and conservation outcomes and fewer studies still are based on sound empirical evidence from the field.

Of the studies which do examine a gendered approach to conservation based on empirical research, there appears to be an imbalance of knowledge and understanding across the different ecological domains. Indeed, forestry stands out as the only area where there has been rigorous, extensive and long-term empirical data collection; Agarwal's work remains exemplary in this respect. At the time of conducting the literature review, there was, however, a sense that a number of academics are becoming increasingly aware of this gap in the literature and

are looking at ways of exploring the links between gender and conservation across other ecological domains, see for example Bosold's recent and extensive literature review which considers the need for a more gendered understanding of mangrove conservation (Bosold, 2012).

As already noted, much of the literature around the issue of gender and conservation continues to present arguments which are framed mainly in terms of development indicators which focus on livelihoods and benefits to women and which pay less attention to actual conservation outcomes, although, as we know from evaluation of ICDPs, the two may be closely linked. Agarwal's work remains unusual in this respect in that she has successfully identified a number of forest health indicators which provide reliable measures of conservation impact. The challenge remains that such indicators rely on extensive monitoring and evaluation over a number of years, possibly even decades and such time-frames are not mirrored by the extent and duration of the majority of funded academic research programmes or ICDPs supported by NGOs in the field.

What we are left with is a sense that an awareness of gender does matter, or at least that it ought to matter, in a world that increasingly challenges cultural, economic and social assumptions about the role of women in all aspects of daily life. However, we are still a long way from having a sound empirical understanding of precisely the mechanisms involved. Evaluations of ICDPs often stop short of demonstrating evidence of good conservation outcome and focus on the social and economic benefits to local community members, especially women, of wider engagement in conservation and development projects; conservation outcomes are only implied. It remains evident from the literature, however, that the values, roles, dependencies and engagement of men and women with the natural world do differ. Furthermore, these gender differences vary across time and space and between different social classes, ethnic groups and communities and so while it is not unreasonable to suggest that conservation programmes are likely to be more successful if an account of gender, as one of a number of social, economic and cultural variables, is built into the programme from the outset, there still remains insufficient evidence to conclude that a more gender-aware approach will, in every instance, necessarily result in better conservation outcomes. We are also a long way from understanding precisely how gender plays a role. Moreover, it would appear that to raise the profile of women with respect to conservation would be an oversimplification of the issue, especially as a number of studies recognise the importance of a gender mix on management committees.

The aim of this study was to undertake an extensive literature review in order to establish whether empirical evidence exists to support the view that the adoption of a gender aware approach leads to an improvement in conservation outcomes across a number of ecological domains. Whilst the study revealed isolated empirical case-studies in support of a gender disaggregated approach to conservation, such studies remain few and far between and are certainly statistically too insignificant to form the basis upon which any reliable conclusions might be drawn.

There is therefore clearly a need for rigorous, long-term empirical research into the role of gender in conservation across the ecological domains addressed in the study. At the same time, interventions on the ground require careful planning, accurate stakeholder analysis across a range of variables, clear establishment of baselines and provision for adequate monitoring and evaluation throughout the entire project lifecycle. Only once such provisions are in place will it be possible to distinguish between the rhetoric of policy and the attainment of practical conservation outcomes. It would seem, however, that this might be easier said than done for it was well over a decade ago that WWF colleagues in the United States saw the launch of WWF's Women and Conservation Initiative, a programme which should have resulted in greater awareness of the 'distinct roles that women and men play in natural resource management' and increased understanding of 'gender issues and their impacts on conservation goals in the design and implementation of WWF programs around the world' (WWF Conservation Strategies Unit, 2001). Judging by the paucity of information available, we might be excused for wondering just how far we have come since then.

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8 Appendices

8.1 Terms of Reference

Role Description and Terms of Reference

GENDER IN CONSERVATION INTERN

*An internship to undertake a desk based, document review to produce a report that answers the question:
“Does a gender aware approach lead to an improvement in the achievement of conservation outcomes?”*

In preparing for the Gender Mapping² currently underway in WWF-UK the fundamental question of the relationship between gender aware work and conservation impacts was raised: does a gender aware approach lead to an improvement in the achievement of conservation outcomes? How do we know? Approaches to answering these questions were discussed within planning for the Gender Mapping and it was agreed that the work involved in researching these questions was beyond the terms and time frame of the agreed Gender Mapping process. It was suggested that this might be the right area of work for an intern.

Purpose:

The purpose of this internship is to undertake a desk based review of available research to analyse the extent to which evidence exists to answer the research question: “does a gender aware approach lead to an improvement in the achievement of conservation outcomes?”

Terms of Reference:

1. The work below is desk based, working from home, using the internet, accessing material from WWF-UK, libraries and other sources both as made available through WWF-UK and through other contacts made during this study. No more than 2 visits to Panda House would be anticipated during the internship period and no other travel is anticipated.
2. Review of books, web links, downloaded research, project & programme reports and other documentation which examines the link between gender and conservation impacts.
3. Follow up the above documents through personal contact (by e-mail, telephone, skype) with the authors to dig more deeply into the material as needed. Where WWF is the focus of the research, Clare Crawford will facilitate the link; where the contacts are external, the intern will set up the conversations themselves, with clear parameters about using the WWF name.
4. Analyse the information gained to see if it provides actual or informed evidence that there is a link between gender awareness and conservation impacts.
5. Cross check conclusions with the Head of Design & Impact/ WWF Gender Adviser on a weekly, progressing to fortnightly, basis.
6. Write a report (no more than 10 pages, excluding annexes) containing: Executive Summary; Outline of Methodology; Summary of Findings (summarise key interventions that show link between conservation and gender, for each of these tabulation of types of documents referenced against the numbers that show link between conservation impacts and gender, number that have clear evidence of a positive/negative/neutral causal effect, number that draw informed conclusions of a positive/negative/neutral causal effect); Summary case studies of stronger documents to illustrate the findings and the evidence; Conclusions; Recommendations (if any); Annex: References, ToR.
7. Report to be drafted by mid-January 2013 and complete by end of January 2013.
8. Remuneration: WWF-UK will not pay a salary but will reimburse legitimate invoiced costs.

Skills Required:

- Understanding of conservation impacts and related sustainability, understanding of gender awareness and ability to identify references that align to both gender and sustainability of conservation (and not to conventional community development alone);

² The gender mapping underway is an internally led, externally supported, assessment of gender awareness approaches and practices in terms of WWF-UK project & programme documentation, supporter facing communication, staff attitudes and HR policies. It is designed to provide the organisation with a baseline of WWF-UK gender awareness that can be used to guide improvements and can be compared against in the future.

- Sound analytical skills to make clear judgements as to whether the documents reviewed truly are making an evidence based link from gender awareness to conservation impact;
- Referencing tools and skills;
- Access to own computer, necessary software, high speed internet and ability to use them with a high degree of competence;
- Ability to work with relatively little supervision, being self-motivated, but open to direction and correction as needed.

Experience Required:

- Writing analytical documents in plain English;
- Work with referencing tools.

Qualifications:

Evidence of academic study to degree level, or equivalent experience

8.2 Keywords

Africa
 Asia
 Biodiversity
 Climate Change
 Community
 Conservation
 Feminist Political Ecology
 Fisheries
 Forestry
 Freshwater
 Gender
 Gender Environment and Development
 Gender Mainstreaming
 Latin America
 Mangroves
 Natural Resource Management
 Power Relations
 Species
 Wildlife
 Women
 Women in Development
 WWF-UK

8.3 Acronyms

ICDP	Integrated Conservation and Development Project
CBNRM	Community Based Natural Resource Management
GED	Gender, Environment and Development
NGO	Non-Governmental Organization
PDF	Portable Document Format
RAMSAR	Refers to 'The Convention on Wetlands of International Importance'
REDD+	Reducing Emissions from Deforestation and Forest Degradation-Plus
TWNP	Tanbi Wetlands National Park
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WID	Women in Development
WWF-UK	World Wide Fund for Nature-UK
WWF-WAMER	WWF-West African Marine Eco-Region

8.4 List of Titles analysed in the Study

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8.5 Useful Websites and Online Resources

- Bina Agarwal: www.binaagarwal.com
- Conservation International: www.conservation.org
- Fauna and Flora International: www.fauna-flora.org
- Global Forest Coalition: www.globalforestcoalition.org
- GreenFILE online database: www.ebscohost.com/request-information/ebscohost-for-students
- Greenbelt Movement: www.greenbeltmovement.org
- International Institute for Environment and Development: www.iied.org
- Institute for Development Studies: www.ids.ac.uk
- IUCN Gender and Environment: www.genderandenvironment.org
- TRY Oyster Women's Association: www.try-oysters.com
- UNDP Equator Initiative: www.equatorinitiative.org
- World Resources Institute: www.wri.org

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