Climate change not only expresses itself through temperature rises and ecosystem transformations, but also has grave implications for human survival and coexistence. Social consequences of climate change are not gender neutral: Due to social inequalities, men and women are affected differently by climate change. Depending on the socio-cultural context, gender differences reduce the survival chances of men and women during climate change-related natural disasters. For example, natural disasters often claim many female victims if warnings do not reach them or if they never acquired survival techniques such as swimming. Furthermore, water shortages, spreading degradation and other consequences of climate change further limit women’s scarce time resources. Similarly, they often lack the financial resources and the legal framework to pursue alternative livelihoods in the face of growing soil degradation. In their responses to climate change men and women also play different roles; although women possess great potential to take an active role in the mitigation of climate change, their specific knowledge and their experience, for instance in developing alternative food-security strategies, often remain untapped.

The Development Policy Action Plan on Gender 2009-2012 by the Federal Ministry for Economic Cooperation and Development has therefore defined “gender-specific challenges and responses to climate change” as a priority. The Action Plan calls for improving the provision of information and developing gender-sensitive and gender-differentiated strategies for adaptation to climate change. In order to ascertain what gender approaches and experiences already exist in “climate-related” projects and programmes, the Programme Promoting Gender Equality and Women’s Rights conducted an analysis of the status quo within GIZ.

In order to categorize which projects are “climate-related”, a categorization by the GIZ “Environment and Climate” division was used as a basis, and accordingly, the relevance for climate was defined in broad terms. A factor which also rendered this broad definition necessary was that “pure” climate projects explicitly pursuing climate change adaptation are still in the development stage or started only a short time ago. For such projects in particular the gender approaches presented here could be very useful.

In the selection of the examined approaches attention was paid to breadth in both the geographic and the thematic scope of the gender approaches. The focus in so doing was on achieved results, which will be illustrated here in a bundled manner to make them easily accessible and therefore to allow individuals to benefit from the “lessons learned”. The publication is aimed at development professionals in general, especially project directors and planning officers overseeing projects related to climate change, as well as civil society and academia.

The four projects described in the following are commissioned by the German Federal Ministry for Economic Cooperation and Development and show the additional benefit of gender-sensitive practice in different contexts:

• Morocco (nature conservation and combating desertification)
• The Dominican Republic (resource management)
• The Mekong Basin (watershed management)
• Himalayan-Hindu Kush region ( interstate knowledge centre ICIMOD)
Morocco – Conservation of nature and combating desertification

Status quo
According to predictions, climate change will hit the Mediterranean region particularly hard due to above-average temperature increases. Today dry periods and occasional extreme rainfall, growing usage pressure and unsustainable resource use already pose a threat to Morocco’s natural resources. For instance, the populations of argan trees, which not only provide firewood and building timber, but also livestock feed and fruits for human consumption and cosmetic application, are decreasing. Palpable environmental changes are particularly disastrous for poorer strata of the population, as they often lack the resources and knowledge to adapt to these changes. The situation is even more difficult for women, whose lower level of education and socio-cultural environment limits their opportunities to pursue other livelihoods, for instance through migration.

Approach: Supporting Women’s Cooperatives
The GIZ project aimed at both developing and expanding sustainable sources of income and effectively protecting natural resources. By supporting women’s cooperatives, sources of income were promoted, which also created incentives to protect resources. For instance, the project supported the women’s association UCFA, whose approximately 1,000 members produce argan oil in the UNESCO biosphere reserve Arganeraie, using almost exclusively traditional manual labour. Through training measures and the use of high-quality production material the quality of the hand-pressed oil was enhanced, with marketing campaigns boosting sales particularly abroad. The manual labour preserves traditional knowledge and keeps income-generating added value at the point of origin. This is in stark contrast to rural communities’ sole contribution of the fruit of the argan tree to the mechanised production in cities. Furthermore, there is a separate market for hand-pressed argan oil in Morocco and abroad, which UCFA can tap into fully. Involving a German-Moroccan business with organic certification through a public-private partnership (PPP) has secured sales and lead to organic production, higher oil quality and thus higher income for the female producers. At the same time, the women can benefit from the private partner’s expertise when marketing their own oil brand.

Afforestation measures agreed upon in the PPP, which women conducted with the help of the local forestry directorate, further sensitised the women to the importance of conserving resources. Such incentives for preserving the argan tree, in turn, are crucial for adapting to climate change: the heat tolerant tree is used to arid conditions, its wide-ranging root system prevents soil and wind erosion and therefore avoids desertification; moreover, it can divert intensive rainfall underground, replenishing groundwater reservoirs.

Results
The programme succeeded in conserving biodiversity, stopping forest degradation and desertification and creating interest in maintaining and expanding the tree populations. Working with the private partner Argand’Or resulted in a considerable increase of revenue in addition to a simultaneous increase in the price per litre. This lead to an increase in women’s income of between 30 and 50% and as a result to their greater economic independence. Women took a more active role in making decisions about the use of financial resources within their families. This appreciation also entails greater social mobility; women are taking an active role in improving the production process; they participate in trainings and fairs and attend meetings with authorities and journalists.

Linking gender to climate and environmental protection within this approach created benefits for society as a whole through an initial increase in awareness in the village communities and families. The work performance and financial contribution of women is recognised and women are included more in decision-making processes. Furthermore, other organisations are asking them to pass on their experiences. An increased appreciation is also visible among the young generation: both girls and boys are becoming accustomed to the strengthened role of women. While at the end of 2008 only 60 women were benefiting from the productive measures initiated by the project, at the end of 2009 it was 546 in the whole operational area. In addition, 282 women are benefiting from small-scale projects in the realm of combating desertification (in 2008 it was only 137), as well as the approximately 1000 women who are organised in the union for women’s cooperatives in the Argan-region and are earning a higher income due to the better quality and marketing options.
Mekong - Sustainable watershed management

Status quo
Over three quarters of the 60 million people living in the lower Mekong basin are directly or indirectly dependent on the Mekong’s resources. The river system is indispensable for irrigation, agriculture, fisheries, forest resources as well as electricity generation. Unsustainable resource exploitation and intensification of agriculture endanger water resources and worsen the phenomena of climate change such as flooding, droughts and landslides. Due to the limited participation of women in decision-making bodies, such as on watershed management issues, important considerations for the sustainable improvement of livelihoods and quality of life are not sufficiently taken into account.

Approach: Women as Trainers
The GIZ project supports the Mekong River Commission in fostering cross-border collaboration for the sustainable and joint use of resources in four pilot watersheds in the lower Mekong countries. Capacity development, by means of multi-stakeholder consultations, technical training and awareness-raising on watershed management, systematically involves women as trainers, participants and target groups. The gender approach is based on a gender-differentiated training programme which aims to strengthen gender awareness in all aspects and amongst all actors of watershed management.

Results
The training manual, which is aimed at all stakeholders in the watershed management process, imparts gender-differentiated knowledge to all participants and presents seven steps towards a system of integrated and sustainable watershed management. In a related publication, each of the seven steps is presented in a gender-sensitive manner, providing details on the inherent challenges and opportunities specifically from a gender perspective. A women’s quota in the committees introduced additional female actors into watershed management, improving the quality of the committees’ work. Involving women systematically resulted in the local population taking greater responsibility, increasing the likelihood of the sustainable application of resource-friendly approaches for society as a whole.

Dominican Republic - Management and protection of resources

Status quo
Climatic changes such as more frequent tropical storms, shorter precipitation periods and declining soil fertility are progressively diminishing agricultural production. As a result, hillsides prone to erosion or cleared forest surfaces are being cultivated, thereby increasing the use of agricultural chemicals, and leading to mounting debt for farming households. Crop failures and the loss of income caused by the consequences of climate change often force women to look for alternative sources of income in order to pay off the loans taken on by men. This results in women migrating for work, often causing families and village communities to disintegrate, or taking on work as day labourers in agricultural establishments, usually under inhumane conditions.

Approach: “Matilde Vinas”
This approach aims to support female producers in the use of sustainable and high-yielding cultivation techniques. However, more frequent extreme weather events are endangering open-air cultivation, which is why small-scale producers from the women’s association “Matilde Vinas” are being supported in greenhouse cultivation. This reduces the land consumption, decreasing the risk of harvest failures, for example due to tropical storms. At the same time, GIZ is supporting the producers in changing over to health-conscious, sustainable cultivation methods.

Results
Profitable and innovative production in greenhouses is resulting in fewer marginal areas being used for cultivation. The greenhouses not only reduce the risk of damage caused by extreme weather events, but also allow women to apply the agricultural knowledge acquired while they were working as day labourers and to contribute to food security and family income. In addition, the agreement with the women’s association requires former cultivation areas to be earmarked for afforestation, which will safeguard the provision of environmental services in the future and create alternative income sources through sustainable forest and resource use. The switch from chemical-intensive cultivation to environmentally friendly methods also promotes the women’s economic independence and reduces the ofentimes very strong dependence on agrochemical suppliers.
Himalaya – Knowledge in reworked form

GIZ supports the interstate knowledge centre “International Center for Integrated Mountain Development” (ICIMOD) in the Himalayan-Hindu Kush mountain range in developing the technical and organisational capacity in order to meet the cross-border problems posed by climate change. One key task of ICIMOD is to develop and pass on knowledge on sustainable resource use. Publications about approaches to adapting to climate change as well as experiences and challenges regarding sustainable use of the environment and resources place a particular focus on gender. A range of helpful documents have originated from this gender-sensitive work, such as guidelines for including gender in value chains, gender-sensitive planning of projects and participatory approaches, and gender-sensitive trainings and research. One publication illustrates different gender perspectives in the sustainable development of mountainous regions, for example on the topic of “Women and REDD” as well as on communal forest management. Specific recommendations for action at the politico-institutional level and suggestions on how to improve adaptation capacities can be found in an “e-discussion” on ‘Gender and climate change’.

All publications are available on the ICIMOD website: www.icimod.org

Conclusions

The consideration of the gender perspective is important for the sustainability of climate and environmental projects, as it not only has ecological and economic value, but also benefits society as a whole.

Continuous Gender Integration

Gender-differentiated analysis, planning and implementation of climate-relevant projects are needed in order for development measures to include gender-specific knowledge and strengths, to contribute added value in the long run and to avoid having negative consequences for women or men.

Gender-sensitive Instruments

Because men and women play different roles in dealing with climate change and are affected differently by the consequences, instruments for combating and coping with climate change need to be designed in a gender-sensitive manner. Although the approaches presented in this paper predominantly serve the adaption to climate change, experiences outside of GIZ, such as the afforestation campaigns of the Nobel Peace Prize winner Wangari Maathai, show that mitigation measures also offer the chance to integrate gender.

Reduce Gender Inequity

If the opportunities for adaption to climate change that exist in developing countries are linked with gender, the danger that the negative consequences of climate change and gender inequality will reinforce each other could be purposefully counteracted.