

Gender approaches in climate compatible development: Lessons from Kenya



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Contents

Acronyms	iv
Summary	1
1 Introduction	5
2 Concepts and research questions	7
2.1 Climate compatible development and gender equality	7
2.2 Research questions	9
3 Case study: Kisumu, Kenya, and the People's Plans into Practice project	10
3.1 Rationale	10
3.2 Background to Kisumu	10
3.3 The People's Plans into Practice project	12
3.4 Policy context on gender and climate change	13
3.5 Methodology	14
4 Findings: Gender and climate compatible development in Kisumu	17
4.1 Gender, livelihoods and vulnerability to climate change	17
4.2 How gender approaches are integrated into PPP initiatives in Kisumu	20
4.3 Integration of gender-sensitive approaches into climate compatible development: Opportunities and constraints	24
5 Conclusions and recommendations	31
5.1 Conclusions	31
5.2 Recommendations	35
Endnotes	36
Additional background reading	38
Annexes	39
Annex 1. Number of interviews conducted in total	39
Annex 2. List of key informants	40

Acronyms

C2C	Classroom to Classroom
CHAST	Children's Hygiene and Sanitation Training
CIDP	County Integrated Development Plan
KIAPNET	Kisumu Indoor Air Pollution Network
KUAP	Kisumu Urban Apostolate Programme
NEMA	National Environmental Management Agency
NPA	Neighbourhood Planning Association
PHASE	Personal Hygiene and Sanitation Education
PHAST	Participatory Hygiene and Sanitation Transformation
PPP	People's Plans into Practice
SANA	Sustainable Aid Africa International
SACCO	Savings and Credit Cooperative Organisation
SME	Small and medium-sized enterprise
SWAPS	Sector Wide Approaches

Summary

Gender is an important driver of vulnerability to climate risks, and a key factor to consider in developing effective policy responses to climate change and development challenges. In recent years, there have been a number of efforts to support gender equality as part of responses to climate change. However, gaps remain in drawing lessons from such efforts. This is especially true when it comes to understanding how gender relations affect people's ability to adapt in urban settings. Given the impact that climate change and extreme weather events are having on urban populations around the world, there is a clear need to provide more evidence to inform climate change and development interventions.

This report examines gender and climate change in relation to efforts to support climate compatible development, a policy goal that aims to integrate and draw synergies between adaptation, mitigation and development. The report's focus is a case study of Kisumu, Kenya, drawing lessons from the five-year project People's Plans into Practice (PPP): Building Productive and Liveable Settlements with Slum Dwellers in Kisumu and Kitale. Using the PPP project as a starting point, the study addressed four related questions. First, what does a gender-sensitive approach mean in Kisumu? Second, what is the evidence for how integrating gender-sensitive approaches may help to promote people's empowerment? Third, what are the constraints and opportunities in promoting gender-sensitive approaches in interventions to support climate compatible development? Finally, the report asks whether and how gender-sensitive approaches may support climate compatible development outcomes. The report is part of a global study, with case studies in India, Kenya and Peru.

The study shows the complexities of gender relations and climate change in urban areas in Kisumu, highlighting the main lessons from the PPP project, and charting some of the key opportunities and challenges for integrating gender in interventions to support climate compatible development. The study's findings can be summarised as follows:

What does a gender-sensitive approach mean in Kisumu?

The analysis highlighted how gender relations play a key role in determining vulnerability in urban Kisumu. A gender-sensitive approach means understanding the complexity in how gender currently affects vulnerability to climate risks, and the ability of both men and women to cope with and adapt to climate variability and change.

Understanding vulnerability. Compared with rural areas, residents in urban parts of Kisumu have more access to self-help groups, and depend on different (but rapidly changing) livelihoods. However, gender relations are dynamic and changing. Some of these changes are due to local factors, such as increased rural-urban migration, and a movement away from traditional sectors, such as fisheries and agriculture, towards greater reliance on business and employment. Others are due to external factors, such as changes in national- and county-level policies that give women, in principle, more formal rights and spaces for participation. However, there are still significant challenges in realising these gains in practice.

Engagement in planning processes. Engagement of both genders in participatory urban planning and development processes is important in order to identify and prioritise the unique needs of men and women, so that initiatives can respond to them. Climate change manifests itself at community level, and therefore community members themselves are best placed to identify and carry out measures using their own knowledge and skills.



Participation in design of solutions. A gender-sensitive approach also involves adopting participatory design and development of solutions, in order to tackle climate risks. This includes people's participation in selecting technology options, while taking into account the unique needs and capacities of both genders to access the different levels of services. For example, it means equipping toilets for women with bins for disposal of sanitary towels, designing toilets that are adapted to the needs of different groups and providing enhanced security features, such as lockable doors, greater accessibility and better lighting.

Monitoring and evaluation. Finally, integrating gender and climate change into programming means developing appropriate tools for monitoring and evaluation of progress in achieving both development and climate change goals. Examples of progress indicators in the key drivers of vulnerability may include gender-based violence, unemployment among women, accessibility to services and opportunities for both genders, and skills transfer to the more vulnerable groups, such as single-headed families.

What is the evidence of the relevance of gender-sensitive programming in climate compatible development to promote and achieve people's empowerment?

The PPP project integrated gender in various stages of the project. The project's motivations for considering gender were a combination of formal and organisational requirements, and a realisation of the importance of addressing gender concerns to achieve better project outcomes. Evidence of inclusion of gender was seen, for example, in the way committees were selected to include an equal number of men and women. Project roles were assigned according to the capabilities and needs of men and women. Some of the roles allocated to women and men appear to be based more on assumed current roles, and hence functional needs, than on strategic roles that if assigned and promoted could help to improve gender equality.

The PPP project provides useful insights into how to support women in leadership and management positions, as well as their increased integration into sectors such as finance, which have traditionally been male dominated. Sharing such stories and encouraging women to reach out to role models with success stories at national level can be a good pathway for championing gender and climate change.

The importance of practical examples at local level cannot be overstated. While efforts exist at national level, for example the formation of offices and departments addressing gender and climate change, gender has often been downplayed or ignored at lower levels of governance. The reasons may be many, such as technical capacity and cultural attitudes, but a contributing factor could be the fact that gender has often been considered a cross-cutting issue. As previous experiences with gender mainstreaming in development demonstrate, champions who claim ownership of the mainstreaming process are crucial, because if gender is the responsibility of everyone, it may end up as the responsibility of nobody.

The PPP experiences also highlight the need to address gender at both individual and structural levels. While progress was noted in involving women in project activities, the number of women who actually participated, and the level at which they became involved, was still low due to the multitude of other roles and responsibilities that women have in the household. Because land is usually owned by men, women cannot make decisions in interventions such as improved housing, without the consent of male household members. Intimidation by male counterparts in county-level decision-making processes is an illustration of the strong role that culture plays as a determining factor in achieving gender equality.



Which socio-economic, political and cultural factors constrain or favour gender-sensitive approaches in the context of climate compatible development?

The study highlighted a number of opportunities that can support gender integration – and improved gender equality outcomes – in interventions to support climate compatible development, but also challenges to achieving this. Key supporting factors found in the Kisumu case study include:

- a policy environment that gives increasing weight to gender equality;
- increasing formal spaces for women and efforts to support empowerment;
- integration in economic activities and market-based approaches;
- women’s empowerment programmes; and
- use of participatory tools, such as life stories, as monitoring tools.

However, there are also key challenges, many of which are entrenched in structures that are slow and difficult to change. These include:

- cultural attitudes working against gender equality at both county and urban levels;
- limited opportunities in practice for women’s participation in activities, due to a lack of capital and platforms to express themselves;
- lack of policies and spaces for discussion of gender issues at local (city and ward) level;
- lack of technical capacity and understanding of the linkages between gender and climate change and how to make projects transformative;
- unequal opportunities to access and use technologies, and solutions biased against women; and
- unequal ability to articulate issues in ways and in fora that matter.

Does a gender-sensitive approach enable better climate compatible development outcomes, and if so, in what way?

Findings from this study suggest that gender-sensitive approaches can help to improve outcomes by better understanding the gender-based drivers of vulnerability to climate change, and responding to the different roles and needs of women and men. Likewise, gender-sensitive approaches can help to improve climate compatible development outcomes by increasing flexibility in planning. However, these approaches only work when coupled with certain crucial building blocks. In the case of the PPP project, these include *continuous engagement and dialogue* among policy-makers on gender and climate change at county level, so as to help keep the debate and discussions on gender and climate change alive. Also essential is *improved coordination of programmes and activities* that address gender and climate change. At present, such coordination is non-existent. For example, there is a pressing need to align the mandates of different institutions and strengthen areas that would address this issue or identify opportunities and programmes that would best fit this debate within the county governance structure. A final important requirement is to *explore possible synergies*. A case in point would be the Climate Change and Green Economy Unit providing support in capacity-building in climate change and working closely with the Ministry of Gender to identify indicators that would address gender and climate change. Further research is required to document data that is gender disaggregated – for example, by ranking industries and owners according to gender. Resources from the Constituency Development Funds (CDF) can be borrowed to support the identification and preparation of indicators at national level.

Key recommendations

For national- and county-level policy-makers:

- Renew efforts to tackle entrenched biases against women in policy processes.
- Introduce a designated gender focal person in every department in the county.
- Kisumu county and institutions working in Kisumu need to account for their performance in addressing gender in climate change interventions.
- Integrate findings on the need to understand gender-based vulnerability drivers and barriers to gender-sensitive approaches in county bills across various sectors, as well as in the national climate change bill.

For city- and ward-level policy-makers and planners:

- Increase awareness of cultural barriers to integration of women in planning processes. Formation of groups is one entry point to embrace gender. A good example is where the forming of groups was motivated by adverse water scarcity in Manyatta.
- Carry out a gender and climate change audit for Kisumu city. So far, there is no documentation to show the differentiated impacts of climate change and people's vulnerabilities.
- Encourage participation of both men and women in meetings and community projects, addressing strategic needs of women.
- Create and build partnerships and collaboration with stakeholders such as the National Environmental Management Agency (NEMA) to disseminate policies and incorporate their views.

For development agencies and donors:

- Document best practices and examples of successful gender integration in climate change programmes and projects.
- Focus on deeper, structural barriers to gender consideration, such as women's individual and household-level capacity to participate.
- A gender-sensitive approach should be instigated by those who are most affected by climate change, in order to receive support from international climate change funding.
- Create an avenue for raising funds to benefit all groups. Enterprise funds go a long way towards empowering men, women and people with disabilities.
- Establish an information-gathering process on gender and climate change, and increase access to this information. For example, the Umande Trust is reaching out to county leaders and sensitising them on the importance of gender differentiation capacity. Another strategy is to request women in leadership to be vocal and share stories of change.

1 Introduction

There is an increasing amount of evidence that shows the importance of addressing gender in climate change policy and practice¹⁻⁴. Gender inequality, driven by socially constructed attitudes towards men and women's different roles in society, is one of the key underlying drivers of vulnerability to climate risks. Gender relations create differences in the ability of women and men to tackle and respond to climate risks. Hence, in any context, it is central to understand gender relations, and to integrate this understanding into policies and programmes.

Yet in practice, there is a lack of evidence of how this integration happens, the challenges and opportunities of integration processes, and the lessons that can be drawn to improve the achievement of climate change and gender equity goals. As a consequence, there is also limited evidence of the potential gains of a gender-sensitive approach, and the potential losses associated with a gender-blind approach. With most adaptation research to date focused on rural settings, this gap is particularly pronounced in urban areas⁵.

This study aims to help fill that omission by exploring the integration of gender into efforts to support climate compatible development, with a case study of urban Kisumu, Kenya. Climate compatible development is a policy goal defined as "development that minimises the harm caused by climate impacts, while maximising the many human development opportunities presented by a low emissions, more resilient, future"⁶. The report draws strongly on a five-year project entitled People's Plans into Practice (PPP), which was implemented between 2008 and 2013 by Practical Action Eastern Africa, the Kisumu Urban Apostolate Programme (KUAP) and Shelter Forum, with support from Comic Relief. The study identifies what a gender-sensitive approach to climate compatible development means in the context of Kisumu, drawing evidence from the PPP project's effort to integrate gender and the impacts and challenges of this process, including how it has supported people's empowerment and contributed to climate compatible development goals. The report is part of a global study, which also draws lessons from urban contexts in India and Peru.

Kisumu was chosen as a case study because of the efforts of the PPP project to integrate gender in an urban-focused project. In common with other urban centres in Kenya, Kisumu faces growing challenges posed by climate-related risks. In particular, these are greater flood damage caused by a combination of increased frequency of heavy rainfall, more rural-urban migration, settlement in flood-prone areas and poorly planned urban development. A recent study in Kisumu suggests that women and girls have the least capacity to cope with and recover from climate-related hazards, and the lowest ability to adjust and change their livelihoods to adapt to future flood risk⁷. This study is an attempt to strengthen the evidence of the benefits and challenges of a gender-sensitive approach to climate compatible development, with a view to informing and supporting policy formulation.

The study is important in view of broader structural developments in Kenya, in particular those related to land and decentralisation. National-level policies and plans in Kenya on agriculture, water and climate change have so far often failed to address gender relations and power dynamics that exist at different levels, as well as the structural constraints that drive different social groups' vulnerability to climate change. This is important in Kenya, where land tenure recognises both statutory and customary law arrangements. While this may in principle be improved following the 2010 Constitution and the new Land Policy, both of which recognise land titles held by women, it is as yet unclear how this will play out in urban settings, including in towns such as Kisumu that have recently been upgraded to cities. For example, rapid population expansion in Kisumu has meant that adjacent land that is held



under customary law is subdivided into commercial plots without adequate city planning. In this situation, customary law and traditions, which give fewer rights to women than to men, still play a predominant role in the governance dynamics of peri-urban communities, relegating formal policies and county laws to the background.

Another important consideration is that Kenya is on the path toward a devolved governance structure. Decentralisation will be a critical component of implementation of gender-sensitive policies, and this poses opportunities as well as challenges.

The report begins by presenting key concepts and research questions (Chapter 2), followed by a description of the Kisumu context and PPP case study (Chapter 3), before describing the methodology for data collection and analysis. Chapter 4 outlines the main findings from the study, followed by conclusions and recommendations in Chapter 5.

2 Concepts and research questions

2.1 Climate compatible development and gender equality

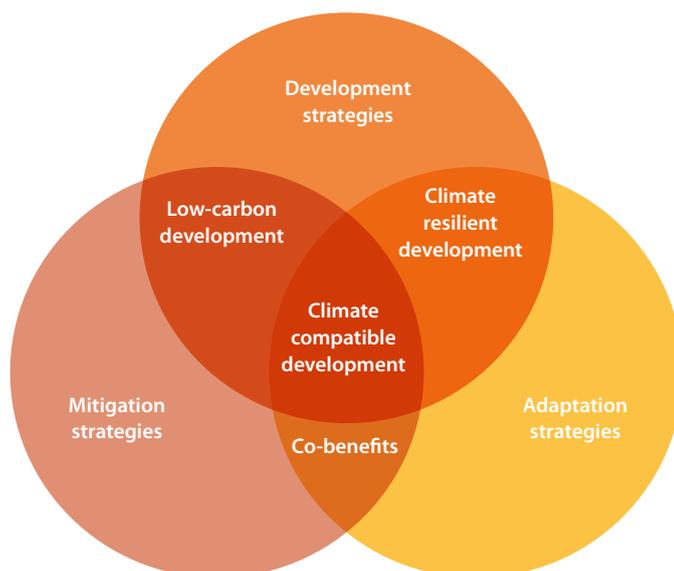
Climate compatible development is a policy goal that involves transforming development pathways to face climate change challenges without prescribing particular methods or approaches (Figure 1). This approach represents an attempt to move beyond the traditional, and still prevalent, separations of adaptation, mitigation and development strategies. The ultimate objective is to adopt strategies and goals that simultaneously build resilience and promote low carbon emission strategies⁸.

The linkages between climate compatible development and gender equality stem from the important role played by gender relations in defining social, cultural, economic, political and private spheres of life, which in turn affect the capacity and vulnerability of different individuals towards development challenges, including climate change. An increasing body of knowledge is available on the role of gender as one of the key drivers behind vulnerability to climate-related shocks and stressors⁹⁻¹². For example, many of the ways in which disasters affect men and women differently are well documented^{13,14}. Gender relations affect people's ability to tackle climate risks because they determine access to assets and resources such as land and water, their status in society and relative power in decision-making processes, and their access to formal and informal networks and support structures¹⁵⁻¹⁷.

Asymmetrical power relations tend to put women at a disadvantage, because it is men who attend most meetings and make decisions, for example in projects to be implemented at community level¹⁸. Less power and less economic muscle often combine to ensure that women have less influence over policy and decision-making processes, including those related to disaster risk reduction, climate adaptation and mitigation.

As a result, efforts to tackle climate change will only be meaningful if gender is considered along with other factors that drive vulnerability, such as wealth, status, ethnicity and

Figure 1: Climate compatible development



Source: Mitchell and Maxwell (2010).

education levels, among others. However, to date, climate change research has frequently failed to consider the different impacts experienced by women and men¹⁹⁻²¹ and gender needs and views are persistently ignored within climate change planning and policy²². In addition, little is known about the practical impacts of the links between gender equality and climate change policy goals. While international governance frameworks are gradually becoming more gender aware, all too often gender is simply tacked on to existing policies and agreements, which actually require fundamental changes in how they interpret gender issues^{23,24}.

Yet while there is considerable knowledge about how gender relations affect vulnerability in rural areas, including agriculture and livestock, evidence relating to gender and climate change in urban areas is currently more limited²⁵. We already know that rural and urban areas differ in many respects, including the drivers of vulnerability to climate change. For example, in rural areas, agriculture is the predominant livelihood, whereas in urban areas, many people have salaried jobs, which are affected in different ways by climate change shocks. Scott (2014) notes that recognising differences between men and women in urban areas is crucial for designing and implementing policies and strategies that reduce vulnerability to climate change, while at the same time addressing gender discrimination and promoting equal opportunities and participation. As such, analysis on gender and climate change needs to be translated into useable insights for policy and practice that acknowledge the diversity of urban contexts²⁶. Alber (2015) makes a powerful case for cities to pursue gender-sensitive approaches in urban development and provides practical recommendations to support gender-sensitive climate policies.

By examining the Kisumu and PPP case study, it was intended that the current report would help to provide compelling evidence of the benefits and challenges of gender approaches to climate compatible development in urban settings. Based on this evidence, a range of policy and practical recommendations have been drawn up to guide future action in this arena, both within and beyond Kenya.

Box 1 shows the typology of gender approaches that resulted from discussions with the research teams and wider debate with scholars working on the subject. This was used as a guide to assess the gender-based approaches adopted in Kisumu and by the PPP project in particular.

Box 1. Gender approach typology

Gender-blind = Project description/proposal does not refer to any particular gender aspects or differences between men and women.

Gender-aware = Project description shows an awareness of gender issues by mentioning differences that need to be taken into consideration, but actual activities do not follow a gender approach consistently from design to implementation to monitoring and evaluation (M&E).

Gender-sensitive = Project follows a gender-sensitive methodology (gender analysis, gender-disaggregated data is collected, gender-sensitive indicators in M&E etc.) and aims to promote gender equality.

Gender-transformative = Project follows a gender-sensitive methodology, aims to promote gender equality and also to foster change and challenge gender discriminatory norms and/or root causes of vulnerability to climate change and of unsustainable development. In other words, the project seeks to address the underlying causes of environmental or development issues.

2.2 Research questions

The following research questions guided the study:

1. What does a gender-sensitive approach to climate compatible development mean in the urban setting of Kisumu?

Here, we explore urban livelihoods in Kisumu, the gender-based vulnerabilities to climate change, how they are changing, and how they differ from rural areas. Drawing on the PPP project in particular, we chart lessons from this experience of integrating gender into different stages of project implementation. This includes participatory design and planning processes in which gender knowledge and expertise were applied, and recognition of the need to address practical needs, as well as incremental action.

2. What is the evidence of the relevance of gender-sensitive programming in climate compatible development to promote and achieve people's empowerment?

Drawing on the PPP project, we analyse evidence of the processes and approaches that enabled beneficiaries to help shape the design and implementation of activities, as well as to take on entrepreneurial, leadership and management roles.

3. Which socio-economic, political and cultural factors constrain or favour gender-sensitive approaches in the context of climate compatible development?

We identify the role of different factors in supporting or constraining gender-sensitive approaches within Kisumu and at PPP project level, and ultimately the ability of men and women to tackle climate risks.

4. Does a gender-sensitive approach enable better climate compatible development outcomes, and if so, in what way?

We discuss evidence of whether and how gender approaches in Kisumu and the PPP project are enabling better climate compatible development outcomes.

3 Case study: Kisumu, Kenya, and the People's Plans into Practice project

3.1 Rationale

This study focuses on urban areas of Kisumu, western Kenya. Its point of departure is the five-year project People's Plans into Practice: Building Productive and Liveable Settlements with Slum Dwellers in Kisumu, known as the PPP project. The initiative was carried out between 2008 and 2013 with support from Comic Relief and implemented by Practical Action Eastern Africa, the Kisumu Urban Apostolate Programme (KUAP) and the Shelter Forum. The PPP project was selected as a case study because it meets the following criteria:

- A project which is already completed or which has been implemented for at least two years;
- A project implemented in urban areas;
- A project which has focused on climate compatible development, involving adaptation or disaster risk reduction along with mitigation and development; and
- A project which has addressed gender at all stages of implementation.

3.2 Background to Kisumu

Kisumu County is the main commercial hub in the western part of Kenya and the larger Lake Victoria Basin (Figure 2). Kisumu is hereafter used to describe Kisumu City, which is the capital of Kisumu County. The city's geomorphological and climatic conditions are largely determined by three highlands, two plains and several wetlands including Lake Victoria, the second largest freshwater lake in the world. Like other cities in Kenya, Kisumu faces severe challenges from intense rainfall associated with flooding²⁷. The population's vulnerability to climate change is the result of a number of factors, such as rapid urbanisation and a dramatic rise in population – which tripled from 150,000 in 1989 to more than 419,072 in 2015²⁸ – high poverty levels, deforestation and soil erosion, deterioration and pollution of the riparian reserve and discharge of untreated solid and liquid waste into the environment.

About 40% of Kisumu's population is classified as poor, slightly lower than the national average of 46%²⁹. This situation comes about because Kisumu city forms the hub for economic activity in the county, which has a cumulative positive effect on average poverty levels. High urbanisation levels in Kisumu also play a part in this lower-than-average poverty rate, given that the more rural a constituency is, the higher the levels of poverty³⁰.

Over 50% of the population lives in informal settlements and other densely populated peri-urban areas around the city. People have to contend with inadequate access to basic infrastructure and services including water, sanitation, drainage and waste management and are, therefore, exposed to poor living and working environments³¹. Furthermore, these conditions compromise the ability of city management to respond effectively to climate-related hazards.



Figure 2. Location of Kisumu County in Kenya

According to UN-Habitat (2005), 80% of Kisumu city, which was incorporated into the municipality as a result of boundary extension, is rural in character and exhibits more intensive levels of urban agricultural practice. However, this sector faces numerous challenges, including official bias of the sector because it has not been legally classified as an urban land use in Kenya (Mireri 2013). In addition, there has been an expansion of informal settlements outside the planned municipality, with inhabitants engaging in these types of livelihood activity as a source of employment and an income-generating activity. However, those engaged in such activities lack extension services, which would normally be supplied by government and aid agencies in rural areas. Moreover, although urban agriculture has traditionally been an important source of livelihood, urban farmers are frequently subjected to harassment by council police, who destroy crops planted on public land.

The combined effects of heavy rains and poor urban infrastructure are the key drivers of floods, with devastating impacts, particularly for poor and vulnerable populations in Kisumu. High tariffs for clean drinking water mean that residents who cannot afford to pay must find other sources, often resulting in waterborne diseases. Lack of sanitation facilities leads to open defecation, environmental pollution and outbreaks of diseases such as cholera. Residents

of these informal settlements are the most vulnerable to the impacts of climate change, including flash floods, receding water levels in Lake Victoria – which affects water supply and fish breeding grounds – surface water pollution (rivers, lakes, earth dams), prolonged droughts, very high temperatures, irregular and unpredictable rainfall patterns and the disappearance of wetlands and rare and endangered species of aquatic flora and fauna. All these factors increase the challenge of bearing shocks and stresses linked to climate change, further eroding the capacities and capabilities of the most vulnerable and marginalised people.

3.3 The People's Plans into Practice project

The specific objective of the PPP project was to improve the well-being, productivity and living conditions of poor people in informal settlements in Kisumu by ensuring their inclusion in the planning and development processes of the Local Authority. It also sought to improve access to clean water, better sanitation, waste management and drainage and support secure land tenure and affordable housing.

An initial assessment of PPP project documents and interaction with the implementing agencies indicated that the project addressed gender concerns in the design and planning stages and hence demonstrated a degree of gender awareness.

The project made a deliberate attempt to involve poor urban communities and local leadership in participatory planning and engagement processes to identify responsive and sustainable solutions to their problems. PPP was designed to improve access to basic services using low-cost and appropriate technologies, managed by the poor people themselves, and responding to settlement specific challenges. These included hazards and disasters related to climate change, such as flooding, the collapse of houses and toilet facilities and human-wildlife conflicts over wetlands etc. The project worked with small and medium-enterprises (SMEs) run by women and youth in waste management, artisanal construction and management of decentralised services (such as water and sanitation facilities). The aim of these initiatives was to improve household incomes and well-being, and hence improve people's adaptive capacities to respond to livelihood threats posed by economic downturns linked to climate change in urban slums. Examples of such challenges are the collapse of the fishing industry, receding water levels in Lake Victoria and erratic rainfall patterns. As such, it was agreed that the project demonstrated the potential to offer interesting insights.

The PPP project was carried out in three main phases, shown in Table 1 below. It was designed to respond to key development challenges affecting poor people living and working within two informal urban settlements. The challenges are compounded by weak institutional capacity on the part of local authorities, skewed resource allocation procedures and a lack of deliberate efforts to involve poor people in decision-making processes. This unfavourable situation is further exacerbated by climate change and extreme events, including floods, fires and mudslides, which have led to greater water scarcity and poor sanitation, among other problems.

The absence of appropriate and timely mitigation measures and affirmative action in Kisumu consigns poor men, women, children and those living with disabilities to the worst forms of exclusion, marginalisation and poverty. The PPP project envisioned that through partnerships, residents of informal settlements in Kisumu and Kitale would have more say in decisions that affect them and greater capacity to engage with local authorities and their staff, who in turn would receive training to build pro-poor attitudes and practices in planning and service delivery.



Table 1: PPP project activity overview

Inception and start-up	<ul style="list-style-type: none"> • Community mobilisation and stakeholders' engagement • Baseline surveys and studies • Preparation of community-based Strategic Ward Action Plans (SWAPs) • Formation and strengthening of residents' associations and Neighbourhood Planning Associations (NPAs) • Capacity-building of community ward representatives on leadership and governance, social audits and participatory planning processes • Training of county government staff on participatory planning methodologies and approaches
Implementation	<ul style="list-style-type: none"> • Appropriate technology development for water and sanitation services • Sinking of community-managed boreholes • Protection of water springs • Digging of shallow wells • Formation of waste management SMEs • Training in business planning, savings and resource mobilisation • Construction of ablution blocks and household toilets • Formation of housing cooperatives and training in low-cost house construction technologies • Donation of equipment and tools for waste management SMEs and construction artisans • Community training/capacity-building on lobbying and advocacy • Mid-term evaluation and project review
Phase-out	<ul style="list-style-type: none"> • Lobby and advocacy campaigns for integration of community plans into county development plans • Institutionalisation of project interventions into municipal structures and departments • Documentation of project impacts, lessons and experiences • Final evaluation and dissemination of lessons to community members and stakeholders • Sharing project lessons at national and international conferences, such as the World Urban Forum in Naples, Italy

3.4 Policy context on gender and climate change

The 2014 Gender Gap Index³² produced by the World Economic Forum gave Kenya a score of 0.7258 (the highest score being 1 for equality and 0 for inequality), thereby ranking Kenya in 37th position ahead of Peru (45th) and India (114th). This ranking is attributed to various factors, including recognition in the 2010 Constitution of gender equality as a key principle of national development, strong commitment from leaders to mainstreaming gender, the National Framework on Gender-Based Violence, a free education policy and the two thirds gender rule³³, which has increased the number of women in leadership positions at national and county levels. Notwithstanding, just 9.8% of national Members of Parliament were women in 2011,

a figure that is low in comparison with neighbouring countries Uganda (37%) and Tanzania (36%)³⁴. The two thirds rule is also applied in the public sector, so as to ensure that employment opportunities for men and women are on a par. Despite these measures, there is generally low awareness of gender equality laws in Kenya, and inequalities persist throughout the country, with northern regions, such the arid and semi-arid lands, demonstrating more acute disparities.

Overall, disparities between men and women exist in the use of resources and access to productive assets and credit. For example, just 3% of land was owned by women in 2011, and women often lack the collateral required to take out a loan³⁵. While access to primary school education is largely equal between boys and girls, the participation of girls drops by around 20% by secondary school level³⁶. Almost one third of women are pregnant before they reach the age of 19³⁷ and women have simultaneous and competing demands to fulfil productive and reproductive roles, often working twice as many hours on average as their husbands³⁸.

According to the Kenya National Bureau of Statistics (KNBS) 2005/2006 reports, 47.8% of women in the wider Kisumu County were employed, while the proportion of those living in absolute poverty was almost the same as that of men at 49.5% and 49.8%, respectively. Literacy levels stand at 85% for men and 81% for women. A study conducted by the Federation of Women Lawyers (FIDA) in Kenya in 2012 revealed that the most prevalent form of gender-based violence experienced in Kisumu was wife inheritance, while girls as young as 13 were found to be working as sex workers on the street and in nightclubs. Also, 89.7% of respondents in the same study were aware of violence against wives, 79.5% were aware of cases of rape, and a further 17.9% were aware of female genital mutilation. Even though they make up the majority, comprising 51% of the entire county population, women are under-represented in strategic decision-making positions. The Governor, the Senator and all seven elected members of the National Assembly are men. According to the Kisumu County Gender Mainstreaming Strategic Plan 2013/4–2017/18, gender disparities still exist in legal, social, economic and political spheres, as well as in access to and control over resources and opportunities³⁹. Inadequate resources, increasing violence against women and limited access to and control of productive resources such as land remain the greatest challenges to gender equity in Kisumu County.

Although women are being encouraged to take advantage of the two thirds gender rule set out in the Kenyan Constitution, women elected or nominated to these positions tend to remain silent in the County Assembly, participating and engaging less on matters that touch on gender sensitivity, due to embedded cultural norms and assumptions. Traditionally, women have faced a number of barriers, including male domination in debates, and society has not yet accepted women's leadership rights or abilities.

3.5 Methodology

Research approach

This study used qualitative, exploratory and participatory approaches to data collection, which involved working closely with former PPP project implementers and other stakeholders at county, ward and community levels. These included officials from national and international agencies, national and county officials working on programmes on environment, gender, Water And Sanitation for Health (WASH) and urbanisation, community members, chiefs, headmen and chairs of neighbourhood committees, women's groups managing a water project, waste management entrepreneurs, women, men and youth in leadership positions, and PPP project implementers.

Analysis of the PPP project focused on the informal settlement of Kisumu. Specifically, the study was conducted in five informal settlements where the PPP project was implemented, namely Manyatta A, Manyatta B, Nyalenda A, Nyalenda B and Obunga (control settlement).

All five informal settlements are characterised by insufficient provision of social and infrastructure services such as water, sanitation and drainage, and face additional challenges such as overcrowding and insecure land tenure. Maoulidi (2010) observed that in Kisumu's informal settlements, sewer bursts and blockages are common, resulting in groundwater contamination and the outbreak of water-related diseases, such as typhoid. For example, as observed by Karanja (2010), in Manyatta A and B, landholdings are not officially recognised in the cases of, respectively, four out of five and nearly three out of five inhabitants. In both settlements, around two fifths of households have no toilet in their plot, and only one fifth have provision of water and electricity. Access to water is through individual connection⁴⁰. A study carried out by Sori (2012) revealed that around two fifths of residents in these two settlements (Manyatta A and B) live in dwellings made of clay-fired bricks and concrete, while the rest of the residents live in mud houses.

According to Karanja (2010), very few households in Obunga have water connections, electricity or toilets on their plots, and many dispose of waste by dumping and burning. Obunga is prone to flooding during the rainy seasons, which blocks drainage. In Nyalenda, most households lack water on their plots, more than two thirds do not have toilets, and the majority use open defecation. There is little provision for drainage, and parts of the settlement are affected by floods during the long rain⁴¹. According to the study carried out by the Pamoja Trust (2011), Nyalenda had seven primary schools and two secondary schools, with a public hospital and various private health services. As a result of individual rights, those who inherited lands from their parents had user rights, transfer rights and exclusion rights over these ancestral lands. According to the land law, they are allowed to dispose of this land at will, affecting the planning process of the County of Kisumu. Primary sources of energy include charcoal (35.5%), firewood (33%) and kerosene (26.5%)⁴².

Methods for data collection and analysis

Data was collected from both secondary and primary data sources. Secondary data was gathered through a desk review of PPP project documentation, as well as from policy documents and literature at national and county level. Primary data was collected through semi-structured interviews with 28 key informants, and focus group discussions were carried out with stakeholders at three levels: county, ward and informal settlement. At the level of informal settlements, semi-structured interviews were used to solicit views from leaders of NPAs and village elders. Additional interviewees were selected from the three organisations responsible for implementing the PPP project in Kisumu, namely Practical Action Eastern Africa, KUAP and Shelter Forum. Focus group discussions involved a representative sample of PPP project participants. The study made efforts to encourage both men and women to attend. A total of 93 men and 86 women took part in 19 focus group discussions across the five informal settlements. Of these, 18 focus groups had a mix of men and women, and one had female participants only.

Although the PPP project provided an important entry point for gaining access to the settlements and informants, interviewees were sought beyond the immediate project participants and direct beneficiaries, so as to avoid potential response bias and in order to be able to triangulate the findings across a larger pool of respondents. Two key means for achieving this were snowballing⁴³, to identify and recruit interviewees, and discussions with representatives from organisations working at county and settlement level in Kisumu but



not involved in the PPP project. Annex 1 and 2 provide further details of the focus group discussions and semi-structured interviews, respectively.

The research comprised three phases. *Phase I* involved mobilisation and preparatory work, including meetings with the research team at PAC, a literature review and a consultative meeting with Nairobi-based stakeholders and institutions. It also involved setting up and preparing the research team, comprising an independent lead researcher and two research assistants. *Phase II* involved fieldwork over a continuous period of eight weeks during June and July 2015, including visits to Kisumu County government offices, interviews with key informants at county and ward level, PPP project partners and beneficiaries of the PPP project in Kisumu. The research team wrote detailed notes after each interview and focus group discussion, before debating key themes emerging from the data. Finally, *Phase III* involved qualitative data analysis by identifying patterns in the responses and grouping them by theme.

Box 2: Acronyms as used in the text citation

KINEMA	Key Informant NEMA
KIKIAPNET	Key Informant KIAPNET
KISANA	Key Informant SANA
KiVi Agroforestry	Key Informant Vi Agroforestry
KIMGY	Key Informant Ministry of Gender and Youth
KICGG	Key Informant Climate and Green Growth
KINGO	Key Informant Non-Governmental Organisation
KIMP	Key Informant Ministry of Planning
KIMCA	Key Informant Member of County of Assembly
KIUmande	Key Informant Umande Trust
KIKUAP	Key Informant KUAP

4 Findings: Gender and climate compatible development in Kisumu

4.1 Gender, livelihoods and vulnerability to climate change

To understand how the impacts of and responses to climate change are differentiated by gender in Kisumu, this section describes the main economic activities and sources of income for men and women in the study area and how they are affected by climate risks, as well as by other risks and challenges. From the interviews and focus group discussions in Kisumu, gender differences were identified in the livelihood activities in which men and women are engaged, as well as their roles and responsibilities and access to resources and services. These differences have implications for the vulnerability of men and women to climate risks, and their ability to cope and adapt. The evidence also reveals some key differences between rural and urban areas.

Table 2 below summarises the main livelihood sources in Kisumu, together with gender-based differences and changes, and how they are being affected by climate risks. Overall, the broad trend across the five informal settlements in Kisumu is a movement away from fisheries and agriculture towards increased reliance on business and salaried employment.

Table 2. Different livelihood activities undertaken by men and women in the five study wards in Kisumu

Activity	Gender differences and changes	Implications of climate change and variability
Fishing	Men catching fish; women selling.	Both men and women affected negatively by reduced fish stocks.
Agriculture	Urban agriculture important for both men and women, but residents are increasingly having to look for alternative livelihoods. Men usually look after the animals (pigs and goats), while women have kitchen gardens, where they plant vegetables, tomatoes and sugar cane. Both men and women rear poultry.	Increasingly difficult for both men and women due to erratic rains.
Water, health and sanitation	Women tend to be responsible for water collection, family health and household sanitation.	Women have been particularly affected by less access to water due to reduced supply and higher prices, increasing time spent collecting water, with less time for income-generating and other activities.
Business and employment	Traditionally, men are more involved in business, but women are increasingly seeking employment in furniture-making shops, road construction, cleaning and business opportunities selling fish, vegetables, waste collection, selling <i>Jikos</i> (stoves) and second-hand clothes and shoes. Increasing competition overall. A high number of young men and women are unemployed.	Both men and women are negatively impacted, but women, whose incomes are already low, are particularly affected by reduced supply and higher costs of raw materials as a result of floods, which affects the making of briquettes and <i>Jikos</i> (stoves).

Sources: interviews and focus group discussions

Traditionally, the main sources of food and income for households in urban and peri-urban areas of Kisumu have been agriculture and fisheries. However, as noted in Chapter 3 above, recent rapid urbanisation and the influx of rural dwellers into the city have resulted in agriculture becoming less and less viable as a livelihood option. Respondents also noted that rainfall patterns have become more unpredictable and erratic, and soil fertility has declined due to increased floods that wash away soil nutrients. At the same time, fish stocks have fallen dramatically, due to overfishing and habitat destruction, which in turn affects both income levels and nutrition, particularly for children. As a result, both men and women have been forced to look for alternative sources of income, such as agribusiness, petty trade for both genders and house help for women. For some, the situation has become more desperate, however. A female leader in Manyatta settlement stated, "Some women have been forced into prostitution, while some men have resorted to crime to fend for their families."

Fishing is still a key economic activity in the Kisumu urban area, providing employment and self-employment for men and business opportunities for women from the informal settlements. Most workers in fish-processing factories and those employed in fishing businesses are women. This activity has been negatively affected by reduced water levels in Lake Victoria, which in turn hampers the fish breeding cycle. The presence of water hyacinth has also had an impact on fishing in the lake. For example, interviewees noted that hyacinth growth hinders fishing because boats cannot access fishing grounds or easily transport fish to shore. The weed also creates a breeding ground for mosquitoes, and hinders irrigation and water treatment processes. Furthermore, industrial effluents, raw sewage and agro-based chemicals washed into the lake affect fish reproduction and production. Shifts towards new and more efficient fishing methods have resulted in overfishing, causing particular fish stocks in shallow waters to decline. This has led fishermen to risk their lives by venturing into deep sea without appropriate equipment.

Reduced fishing opportunities have led both men and women to diversify their livelihoods and sources of income. Fishermen, mostly from the informal settlements, continue fishing in the dry season, despite lower fish stocks. Those hired by boat owners to conduct fishing activities have to work extremely hard to collect enough fish to earn a daily income. In parallel, it was observed that approximately 75% of workers in fish-processing factories, and those involved in fish businesses as employees, are women⁴⁴. The case story in Box 3 below describes some of the changes to fisheries, as experienced by a cooperative society in Kisumu.

Box 3: Changes to the Dunga Fishermen Cooperative Society, Kisumu

"There used to be plenty of fish between 1988–1995, but the levels have dropped dramatically [since then] due to changes in climatic conditions. Demand for fish, both Nile perch and tilapia, is high, but supplies are scarce due to reduced stocks. The Cooperative used to have an annual sales turnover of about KSh5 million [\$50,000], but this has declined drastically to KSh0.5 million [\$5,000]. The Cooperative used to have 21 employees, but now has just one. Previously, there were a great many bonuses, and the Cooperative could provide credit facilities in the form of loans and fishing gear to members, but this is no longer possible. Before, Cooperative members could afford to attend exchange programmes, but not anymore. Previously, welfare was provided for members, but now there is none."

Officer, Lake Basin Development Authority

Urban and peri-urban agriculture has traditionally been another important source of livelihood. In the five sampled settlements, urban agriculture was no longer a major activity, except for a few farm gardens that were observed during fieldwork. The expansion of the city has led to land being parcelled into smaller units, with less land available for agriculture. In the past, women in Kisumu would rear cows and goats, but due to reduced land availability they are no longer able to do so. Instead, many women are increasingly seeking to develop commercial businesses to earn an income. Since large numbers of individuals and households in Kisumu can no longer access nutritious vegetables, malnutrition levels are high. During floods, vegetables are submerged in water, leading to loss, and during droughts, urban households are hit by rapid increases in food prices. For example, small fish can increase in price from \$0.50 to as much as \$10, because they move to deeper waters.

Comparing the current situation with the one that they experienced in rural areas before migrating to Kisumu, many respondents noted some common challenges. First, in rural areas, farmers had to modify their calendars due to increasingly unpredictable and irregular rainfall patterns. This led to considerable losses in yields and wasted farm inputs, and growing dependency on buying foods from shops. Traditional granaries no longer exist due to low outputs. As one Manyatta A resident commented: "There used to be high yields of millet, but this has changed. Plants have become like human beings that have to be fed to get yields. Long ago, there used to be nutritious and medicinal traditional vegetables, but they are now few and can only be found in the supermarkets where they are sold at very expensive prices."

In the past, men and women could cultivate on the shores of the lake where land was very fertile, but as a result of erosion and floods, the lake has moved closer inland and has covered these once fertile lands. Due to reduced land fertility, there is increased use of pesticides on crops, which respondents found to be harmful, particularly to the regeneration of wild vegetables. Hiring land to farm is expensive, as is setting up a greenhouse. Increases in human-wildlife conflicts have also been observed. For example, hippopotamuses invade farms and destroy crops and vegetables.

Water collection and sanitation tend to be mainly the responsibility of women. Kisumu residents used to depend on rivers, springs and wells for watering the animals, as well as for domestic use. However, the water masses have receded, and available surface water sources are increasingly polluted. Piped water is not affordable to all, and there is a perception that KIWASCO (the water company) overcharges water fees. In 2014, for example, water scarcity led to water rationing and a significant increase in the price of water, from KSh5–10 to KSh20 per 50-litre can. As a result, some people, and particularly the poorest, have to rely on cheaper borehole water during the dry season. The long queues at water points (kiosks) reduce the amount of time that women have available to engage in other activities, including income generation. Poor sanitation during floods, when toilets are either washed away or collapse due to the high water tables and weak soils, are just some of the challenges encountered by all residents. Low coverage of pit latrines, open defecation and so-called flying toilets⁴⁵ pose an increasing challenge due to high population densities in the informal settlements. There have been some efforts to engage county public health officials, and community members keep a close watch on those involved in malpractices. The case story in Box 4 illustrates some of the challenges faced by a women's group that runs a water kiosk, as well as more general challenges that they face when carrying out their daily activities.

Business and employment. Formal employment in factories, industries and commercial service sectors are important for both men and women in Kisumu. The number of women in formal employment is overall significantly lower than men, but with some exceptions. The fish factories employ more women than men as casual labourers, and women were therefore



Box 4: Blessed Noah Women's Group, Kisumu

The Blessed Noah Women's Group has 10 members in Manyatta B. This group worked closely with PPP partners to implement activities set out by the project. On a day-to-day basis, the group supports people living with HIV/AIDS alongside other groups and community-based and non-governmental organisations, such as the KUAP, Practical Action, World Vision, Solidarity with Women and Girls in Distress (SOLWOGIDI) and the Grassroots Trust. Their coming together helped them to run a water kiosk and a tent for outside catering services. The group received training from partners in table banking and social auditing. Members used their savings to purchase chairs. Some members are water vendors, tailors and small-scale agriculturists. However, individuals still face challenges. Poverty decreases their capability to maintain table-banking activities⁴⁶. Transport is a challenge, particularly when they have to offer outside catering services where tents and chairs are required. Floods damage their homes, leading to evictions, and kitchen gardens are flooded. The majority lack adequate training in any skill, and counselling the HIV/AIDS patients is not an easy task.

Focus group discussion with Blessed Noah Women's Group

affected most when the factories closed in Kisumu. The decision was a result of declining fish stocks in Lake Victoria, due to pollution and receding water levels that are attributed to climate change. However, both men and women respondents pointed out that women adapted much better to the job losses, as they ventured easily into other income-generating activities, such as selling groceries and ready-to-eat products by the roadside, including *mandazis* and *chapatis*. Both men and women respondents in focus group discussions in Obunga noted that men tended to "resort to alcohol abuse and waste away, some of them even dying".

4.2 How gender approaches are integrated into PPP initiatives in Kisumu

This section examines the PPP project through interviews with beneficiaries and other stakeholders who are familiar with the project. The aim is to draw some lessons from their experience of integrating gender into all stages of project implementation, including the way in which knowledge was applied, recognition of the need for transformative measures and incremental action, and acknowledgement of gender expertise.

Motivation drivers to integrate gender

An important question regarding the role of gender in the PPP project is what motivated the integration of gender into the project initiatives. For example, was this inspired by donor or project requirements, or was it an objective on the part of the project team or beneficiaries? Key informants suggested that it was possibly motivated by all those reasons. Some said that the project included gender because of the constitutional requirement (the two thirds rule), while others pointed to the organisational requirements laid down by Practical Action, for which gender and climate change are cross-cutting themes. Another reason highlighted by key informants was recognition by the project team of a need for inclusive urban development programming. The wider context was also seen as important: some key informants noted the international recognition of and spotlight on gender and climate change in development, including an increased focus on these issues in international climate negotiations, which served as a motivator because it helped to make the project relevant

and timely. Finally, the donor's requirements did play an important role: Comic Relief was very clear on beneficiary categorisation by gender.

Inclusive project design

During the planning stage, and influenced by the findings of a previous project (the UN-Habitat City Development Strategy), the PPP project team underscored the importance of working with poor women and young people in informal settlements of Kisumu. An objective for helping these groups was to improve their well-being, productivity and living conditions. One cross-cutting goal of the PPP project was therefore to ensure that a number of groups defined as vulnerable (women, youth, waste pickers and tenants) were included in decision-making processes set up by the project, and that they were also able to benefit from project opportunities. The key indicators related to women were to increase their incomes from small businesses by 20% by end of year 3, as a result of less time spent looking for water, as well as improved attendance of girls at primary schools.

Another objective for helping women and young people was to ensure improved coverage and access to better services, at community and household level. The indicator related to women was that 28,250 people in Kisumu – particularly women and children – should have access to adequate, safe, reliable and affordable water, sanitation and waste management services. In addition, it was indicated in the project design that “poor people (majority being women) and service providers are able to plan, construct and operate suitable infrastructure services, where appropriate using decentralised approaches and technologies”. During implementation, the community was involved in the selection of technology options of interventions, and this was demonstrated by the number of training initiatives and consultations made by the PPP implementing partners.

Participatory involvement

Adopting a gender-sensitive approach to the PPP project involved ensuring participatory design and development of solutions to tackle climate risks. So it was important to organise the participation of community members in selecting technology options for interventions, while taking into account the unique needs and capacities of both genders to access different levels of services. For example, toilet designs has to be adapted to the needs of different groups, i.e. toilets for women with bins for disposal of sanitary towels and enhanced security features, such as lockable doors, greater accessibility and better lighting.

The PPP project made significant efforts to integrate women into activities. As highlighted by participants in one group discussion in Kona Mbuta: “The coordinator of the PPP group in Meta Meta is a lady; the treasurer is also a lady. This is because women are trustworthy and men have accepted it.” An evaluation of the PPP project carried out prior to this study by University College London⁴⁷ found that the project made good progress towards its goal of being participatory in both planning and design phases, by ensuring the representation of these groups on bodies (such as the NPA) set up in the framework of the project, and also ensuring that these groups were able to materially benefit from services and livelihood opportunities. However, results from respondents in the present study showed that there is a need to go beyond this focus on (numerically) balanced participation in decision-making bodies, to building the capacity of such groups to participate actively in decision-making, through, for example, identification and prioritisation of community needs, engagement in county government and budgeting cycles, monitoring, evaluation and oversight of projects funded from public coffers.

The PPP project provided opportunities for both men and women to take on leadership roles, and supported their participation in economic activities. This was achieved through



the formation of task forces including ones for water kiosks, sanitation, urban waste and agriculture. In all these task forces, women were present. "Besides other areas of the project, women were involved in operating and management of completed projects such as water kiosks and sanitation facilities. They were involved for the ownership and the success of the project. The inclusion of women was pre-planned because they are the custodians of water issues in community households" (Officer, Manyatta Residents Association).

One example of women taking leadership roles was in Nyalenda ward, where female community members were involved in several stages of the PPP project, from identification of stakeholders to identifying priority actions, forming and strengthening community structures and targeting training needs. During project implementation, the Nyalenda community was involved in protecting a spring water source and laying water pipes, as well as in the tendering process, including sourcing local contractors and suppliers. The following comment illustrates the PPP process that led to the involvement of women:

"Women faced a lot of problems fetching water, and that is why they were involved in the PPP project. They were trained by PPP to access adequate safe water. Women are in various task forces, including the water task forces. The condition for PPP was that the community had to form groups in order to be involved in the PPP project. Women therefore got the opportunity to be involved. In a group, you have to contribute time as well as money" (focus group discussion: Gonda, Konambutu unit).

This approach resulted in women's being able to influence the location, maintenance and design of water points more suitable to their needs. They also participated in training of trainer sessions, particularly for the operation and maintenance of facilities, such as water kiosks, toilets and housing. The PPP mid-term review report from 2011 noted that: "The community was empowered through trainings on the use of hydraform machines to create interlocking bricks for better houses and given certificates. A total of 17 artisans participated, of which two were women and 11 were youths⁴⁸." In one group discussion in Magadi, participants also noted that: "Others were trained as social auditors, others as water kiosk operators, how to identify leakages and read meters. In housing, people used the technology to build cheap permanent houses." Those who took part in the operation of the hydraform machine were trained in safety while operating the machine, as well as in moulding the bricks, curing and construction using the blocks. As a result, one three-bedroom demonstration unit and an appropriate building technology (ABT) centre were built in Kisumu. Funding for the housing unit came from a female resident of Kisumu, while funding for the ABT centre came from the Ministry of Housing.

Table 3 shows the total number of men and women who took part in training sessions conducted by PPP.

Gender-sensitive interventions to address practical needs

The PPP project explicitly divided many of the activities among men and women. This was particularly true for activities involving water and sanitation. Lack of proper sanitation, exacerbated by high water tables and flash flooding, was identified as a problem by men and women residents in settlements where the PPP project was implemented. As a result, KUAP followed up with training in how to construct improved latrines that are raised, so as to prevent water from flooding them. One of the techniques taught was the ECOSAN system⁴⁹. Women were involved because the project recognised that their roles involved fetching water for the household, keeping the toilet clean and usable for reasons of hygiene and assisting children and the elderly in hygiene and sanitation needs, such as using the toilet. According to women beneficiaries, the ECOSAN toilet was better than the pit latrine



Table 3. Number of men and women involved in different activities in the PPP project

		Kisumu			
		No.	Male	Female	Total
1	Training of trainers on PHAST and C2C	2	22	18	40
2	Training of School Health Club members and patrons in PHAST, CHAST, PHASE	2	37	36	73
3	Advocacy and lobbying	1	38	26	64
4	Training in social auditing	1	45	35	80
5	Leadership and management training	2	26	19	45
6	Establishing/strengthening NPAs	4	117	95	212
7	Preparation of Sector Wide Approaches in Health	4	228	191	419
8	Business Development Services training	1	38	44	82
9	Participatory technology development	2	41	24	65
10	Waste entrepreneurs training in waste reduction, reuse, recovery and recycling	1	11	8	19
11	Placement of youths for on-job and artisan skills training	3	72	36	108
12	Training in establishing community Savings and Credit Cooperative Organisation/saving schemes	2	68	45	113
Total		25	600	463	1063

Source: PPP Mid-term review report, 2011.

because there is no risk of a child falling into it. The men were mostly involved in the digging and construction of pits. As a result, the ECOSAN toilets would save on the cost and space needed to replace a filled pit latrine. An additional activity carried out for the sanitation sector involved Community-Led Total Sanitation (CLTS)⁵⁰, with KUAP raising awareness on personal and environmental hygiene.

The Biocentre Initiative⁵¹ and so-called communal ablution blocks have bathrooms designed for different genders and are for the most part managed by women. Women took up the management role because they play a key role in mobilising other community members for awareness-raising meetings on water and sanitation. In addition, women often took on the role of managing water facilities, since if the water system breaks down, they are the ones who bear the brunt of fetching water from a longer distance.

“The Biocentre is managed by different groups with different leadership structures. There is a need to improve the governance structure. The cashless payment card is gender neutral.”

(Umande Trust)

Another intervention implemented by PPP was the use of simple, low-cost technologies to construct a borehole, and these were deemed friendly to different genders because of its ease of use, with less human power required for water pumping. The technology has attracted more women to using this facility, as echoed by participants in the focus group discussion in Manyatta ward. This was because men were more concerned with water for

production, while women, who are direct users of water, especially at household level, found the technology much easier to operate and save on time spent pumping the water out of the borehole. “The borehole technology used is friendly to different genders. The easy and friendly technology attracts women” (Umande Trust).

At the PPP project implementation level, women in Manyatta were seen to participate more than men, empowering the community by setting up a savings and loan group for businesses and families. But this view was not shared in all wards. For example, some felt that PPP involved both men and women in the process, and that both men and women could be meter readers and plumbers in Nyalenda. However, the roles could also be more segregated, with women fetching water for construction while men dug trenches. Both sexes were involved in tendering and looking for suppliers and contractors, according to participants of group discussions. “The Biocentres have a book showing use of men and women for the facilities. This has shown that it helps to improve the facilities. Both men and women are managing the facility” (Umande Trust).

Women and young males formed the majority of people who established SMEs in waste management, artisanal construction and management of decentralised services (such as water and sanitation facilities). For example, among the beneficiaries of the PPP project are young men running waste enterprises, such as *Gasia Poa*, Magadi waste and BAMATO Environmental Enterprise (see Table 4). These waste enterprises employ women to separate different wastes, youth to collect waste from different points in the informal settlements and men who are responsible for transporting the waste.

4.3 Integration of gender-sensitive approaches into climate compatible development: Opportunities and constraints

Among factors affecting the integration of gender into formal and informal processes, as well as in the PPP project, three in particular emerged from interviews and group discussions at county and settlement level, namely leadership and authority, economic participation and language.

Leadership and authority

Leadership and authority – and changes in these – influence the way that gender approaches are taken into account, particularly at county level in Kisumu. While the National Assembly has made significant strides in including women in leadership positions, there is still some way to go before they are recognised in formal processes. A key informant highlighted how the lack of appreciation of gender in formal processes has hampered integration of gender-based approaches in development planning. Others reported that a lack of collaboration among champions of gender mainstreaming undermined their own efforts, which some attributed to ‘divide and rule’ strategies to weaken motions presented by women on gender issues (Key informant, Member of County Assembly). At community level, institutions such as the Umande Trust often observe that groups encounter challenges in choosing leaders who can champion gender integration at grassroots level. Thus, despite formal progress in recognising gender (such as the 2010 Constitution and other measures described in Section 3.4), barriers still exist to supporting strong leadership on gender integration in practice, both at county and local levels.

The PPP project demonstrated some degree of gender sensitivity by providing opportunities to women for taking on leadership roles at community level. Residents’ Associations were set up in the five Kisumu wards as a result of the PPP project. The leadership structure comprises

Table 4: Waste enterprises in Kisumu informal settlements

	Name	Ward	Unit	HHs served	Employees		Monthly turnover	
					Male	Female	KSh	£
1	Gasia Poa Waste Enterprise	Manyatta A/ Kondele	Flamingo	310	6	2	120,000	960
2	Magadi Waste Enterprise	Manyatta A/ Kondele	Magadi	125	3	1	25,000	200
3	Garbage Dotcom Waste Enterprise	Manyatta A/ Kondele	Gonda	88	2	1	13,200	105.6
4	Evergreen Waste Management	Manyatta A/ Kondele	Kondele	67	3		11,500	92
5	Taka Bora Waste Collectors	Manyatta A/ Kondele	Kona Mbuta	95		3	16,500	132
6	Lord's Mercy Waste Collectors	Manyatta B	Manyatta B	400	5	3	86,000	688
7	BAMATO Environmental Enterprise	Nyalenda A&B	Kilo	120	7	11	24,000	192
8	Achok Youth Waste Group	Nyalenda A	Kanyakwar	210	11	4	31,500	252
9	Gulf Youth Group	Nyalenda B	Got Owak	56	3		14,000	112
10	Muongano Waste Managers	Nyalenda B	Western	97	5	1	17,000	136
Total				1,568	45	26	358,700	2,870

Source: PPP Mid-term review, 2011

both men and women, who are elected to positions such as treasurer. According to KUAP, one of the implementing PPP partner organisations, it is policy to involve both genders in leadership. The Umande Trust also observed that it assisted with the election of leaders for the NPA, but could not influence who was elected. These community structures were strengthened throughout the PPP project, and members of the Residents' Associations were able to run their own projects, such as the Delegated Management Model (DMM) water project. Furthermore, they now have the power and courage to approach and engage authorities when faced with technical and other development problems in their respective areas.

Economic participation

Increased involvement of women in community-level groups and economic activities during the PPP project have opened up opportunities for women and helped to build their confidence, providing a forum for discussion and action on common problems, as well as the chance to engage in learning. In Kisumu, the Ministry of Gender and Youth designs its socio-economic programmes to target youth, women and people with disabilities, so as to better address growing challenges of poverty and employment.

“It is a policy requirement. Institutions advocate for gender aspects in programmes. Adopted in tender committees because they are marginalised genders.”

(Key informant, Ministry of Gender and Youth)

Different streams of funding provided by the government to support economic empowerment of youth and women include the Youth Fund (targeting both men and women) and the Women’s Fund. The Uwezo Fund serves youth, women and people with disabilities. Some of the activities requested by women in the informal settlements in Kisumu include capital for small businesses, shoe manufacturing, poultry keeping, tenders for supplying goods to supermarkets, capital for furniture making, and weaving baskets from hyacinth reeds. However, a review of the Youth Fund and Women’s Fund strategies⁵² revealed that climate change is not a consideration in designing the funds or programmes, or in receiving support.

At PPP project implementation level, women in the Manyatta ward participate more than men. This is because most of them were already organised into women’s groups, and they had been carrying out activities such as table banking, lending loans to each other to buy household goods or even pay school fees for their children. Through such platforms, the PPP project was able to sensitise women on the use of energy-saving devices to reduce fuel consumption. Organisations such as Vi Agroforestry had also worked with these groups to raise awareness about urban agriculture and agroforestry. They have provided training in farming skills, and the community has been helped by the launch of savings and loan groups for businesses and families. Many interventions targeted agriculture as a source of livelihoods, particularly focusing on women.

Changing language, shifting perspectives? From women to gender

A third important factor noted in interviews, and which is affecting the integration of gender into formal and informal processes, is a considerable shift from a focus on women to gender by organisations working in the informal settlements of Kisumu. Organisations that addressed power relations in project management were said to address equity and reduce discrimination of either gender, rather than exclusively focusing on women. However, this approach was largely shaped by campaigns led by civil society organisations to support both men and women. This shift has been accompanied by recognition that men and women, especially those in informal settlements, are both highly vulnerable to climate change, hence the current focus on gender-differentiated impacts.

Also pushing the gender agenda is the fact that it is now a requirement by many development agencies for programmes to have a gender component. Some agencies require that 50% of funds provided go towards implementing projects that benefit women. A case in point regards project activities funded by the Swedish government (Umande Trust; Vi Agroforestry), as noted by a key informant. One respondent from the Umande Trust observed that proposals should demonstrate the element of social inclusion in their approach, in order to cater for the different needs of both men and women. Proposals for funding that do not demonstrate gender inclusion are less likely to be funded. The process of including both genders in the PPP project was factored in at the proposal formulation stage, as stated in one of the objectives: “People in informal settlements have more say in decisions that affect them.” Women and other marginalised groups form the large part of those classified as poor, so including them in the decision-making, planning and budgeting process was a critical strategy that was clearly articulated by PPP at the proposal formulation stage. At the implementation stage, both men and women took on different roles within the task forces as managers, bookkeepers, attendants and waste pickers.



The use of participatory tools and monitoring and evaluation by the Umande Trust has also promoted the use of gender, as opposed to targeting women only. The participatory approaches require the involvement of both men and women in project activities. The Residents' Associations/NPAs, for example, include both men and women in leadership positions, and the latter used the forum to highlight issues affecting them, including those related to climate change. However, some also stressed that it is still a challenge to include men in work on gender. An illustration of this is the argument raised by several respondents that the motivation for some men working on gender is that they would like to remain in employment, rather than a genuine interest in the topic.

4.3.1 Opportunities

Market-based approaches

In the story presented in Box 5 below, one man describes how an enterprise approach to waste management has benefitted him, as well as women in the business. The aim of the project was to preserve the environment and reduce the effects of climate change. Through the Gasia Poa business venture, this man shows how women are taking on roles that involve finance and other roles usually played by men, particularly those that require manual labour.

Box 5: Gasia Poa Waste Management Enterprise

Dickens Ochieng is a resident of Manyatta A and is a beneficiary of the PPP project. He is involved in a waste management enterprise called Gasia Poa. Gasia Poa is a Swahili word that means 'good waste' and has been used as a marketing strategy for the enterprise. Gasia Poa has 1,200 clients in Mambo Leo, Manyatta and Polyview hotels and hospitals. There are seven staff employed on a permanent basis, though more casual labourers are added during weekends. Women have been assigned financial management roles, while men engage in work such as pushing handcarts and removing garbage. Women distribute plastic bags, but both genders handle marketing.

Before taking on this venture, Dickens was a shoe seller, but he gradually discovered that waste collection is a profitable venture and more so, after he received support from external organisations such as Sustainable Aid Africa International (SANA). Together with other members of the Manyatta community, he received training from the municipal council in waste management, and took part in an exchange visit to Tanzania. Dickens is motivated to work in this industry because it earns him a living. He believes that waste can change lives. Many groups in Kenya are now involved in waste management enterprises, helping to solve the climate change problem in the process. The growing population means there is inadequate land for dumping waste. Floods have affected infrastructure, and this hinders waste transportation in some areas such as Mambo Leo. The dumping site in Kisumu is crude, more waste is compost (than non-compostable matter), and he believes that people should use the compost for urban agriculture. Gasia Poa engages in several activities, including separation of waste at Kibuye market by staff who have been trained in composting. This compost has been tested by the Kenya Private Sector Alliance (KEPSA) and has been found to have valuable properties, mostly for uses in landscaping. The plastic is stored and later crushed into pellets by machines. While he is proud to be engaged in the waste enterprise, Dickens also faces challenges in transporting waste and in supplying protective gear for the workers. However, he receives mentorship training and valuable sessions from Practical Action.

Women and youth were seen to be more inclined to engage in small businesses, and the opportunity was observed of involving them in enterprises that could help to preserve the environment – for example, recycling plastic bags, paper and bottles. Some of this waste clogs drainage outlets, preventing water flow during heavy rains. One group in Nyalenda ward, managed by PPP beneficiary the *Bomato* Youth Group, has already taken this approach and is smelting cups, fencing and poles. The food industry also offers scope, since potato peelings can be used to feed pigs, and there are opportunities for creating flower orchards and woodlots as businesses. These are enterprises that require minimal capital and can therefore be launched by women and youth, who have few financial assets.

Women's empowerment programmes

Continued government focus on women's empowerment and grants from civil society organisations offer another opportunity for helping to bridge the employment gap between men and women. For example, it was observed in focus group discussions on progress made to empower youth that approximately 90% of young people have been recruited into the National Youth Service programme in Nyalenda ward. However, it was noted that while there were more women than men in this programme, a gender imbalance in development programmes can also lead to setbacks in society, particularly when gender-differentiated needs are not well addressed. As a result, the resilience of both genders to climate impacts and development challenges could be better addressed if the right people were matched with the appropriate intervention.

Addressing power relations at local level

In Kenya, public participation is encouraged at national level. Sub-county green energy committees reach out to men, women, youth and people with disabilities, and ensure that committee roles demonstrate gender balance. The presence of a number of organisations which support urban communities in a great many ways offers good opportunities to raise awareness of and promote a gender approach in climate compatible development initiatives. Some organisations in Kisumu are already implementing activities that aim to change gender power relations. For example, organisations such as KUAP and SANA International insist that women are fully involved in projects, including in managing facilities funded by the organisation, such as water points. Recognising that men generally prefer roles that generate cash, KIAPNET decided to train both men and women in cladding⁵³. KUAP ensures that all managerial positions in its projects are shared between men and women, in contrast with earlier situations, when men were dominant. Occasionally, the organisation carries out appraisals on leadership change, because men and women depend on each other. Social audit processes, through which community members can hold their leaders to account for resources allocated to address their needs, could be an opportunity for tackling power imbalances. Another opportunity is the formation of inclusive community structures for engagement with government authorities in planning and resource allocation. Most of the challenges in urban slums relate to exclusion from decision-making and a lack of accountability on the part of elected leaders.

Monitoring and evaluation indicators

Monitoring and evaluation at different levels helps to keep track of whether either sex is being discriminated against or left out of climate compatible development initiatives. A good example in the PPP project is the recording, on a daily basis, of use of the Biocentre by men and women, in order to determine usage of the facility by both genders. Programmes rolled out by the Ministry of Devolution and Planning target economically weak groups, including women. The approach used in Kisumu's informal settlements is similar to that adopted in other areas. This process is carried out by county Environmental Committees using the National Response Strategy to develop indicators for monitoring and evaluation



on the ground. The Ministry works on indicators that are not gender biased. Ministry staff were involved in drafting the Kisumu County Strategic Plan on climate and energy issues, including developing the log frame. Under the heading of energy, there was emphasis on the eradication of *Nyangile* (small kerosene lamps) and the adoption of solar energy. More than one third of Ministry staff members are now monitoring the use of solar energy in the informal settlements and peri-urban areas. The Ministry has collected disaggregated data showing the number of female- and male-owned enterprises that are winning public tenders. It is through these processes that the Ministry was able to identify some of the barriers faced by women in the tender application process. The Umande Trust has reported moving towards including gender indicators its programmes.

4.3.2 Challenges

Simply integrating women and men into projects does not mean that there will be gender equality. For instance, while gender concerns were in principle giving women and men equal attention, it was observed that men tended to dominate in meetings, which frustrated the women, who then stopped participating. As a result, men took charge whenever there was a leadership role to be assigned, particularly neighbourhood positions. KUAP attempted to address this imbalance by insisting on equal opportunities for both genders to take on leadership roles and creating some new requirements. For example, if the chair was a man, then the vice-chair should be a woman. On some occasions, KUAP has dictated who should take on these roles.

Policy environment and opportunities for participation

At national level, a favourable policy environment, together with institutional and legal frameworks, requirements from donors and rights awareness, are powerful drivers for the use of gender-sensitive approaches. However, while the formal legal and policy environment in Kenya increasingly supports gender concerns, there are obstacles in implementation. There are also very few gender focal points, and staff rotation is high. For example, of all those interviewed, very few institutions had a gender specialist, who ensures that there are capacities on special and gender advocacy on infrastructure for vulnerable staff within the organisation. While the majority of these posts are filled by women, this is believed to be a coincidence and not pre-planned. The composition of staff comprising both male and female members at institutional level promotes some level of engagement on gender and climate issues.

Cultural attitudes

Cultural attitudes are a hindrance to integrating gender in climate compatible development interventions. Women are at a disadvantage due to cultural biases. Most land belongs to men, and as such it is a challenge implementing land-related projects aimed at helping women and youth. Subdivision of land is problematic in peri-urban areas, where disputes often occur among families over inherited land. As one focus group discussion member said: "Culture denies women many rights and privileges. Women were never allowed to plant trees at home or voice their opinions, and also women would work a lot more than men" (Focus group discussion 3). The role of social norms on gender roles and responsibilities also affected the continuous participation of women throughout the PPP project. Participants of one group discussion reported the issue of continuity of women's involvement. Women did not attend meetings because they were busy with other tasks (Focus group discussion 2).

Lack of relevant policies and a gender agenda at local level

Complementary policies that would address both gender inequality and climate change are lacking in Kisumu County, where there is no agenda to tackle these issues at local level. A few respondents felt that this was due to the push for gender considerations coming from

outside (i.e. donor driven or from central government), rather than being generated from within.

Lack of proper establishment of the link between and climate change

The link between gender and climate change is not well established in many organisations. A majority of the institutions take on gender issues to access funding. Those who acquire funding have nothing to show on gender at the end of the project, with few activities ever taking place.

Limited empowerment of women

Women lack previous work experience and access to enterprise information and marketing facilities, which male entrepreneurs acquire. This can be attributed to the way that both genders access and fare in education. The overall gender gap in primary education has decreased, but it remains high at secondary and tertiary education levels. However, the lower education that is free to all does not emphasise entrepreneurship skills. This decreases the chance that women will have the knowledge needed to excel in business. As observed by the Gender Officer in the Ministry of Youth and Gender, lack of investment in skills training among women has led to considerable losses in their business ventures. Men were observed to have registered companies and taken up all the tenders meant for women, youth and people with disabilities. While the Kisumu Youth and Women Trade Fund – Cooperative Bill (2015/2016) – encourages women to invest in business, the bill has not been implemented due to lack of funds, as a result of mismanagement. In one case, some women invested in fingerlings (a young fish that has developed to about the size of a finger) through the Kisumu Youth and Women Trade Fund, but the fishpond was affected by floods. This example shows how some women can be unaware of the potential effects of a disaster, and how best to protect their businesses before being affected by floods. Given that this was an investment supported by the Women's Fund, which the women were expected to pay back at a very low rate of interest, the collapse of this venture meant that they were forced to look for alternative sources of capital to repay the loan.

Women face a number of challenges as small-scale entrepreneurs. The excessive demand on their time as wives, mothers and managers of household affairs makes it extremely difficult to run a successful enterprise. In addition, women often face discrimination in applying for credit, since they rarely inherit land and other property, and a title deed of a property is one of the criteria used to acquire start-up capital or any other loan. Women operating small-scale businesses are often vulnerable to mistreatment by city or county officials when applying for costly business licences, and are less likely to meet or negotiate bribes demanded by male council officials in charge of business licensing. Women also tend to have multiple responsibilities, with the result that the proceeds from an enterprise are often quickly consumed by the household. Finally, women generally have to return home early to tend to children, and lose out on business opportunities and customers as a result. There are also differences among women and men with regard to business know-how.

5. Conclusions and recommendations

5.1 Conclusions

This study shows the complexities of gender relations and climate change in urban areas in Kisumu, highlighting main findings from the PPP project and the broader context of Kisumu County, including some of the key opportunities and challenges for integrating gender into interventions that support climate compatible development. The following sections synthesise findings in response to the study's four research questions.

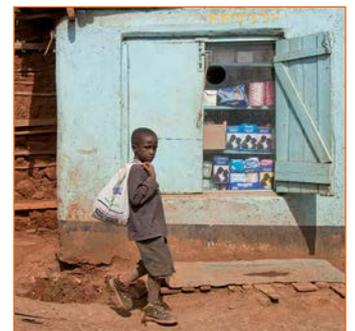
What does a gender-sensitive approach to climate compatible development mean in Kisumu?

The analysis highlighted how gender relations play a key role in determining vulnerability in urban Kisumu and the different ways in which men and women's livelihoods and daily activities are affected by climate change. A gender-sensitive approach in Kisumu therefore means understanding the complexity of how gender affects vulnerability to climate risks in urban areas and the ability of both men and women to cope with and adapt to climate variability and change.

Understanding vulnerability. Compared with rural areas, residents of urban parts of Kisumu have moved away from traditional livelihood sectors such as fisheries and agriculture, towards a stronger reliance on business and salaried employment. This is mainly because agriculture and fishing have become more difficult, due to erratic rains and flooding. Some men and women still carry out urban agriculture, but their crops are sometimes ruined by floods. Due to receding water masses, men have been forced to go deepwater fishing, sometimes without the appropriate equipment, which places them at risk. Women have been more affected by fish factory closures. Urban households in general are exposed to significant price shocks when staple food stocks are reduced, sometimes due to climate change. Within a context of increased rural-urban migration, gender relations are dynamic and changing. For example, urban residents – particularly women – reported having access to self-help groups which support their economic empowerment and provide them with a space to socialise. This contrasts with rural areas, where people are less forthcoming and thus have fewer social relations.

In terms of the PPP project, gender was integrated into various stages. The rationale for considering gender was based on a combination of formal and organisational requirements, including insistence from the donor and Practical Action East Africa's institutional gender strategy, to recognise the importance of addressing gender concerns as a strategy for achieving better project outcomes. Evidence of inclusion of gender was seen, for example, during project design in the way that committees were selected to include an equal number of men and women. Project roles were assigned according to the capabilities and needs of men and women, although these appear to have been based more on assumed current roles. As a result, activities tended to address functional needs rather than strategic – or transformational – gender equality goals.

PPP experiences also highlight the need to address gender at both individual and structural levels. While progress was noted in involving women in project activities, the number of women and the level of their actual participation was still low due to the multitude of other roles and responsibilities that women have in the household. Male-dominated land ownership led to women being unable to engage in decision-making in interventions such as improved housing, without the consent of the men in their households. Intimidation by male counterparts in county-level decision-making processes is an illustration of the strong role played by culture as a determining factor in achieving gender equality.



As the project evaluation report stated, the project was gender-sensitive, but did not go deeper to unearth and address underlying causes of gender imbalances. Transformation of gender power relations was not one of the planned outcomes of the project, but gender issues were addressed as cross-cutting themes throughout its life cycle.

While efforts exist to integrate gender and climate change at national level, for example through the formation of offices and departments addressing gender and climate change, gender has often been downplayed or ignored at lower levels of governance, as was witnessed in Kisumu. The reasons may be manifold, such as limited awareness and technical capacity, cultural attitudes and the fact that gender is often considered a cross-cutting issue without anyone really taking responsibility for driving a gender agenda forward. For this reason, the importance of practical examples at local level cannot be overstated.

Priorities made at national level are reflected in policies that have undergone limited consultation in the counties. This can be a barrier to promoting gender equality, due to lack of county-level ownership. Evidence also suggests that there is often little room for county officers to manoeuvre and allocate funds according to their own priorities. Insufficient budgets, training and staff are considered key barriers to implementation of gender-sensitive policies within the climate change sector. Even as women are being encouraged to take advantage of the two thirds gender rule introduced by the Kenyan constitution, evidence shows that those elected or nominated to these positions tend to remain silent in the County Assembly, with less participation and engagement on matters that touch on gender sensitivity, due to embedded cultural norms.

Monitoring and evaluation. Integrating gender and climate change into programming means developing appropriate tools for monitoring and evaluating progress and outcomes in achieving both climate change and gender equity goals. The PPP project, county government programmes and some local organisations operating in Kisumu do use some indicators in their work in order to avoid gender discrimination of interventions and identify any potential drivers. However, other indicators could also be useful. Examples of indicators relating to the key drivers of vulnerability in Kisumu could include gender-based violence, unemployment among men and women, accessibility to services and opportunities for both genders, and skills transfer to the more vulnerable groups such as single-headed families.

What is the evidence of the relevance of gender-sensitive programming in climate compatible development to promote and achieve people's empowerment?

Findings showed that by implementing activities that can improve women's and men's access to services or resources, the PPP project supported the needs of both genders. However, given the scale of the intervention provided, the PPP project had little influence on the larger contextual issues that lie at the root of gender inequities. As a result, the PPP project approach was probably not sufficient to bring about fundamental change to the balance of power in gender relations.

Factors reported as contributing to changes in gender relations in Kisumu include national- and county-level policies that give women, in principle, more formal rights and spaces for participation. However, as was observed in Kisumu, there are still significant challenges in realising these gains in practice.

Findings from the PPP project show that the engagement of both genders in participatory urban planning and development processes is fundamental in order to identify and prioritise the unique needs and vulnerabilities of men and women, so that initiatives can specifically respond to them. Community members are best placed to identify and execute adaptation



and mitigation measures, using local and traditional knowledge and existing capacities held by people living and working in urban areas. In this sense, participatory planning processes are useful tools for integrating a more gender-sensitive approach, because they can empower men and women to play an active role in making decisions and taking actions that affect their lives. Special care should be taken to ensure that vulnerable populations are able to participate equally in these processes. In Kisumu, some organisations have set their own requirements to encourage proactive participation from both genders, such as defining the gender balance among committee members. In particular, this has led to women taking on managerial and leadership roles.

The PPP project provides useful insights into how to support women in leadership and management positions, as well as increased integration sectors, such as finance, that have traditionally been male dominated. Sharing such stories and encouraging women to reach out to role models can be effective pathways for championing gender and climate compatible development.

Which socio-economic, political and cultural factors constrain or favour gender-sensitive approaches in the context of climate compatible development?

The study identified a number of opportunities that can contribute to gender integration and improved gender equality outcomes in interventions to support climate compatible development. However, it also revealed a number of challenges to achieving this.

Key supporting factors found include:

- a policy environment that gives increasing weight to gender equality, including increasing formal spaces for women to participate in decision-making;
- efforts to drive empowerment, so that more women take on leadership roles;
- targeting women and other vulnerable groups with economic activities and market-based approaches;
- use of participatory tools and processes to ensure that project and policy design is able to capture the differences between how urban men and women experience and are affected by climate change; and
- use of adequate monitoring and evaluation indicators to assess the gender impact of interventions as they progress.

Key challenges, many of which are entrenched in structures that are slow and difficult to change, include:

- insufficient budgets, training and staffing within public departments;
- cultural attitudes, where men still assume power and consider women as the weaker sex, and which are working against gender equality at both county and urban levels;
- limited opportunities in practice for women's participation in activities due to their manifold responsibilities and the domination of men in formal and informal spaces;
- lack of policies and spaces for discussion of gender issues at local (city and ward) level;
- lack of technical capacity and understanding of the linkages between gender and climate change and how to make projects gender transformative;
- unequal opportunities to access and use technologies, with some solutions affecting women negatively; and
- limited ability of women to express issues in ways and in fora that matter.

The study finds that challenges to promoting gender equality and supporting climate compatible development have to be addressed simultaneously at project and policy levels across local, county and national scales. While experiences from the PPP project show that much can be achieved at project level, some of the key barriers to improved gender

responsiveness lie with county- and national-level policies, many of which continue to be gender blind, thereby reinforcing gender-based differences in vulnerability to climate change.

Does a gender-sensitive approach enable better climate compatible development outcomes, and if so, in what way?

Findings from this study suggest that gender-sensitive approaches can help to improve outcomes by better understanding the gender-based drivers of vulnerability to climate change, and responding to the different roles and needs of women and men. But these approaches only work when coupled with certain crucial building blocks. In the case of the PPP project, these include *continuous engagement and dialogue* among policy-makers on gender and climate change at county level, through fora such as the County Assembly, policy formulation processes, the drawing up of strategic plans for the county, management planning meetings and county departmental meetings. These engagements would help to keep the debate and discussions on gender and climate change alive.

Second, it was evident from this study *that improved coordination of programmes and activities* that address gender and climate change is critical. At present, such coordination is non-existent. For example, there is a pressing need to align the mandates of different institutions and strengthen areas that would address this issue or identify opportunities and programmes that would best fit this debate within the county governance structure.

Another important requirement is *to explore possible synergies*. For example, the *Kazikwa vijana* programme that involves youth and was rolled out by the Ministry of Devolution and Planning would take up tree-planting exercises in collaboration with NEMA. Another case in point would be the Climate Change and Green Economy Unit providing support in capacity-building in climate change and working closely with the Ministry of Youth and Gender to identify indicators that would address gender and climate change. Further research is required to document data that is gender disaggregated – for example, by ranking industries and the owners according to gender. Resources from the Constituency Development Funds (CDF) can be borrowed to support the identification and preparation of indicators at national level.

Lastly, gender-sensitive approaches can help to improve climate compatible development outcomes through *increased flexibility in planning*. For Kisumu, being a relatively new city, with rapid urbanisation and a gateway to the western region, migration is important for building long-term resilience. The migration patterns into the informal settlements are based on ethnic inclinations, which translate into rapid growth of some wards compared with others. The majority migrating to these settlements are from rural areas and have been practising farming, unlike people in urban areas, where land for cultivation is unavailable. How quickly they adapt to the urban environment and livelihood activities determines the rate at which they can withstand the stresses and shocks of the impacts of climate change and development in general. Widows who migrate to the city as a result of disinheritance when their husbands die are more at risk, as they tend to settle in the very poor areas of these informal settlements. Good urban planning would reduce the incidence of floods in the wards, as noted in the case study.

5.2 Recommendations

This study has shown that integrating gender into projects requires a concerted effort to think outside the box. A number of recommendations have been identified along the way.

For national- and county-level policy-makers:

- it is important to address entrenched biases against women in policy processes;
- it is advisable to introduce a designated gender focal person in every county department;
- Kisumu County and institutions working in Kisumu need to be accountable for their performance in addressing gender in climate change interventions; and
- it is helpful to integrate findings on the need to understand gender-based vulnerability drivers and barriers to gender-sensitive approaches in county bills across various sectors and the national climate change bill.

For city- and ward-level policy-makers and planners, it is advisable to:

- carry out a gender and climate change audit for Kisumu city in order to document the differentiated impacts of climate change and people's vulnerability;
- encourage participation of both men and women in meetings and community projects, addressing specific strategic needs for women; and
- create and build partnerships and collaboration with stakeholders who value gender equity, such as NEMA, to disseminate policies and incorporate views of stakeholders.

For development agencies and donors, it is important to:

- document best practices and examples of successful gender integration into climate change programmes and projects in urban areas;
- focus on deeper, structural barriers to gender equality, such as women's individual and household-level capacity to participate;
- create an avenue for raising funds to benefit all groups. Enterprise funds go a long way towards *empowering* men, women and people with disabilities; and
- design and implement an information-gathering process on gender and climate change, which also ensures increased access to this information. For example, the Umande Trust is reaching out to county leaders and sensitising them on the need for and the importance of gender differentiation capacity. Another strategy is to request women in leadership to be vocal and share stories of change.



Endnotes

1. Arora-Jonsson, S. (2011) 'Virtue and vulnerability: discourse on women, gender and climate change', *Global Environmental Change* 21(2), 744-1326.
2. Tschakert, P. and Machado, M (2012) 'Gender justice and rights in climate change adaptation: opportunities and pitfalls', *Ethics and Social Welfare* 6(3): 275-289.
3. Brody, A., Demetriades, J. and Esplen, E. et al. (2008) *Gender and climate change: mapping the linkages, A scoping study on knowledge and gaps*. Brighton, UK: BRIDGE, Institute of Development Studies, University of Sussex.
4. Schipper, L. and Langston, L. (2014) 'Gender equality and climate compatible development. Drivers and challenges to people's empowerment', Literature Review. London: Climate Development Knowledge Network/Overseas Development Institute.
5. Ibid.
6. Mitchell and Maxwell (2010) *Defining climate compatible development*. London: Climate and Development Knowledge Network.
7. Final independent evaluation of the Practical Action project: People's Plans into Practice: Building Productive and Liveable Settlements with Slum Dwellers in Kisumu and Kitale, London: UCL. September, 2013.
8. Ibid.
9. Arora-Johnson (2011) Op. cit.
10. Dankelman, I., K. Alam, W. Bashar Ahmed, Y. Diagne Gueye, N. Fatema, and R. Mensah-Kutin. (2008) *Gender, climate change and human security: Lessons from Bangladesh, Ghana and Senegal*. Report prepared for ELIAMEP by The Women's Environment and Development Organization (WEDO) with ABANTU for Development in Ghana, ActionAid Bangladesh and ENDA in Senegal.
11. Shackleton, S., Cobban, L. and Cundill, G. (2014) 'A gendered perspective of vulnerability to multiple stressors, including climate change, in the rural Eastern Cape, South Africa', *Gender and Climate Change* Volume 20, Issue 3, 73-89.
12. Nelson V. (2011) *Gender, generations, social protection & climate change: A thematic review*. London: Overseas Development Institute.
13. Denton, F. (2002) 'Climate change vulnerability, impacts and adaptation: Why does gender matter?' in Masika R. (ed) *Gender, Development and Climate Change*. Oxford: Oxfam.
14. Enarson, E. and Marrow, B. (1998) *The gendered terrain of disaster- Through women's eyes*. International Hurricane Center. Laboratory for Social Sciences and Behavioural Research. Florida International University.
15. Arora-Johnson (2011) Op. cit.
16. Brody et al. (2008) Op. cit.
17. Masika, R. (ed) (2002) *Gender, development and climate change*. Oxford: Oxfam. (http://www.oxfam.org.uk/resources/downloads/FOG_Climate_15.pdf).
18. Tacoli, C., Polack, E., Nhantumbo, I. and Tenzing, J. (2014) *Building resilience to environmental change by transforming gender relations*. London: International Institute of Environment and Development.
19. Lambrou, Y. and Piana, G. (2006). *Gender: The missing component of the response to climate change*. Rome: Food and Agriculture Organization of the United Nations. (http://www.generoyambiente.org/admin/admin_biblioteca/documentos/pe1_051001d1_en.pdf).
20. Dankelman, I. (2010) *Gender and climate change: An introduction*. London: Earthscan.
21. Arora-Johnson (2011) Op. cit.
22. Schipper and Langston (2015) Op. cit.
23. Ibid.
24. Brody et al. (2008) Op. cit.
25. Schipper and Langston (2015) Op. cit.
26. Ibid.
27. Bicknell, J, Dodman, D and Satterthwaite, D. (2009) *Adapting cities to climate change. Understanding and addressing the Development Challenges*. London: Earthscan.
28. Kisumu County Integrated Development Plan (CIDP) 2013-2017.
29. KIPRA, 2013.
30. Kisumu City Development Strategy (CDS)-2005.

31. Kisumu CIDP, 2013-2017 Op. cit.
32. The Global Gender Gap Report 2014. World Economic Forum. (www3.weforum.org/docs/GGGR14/GGR_complete_report_2014.pdf).
33. The two-thirds gender rule is one of the affirmative actions enshrined in the Constitution of Kenya in Article 27(8) of the Bill of Rights to help enhance equality. This rule requires that not more than two-thirds of any elective or appointive position in the government of Kenya shall be the same gender (i.e. women should make up at least a third of the representation).
34. United Nations Development Programme (2011) Human Development Report. New York: UNDP.
35. CEDAW, (2009) The 7th periodic report of the government of the republic of Kenya on implementation of the international convention on the elimination of all forms of discrimination against women. Kenya: Ministry of Gender, Children and Social Development, Kenya. (<http://www1.uneca.org/Portals/ngm/Documents/KENYA-COUNTRY-REPORT-TO-CEDAW-FINAL-APRIL-2004-2009-1.pdf>).
36. Gender Data Sheet (2011) Ministry of Gender Child and Social Development. (<http://www.gender.go.ke/index.php/downloads1/summary/9...gender...mainstreaming/9...gender...data...sheet...2011>).
37. Kenya Demographic Health Survey (2014) Nairobi: Kenya National Bureau of Statistics.
38. World Bank, 2006.
39. Kisumu County Gender Mainstreaming Plan 2013/14 to 2017/18.
40. Karanja, I (2010) 'An enumeration and mapping of informal settlements in Kisumu, Kenya, Implemented by their inhabitants', *Environment and Urbanization* 22 (1) 217-239.
41. Ibid.
42. Pamoja Trust (2010) Enumeration and mapping of informal settlements in Kisumu City.
43. Snowballing is a sampling method whereby existing interviewees recruit future interviewees from among their acquaintances.
44. Heather, C. (2014) Socio- economics of Lake Victoria Fisheries: An analysis of the shifting roles and status of women fish traders. *The Interdisciplinary of Study Abroad*. (www.files.ecgv/fulltxt/EJ89148.pdf).
45. A flying toilet is a facetious name for the use of plastic bags for open defecation, which are then thrown into ditches, on the roadside, or simply as far away as possible.
46. Table banking is an informal loan arrangement, widely used in Kenya. For a description, see <http://www.un.org/africarenewal/magazine/august-2015/loans-women-smart-economics>
47. Final independent evaluation of the Practical Action Project: People's Plans into Practice: Building Productive and Liveable Settlements with Slum Dwellers in Kisumu and Kitale. University College of London. September, 2013.
48. PPP. Mid-term review report 2011.
49. ECOSAN is a low-cost approach to sanitation, where human waste is collected, composted and recycled for use in agriculture and reforestation. The ECOSAN toilet is a closed system that does not require water. It is an alternative to pit latrines in places where the water table is high and the risk of groundwater contamination is increased.
50. Community-Led Total Sanitation (CLTS) is an approach that helps rural communities to understand and realise the negative effects of poor sanitation and empowers them to collectively find solutions to their inadequate sanitation situation.
51. Biocentre technology is an innovative solution that addresses the fundamental needs of densely populated informal settlements and has improved sanitation and energy access options for residents. In this study, Practical Action, together with the implanting partners of the PPP project, constructed a Biocentre at Obunga.
52. Ministry of Devolution and Planning.
53. Cladding is the application of one material over another to provide skin or layer for aesthetic purposes.

Additional background reading

- Adger, W.N., Agrawala, S. Mirza, M.M.Q., Conde, C., O'Brien, K., Pulhin, J., Pulwarty, R., Smit, B. and Takahashi, K. (2007) 'Assessment of adaptation practices, options, constraints and capacity', in: *Climate Change, 2007. Impacts, adaptation and vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the IPCC. Geneva: Intergovernmental Panel on Climate Change.
- Alber, G. (2015). 'Gender and urban climate policy: Gender sensitive policies make a difference', G land, Switzerland: International Union for Conservation of Nature. (<http://www.gendercc.net>).
- Coulier, M. and Konstantimidis, D. (2015) *Making it count. Integrating gender into climate change and disaster risk reduction: A practical how-to guide*.
- Lambrou, Y. and Nelson, S. (2010) *Farmers in a changing climate - Does gender matter? Food Security in Andhra Pradesh, India*. Rome: Food and Agriculture Organization of the United Nations.
- Maoulidi, M. (2010) 'A water and sanitation needs assessment for Kisumu City, Kenya', *MCI social sector*. Working paper series.
- Republic of Kenya (2011) 'The urban areas and cities Act', No.13 of 2011. Nairobi: Kenya.
- Republic of Kenya (2013) 'Agriculture, fisheries & food authority Act', No.13. of 2013. *Government Press*. Nairobi: Kenya.
- Republic of Kenya (2013) National Climate Change Action Plan 2013- 2017. Nairobi: Kenya.
- Republic of Kenya (2011) 'The urban areas and cities Act', No.13 of 2011. Nairobi: Kenya.
- Republic of Kenya (2007) 'Kenya Vision 2030: a globally competitive and prosperous Kenya', *Ministry of Planning and National Development and the National Economic and Social Council (NESC), Office of the President*. Nairobi: Kenya.
- Republic of Kenya (2010) 'National climate change response strategy', *Ministry of Environment and Mineral*. Nairobi: Kenya.
- Republic of Kenya (2013) National Climate Change Action Plan 2013- 2017. Nairobi: Kenya.
- Republic of Kenya (2010) 'The Constitution of Kenya', *Government Press*. Nairobi: Kenya.
- Republic of Kenya (2007) 'Kenya Vision 2030: a globally competitive and prosperous Kenya', *Ministry of Planning and National Development and the National Economic and Social Council (NESC), Office of the President*. Nairobi: Kenya.
- Republic of Kenya (2002). 'The water Act', *Government Press*. Nairobi: Kenya.
- Scott, C. (2014) *Gender inequality and urban informality*. London: Climate Development Knowledge Network. (cdkn.org/2014/06/opinion-gender-inequality-and-urban-informality-what-it-means-for-climate-compatible-development/?loclang=en_gb/).
- Smit, B. and Wandel, J. (2006) 'Adaptation, adaptive capacity and vulnerability' *Global Environmental Change* 16: 282–292.
- Sori, N. (2012) 'Identifying and classifying slum development stages from spatial data'. Unpublished Thesis. University of Twente.

Annexes

Annex 1. Number of interviews conducted in total

Table 5. Number of FGDs and number of participants (disaggregated by sex)

No.	Location	Number of Participants	
		Male	Female
1	Manyatta B: Magadi Catholic	7	4
2	Manyatta B: Flood Light	5	6
3	Manyatta B: Upper and Lower Unit	4	5
4	Flamingo, Kondele & Meta Meta	5	3
5	Kilo and Western Unit	6	3
6	Case story: Water kiosk group	3	4
7	Case story: Gasia Poa	1	-
8	Case story: Blessed Noah Women's Group	-	8
9	Got Owak & Nanga	3	6
10	Dunga Unit: Nyalenda A	6	4
11	Kuoyo Unit: Manyatta B	5	6
12	Pandi Pieri-Nyalenda B	5	5
13	Nyalenda B: Assembly	7	4
14	Manyata A: Kondele	6	3
15	Magadi, Gonda, Kona Mbuta unit	5	2
16	Western and Central unit	7	4
17	Nyalenda A: Dago and Kanyakwar	6	8
18	Obunga Settlement (Obunga Central and Kasarani)	6	4
19	Obunga Settlement (Sega Sega and Kamakowa units)	6	7

Source: author's data collection, June/July 2015

Annex 2. List of key informants

Table 6. List of key informants

No.	Respondents organisation	Type of institution	Respondents	
			Male	Female
1	KUAP	Non-governmental organisation	1	1
2	ENERGIA-Kenya Network	Energia (an international non-governmental organisation) -Kenya Network	x	1
3	National Environmental Management Authority (NEMA)	National agency	1	x
4	Department of Climate Change & Green Energy	County government Kisumu	1	1
5	Minister Water, Energy & Natural Resources	County government Kisumu	1	x
6	Ministry of Devolution and Planning Department of Gender Youth and Sports	County government Kisumu	1	1
7	Umande Trust	Non-governmental organisation	4	1
8	KIAPNET	Non-governmental organisation	1	1
9	Sustainable Aid Africa International (SANA)	Non-governmental organisation	1	x
10	Suswatch	Non-governmental organisation	1	x
11	Lake Basin Development Authority (LBDA)	Regional development agency	1	x
12	Vi Agroforestry (SIDA)	International organisation	1	x
13	Member of County Assembly	Kisumu County	x	1
13	Nyalenda A. Member of County Assembly	Kisumu County	1	x
	Nyalenda B. Member of County Assembly	Kisumu County	1	x
14	Nyalenda A: Neighbourhood Association Chair	Neighbourhood Association leader	1	x
15	Manyata B. Neighbourhood Development Group	Community based organisation leader	1	x
16	Obunga Village Elder	Community leader	1	x
17	Manyatta Residence Association Chair	Community leader	1	x
18	Nyalenda A. Residence Association Chair	Community leader	1	x
Total			21	7

Source: Author's data collection, June/July 2015 (with research assistants)

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The Climate and Development Knowledge Network (CDKN) aims to deliver climate compatible development. We do this by providing demand-led research and technical assistance, and channelling the best available knowledge on climate change and development to support policy processes at country and international levels. CDKN is managed by an alliance of five organisations that brings together a wide range of expertise and experience: PricewaterhouseCoopers LLP, Fundación Futuro Latinoamericano, LEAD Pakistan, the Overseas Development Institute and SouthSouthNorth.

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