



VAWG and Energy in Stable Urban and Rural Settings

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Query: What is the evidence on the links between access to different sources of energy at the household and community level and VAWG in stable urban and rural settings? Please also look at the evidence on violence during firewood collection and in poorly lit communal spaces.

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1. Overview

The literature on the between energy access and violence against women and girls (VAWG) in stable settings tends to focus on the availability of lighting and transport in urban settings and the impact on VAWG and the risks of fuel wood collection in rural settings. VAWG, particularly sexual harassment, in public spaces is a common global phenomena and much of the reviewed literature claims that poorly lit streets, unreliable transport and collecting firewood in secluded areas increases the risk. Some reports also mention the lack of working public telephones and the impact this has on women and girls ability to call for help or report problems.¹

Lighting and transport

For this review only one quantitative study from a low and middle income county that looked at the link between poor lighting and increased VAWG and none that looked at the link with transport. There are clear practical and ethical issues regarding conducting such studies and isolating the impact of specific factors on such a complex issue as VAWG. However, a study of an electrical programme in rural Bangladesh found that almost everyone (98%), irrespective of access to household electricity, agreed that protective security has increased due to electrification at the household level.

There are a few qualitative studies looking at VAWG in urban spaces where women highlight that problems with lighting and transport are primary concerns; although such issues are generally part of a collection of concerns regarding safety in communities. The studies emphasise the fact that poorly lit areas and weak transport infrastructure lead women and girls to fear venturing into certain areas at certain times – so either causing anxiety or curtailing their movements. Key qualitative studies include:

- In Actionaid's study on VAWG in urban public spaces, women reported facing a constant threat of violence, including rape and sexual harassment, in public spaces. Lack of access to public services such as transport, street lighting and electricity, unavailability of public toilets and weak

¹ There is some evidence of an association between access to a television and a lower acceptable of domestic violence – literature assessing communications initiatives explore the link. A relatively new area of attention is the use of mobile technologies to report incidences of VAWG (witnesses or experienced). The evidence base is still weak on the effectiveness of such approaches. (Footnote included because of the need for energy to run televisions and mobile phones).

crime control, made women more vulnerable when moving around the city for work, education or other reasons.

- Amnesty International's report on women's experiences in the slums of Nairobi, Kenya highlights the increased dangers of accessing sanitation at night/during darkness, again drawing attention to the links between violence and poorly lit communal spaces.
- Baselines from the Safe Cities Delhi programme and Madhya Pradesh Safe Cities Initiative evaluation by ICRW and SDDirect respectively illustrate that women fear going out at night and curtail their movements. It is not clear from these baselines whether improved access to energy (through for example, better lighting and transport) in communities would impact these fears.²

Improving public environments through a *range of strategies* that include better lighting and transport systems is believed to have the potential to reduce VAWG and is the cornerstone of Safe Cities programming. There are many examples of community initiatives to improve lighting in their communities³ illustrating the importance of lighting to residents. There are also examples of companies and development institutions providing transport for women to get to work, partly as a result of the link between VAWG and poor transport systems. The World Bank, for example, initiated a programme in Rio de Janeiro, Brazil and Quito Ecuador to improve the transport infrastructure. Both programmes have initiated activities to address GBV, including providing women's restrooms, improved lighting on platforms and surrounding areas, legal, medical, and counselling support at some stations and electronic GBV information terminals as well as ensuring that key service centres are connected via public transport. These programmes have yet to be evaluated.⁴

Collecting firewood

The increased risk of sexual and gender based violence when collecting firewood is recognised in a range of literature on gender and energy access. However this statement is rarely substantiated with evidence. Experts consulted for the query confirmed that there was relatively little evidence supporting the link. The evidence base on VAWG and energy access in transitional setting (such as IDP and refugee camps) is stronger, particularly in relation to firewood collection, and that this is covered in a separate query⁵.

It should also be noted that while there is not a strong evidence base on the direct links between energy access and violence against women and girls, there is a wealth of evidence around broader links between energy access and gender equality (see section 2.3). For example, improving women's access to energy saving devices can play a major role in reducing rural women's burdensome tasks (fetching water, collecting firewood, processing crops); offering them income generating opportunities and management experience; and in many cases can enable them to become more economically independent and help them improve their social status. Labour-saving opportunities and reducing women's drudgery enabled by energy access, may also contribute to the economic and social empowerment of women in both rural and urban areas.

While the specific connections between VAWG and energy access in stable settings are fairly unsubstantiated in terms of robust evidence, the wider literature on energy access supports the need for mainstreaming gender in energy projects and energy issues.

² An assessment by E. Fulu (independent consultant) of the evidence on programmes working to enhance women and girl's safety and mobility in public spaces is due in January 2016.

³ See for example Actionaid (2013)

⁴ Willman and Corman (2013)

⁵ Parke, A. and Fraser, E. (2015)

2. Annotated bibliography

2.1 Literature that focuses on lighting / transport

ActionAid International (2013) *Women and The City II: Combating violence against women and girls in urban public spaces – the role of public services*. London: ActionAid
http://www.actionaid.org.uk/sites/default/files/publications/women_and_the_city.pdf

This ActionAid report is based on qualitative research with women from six cities in Brazil, Cambodia, Ethiopia, Kenya, Liberia and Nepal. The research methodology included a policy and programme analysis regarding public services and violence against women, focus group discussions with women, key informant interviews and case studies.

Women reported facing a constant threat of violence, including rape and sexual harassment, in public spaces. Lack of access to public services such as transport, street lighting and electricity, unavailability of public toilets and weak crime control, made women more vulnerable when moving around the city for work, education or other reasons. For many women, the pressure to earn money for themselves and to send home to their families leaves them with no option but to face unsafe conditions when travelling to and from markets or factories.

Country examples showing the links between access to different sources of energy at the household and community level and VAWG include:

- Cambodia: In Phnom Penh, many women garment workers work overtime to earn more money and the poorly lit roads from the factory put the workers at risk of being attacked, abused and robbed by criminal gangs.
- Kenya: Women and girls living near and around the dumpsites of Mwakirunge in Mombasa lack access to the most basic services, including electricity or any forms of security and protection while working at the dumpsites or passing through them. In Ziwa la Ng'ombe women fear being attacked in dark alleys and back streets, especially because of poor lighting. Women report extreme forms of violence, such as young children being sexually harassed and raped and facing the consequences of unplanned and unwanted pregnancies.
- Ethiopia: In Addis Ababa, women vendors fear negotiating deserted roads, especially early in the morning or late at night when the roads are dark and poorly lit. These women workers lack access to a proper marketplace and sell their goods on the street so are at constant risk of robbery. Robbers attack women as they leave for home in the evenings assuming they carry money with them.
- Brazil: In Recife, some streets are narrow and unpaved. Women feel unsafe because of the risk of being surprised in such locations. In these places, street lighting is unreliable or even non-existent.

Amnesty International (2010), "Insecurity and indignity: women's experiences in the slums of Nairobi, Kenya". London: Amnesty International Publications -
<https://www.amnesty.org/en/documents/AFR32/002/2010/en/>

This report explores the experiences of women in the slums of Nairobi, Kenya. Information was gathered during a period of three months' research which included four weeks of field research in and around Nairobi (two weeks in November 2009 and two weeks in February 2010), and involved interviews with women, government officials, local and international non-governmental organizations (NGOs) and community-based organizations (CBOs). This report highlights the links between sanitation and violence against women and girls, which indirectly links to energy and service provision. Likewise the report highlights the increased dangers of accessing sanitation at night/during darkness, again drawing attention to the links between violence and poorly lit communal spaces.

It highlights that most women have to walk more than 300 metres from their homes to use the available latrines. Access to the latrines is especially unsafe for women and particularly at night. The report states that “The lack of sanitation facilities in Kibera affects women more than men...Men equally face the threat of violence but women are at increased risk of sexual and other forms of gender-based violence. Women tell us regularly how they are at risk of being raped or assaulted after dark or at night if they were to attempt to walk even 100 metres to a latrine near their houses; what chance is there that they would use a facility that may be three times further as is the dominant case here in Kibera?”⁶

All women interviewed by Amnesty International referred to the ever present danger of sexual and other forms of gender-based violence particularly at night and sometimes well before dark. This perceived risk is supported by a high number of women and girls reporting rape and other forms of violence directly as a result of their attempt to find or walk to a toilet or latrine some distance away from their houses. A number of women told Amnesty International how their daughters or children in their custody had suffered rape and other forms of sexual violence while attempting to use toilets mostly at night but sometimes even during the day.

Haves, E. (2012) *Does energy access help women? Beyond anecdotes: a review of the evidence.* London: Ashden - https://www.ashden.org/files/pdfs/reports/Ashden_Gender_Report.pdf

This paper reports that while there is a general belief that gaining access to modern energy brings specific benefits to women, rigorous impact evaluation studies are harder to find. It reviews the evidence from available studies on how gaining access to electricity and clean cooking impacts women and girls. Among its findings are a number of case studies relating to women’s empowerment, and one in particular with regards to the rejection of domestic violence:

- A study of households in Bangladesh found that women from electrified households were less likely to display son preference (study featured in separate summary Barkat et al (2002)⁷.
- A study on the impact of cable television in rural India also found lower son preference, more self-determination, and less acceptance of domestic violence⁸.

Barkat et al. (2002) *Economic and Social Impact Evaluation Study of the Rural Electrification Programme in Bangladesh.* Bangladesh: Human Development Research Centre. -

http://www.hdrc-bd.com/admin_panel/images/notice/1387698662.4a.%20%20economic%20and%20social%20impact%20evaluation%20study%20of%20rural%20electrification%20program%20in%20bangladesh.pdf

This study provides some interesting insights into the impact of rural electrification on women’s empowerment and, to some extent, security. A quantitative survey was conducted with a total sample size of 3718 (including 2491 households). Qualitative information were collected through Focus Group Discussions (FGD) with respective respondents of each observation measurement unit. The Rural Electrification Programme aimed initially at electrification of irrigation pumps and tube-wells, agro-based industries and serving domestic and commercial loads of only those villages, which fall right alongside the electrical distribution facilities built for irrigation purposes. However, to date, electricity made available through Palli Bidyut Samities (PBSs) (rural electric cooperative) areas, is intended to use for all possible applications that serve the purpose of improved living conditions of rural populace.

The study highlights that women in the electrified compared to those in the non-electrified households were involved more in household level income-generation activities and re-allocated their time to

⁶ Amnesty International interview with official of Umande Trust, 9 February 2010.

⁷ Barkat et al. (2002)

⁸ Jensen, R. and Oster, E. (2009)

remunerative employment. The study also found that poor women in electrified households were more knowledgeable (79%) about gender equality issues than even the rich in the non-electrified villages (64%). This indicates that household access to electricity can greatly improve a poor woman's knowledge of gender issues.

Likewise electricity had a profound impact on women's mobility, participation in income generating activities, decision-making, freedom in using income and savings, better utilization of credit, knowledge about gender inequality issues, household work plan according to convenience, changes in attitude in terms of reducing healthcare disparities, increase in overall years of schooling for both boys and girls, preference to send girls to schools, awareness of legal issues (as for example, marriage for girls at 18 and boys at 21), and awareness about negative impact of dowry.

Almost everyone (98%), irrespective of access to household electricity, agreed that protective security has increased due to electrification at the household level. The fact that security of mobility at night has increased due to electricity was confirmed by all respondents, irrespective of availability of electricity in their households.

ICRW (2012) *Safe Cities free from violence against women and girls: Baseline findings from the safe city Delhi programme, Washington DC: ICRW -*

[http://www.icrw.org/files/publications/Baseline%20Research%20of%20Safe%20Cities%20programme%20\(1\)%5Bsmallpdf.com%5D.pdf](http://www.icrw.org/files/publications/Baseline%20Research%20of%20Safe%20Cities%20programme%20(1)%5Bsmallpdf.com%5D.pdf)

Evidence gathered in this ICRW report was by household survey with a sample of 2001 women and girls and 1003 men and boys. In its introduction, the report describes a dearth of empirical data on what drives sexual violence in public spaces. It largely explores men and women's experiences of, and perpetration of violence, and the responses (or lack of response) to violence when it does occur.

63% of respondents felt fearful of going out after dark. More than 21% do not venture out alone at all. Over 90% of women reported experiencing some form of sexual violence in Delhi (including verbal harassment).

Recommendations largely revolved around the need for stronger help-seeking mechanisms, police protocols, and transformations in gender equitable attitudes (particularly those of men and boys). While issues of going out at night were discussed, no nuances were drawn out around levels of lighting provision in cities and whether this improved levels of safety from violence.

Neville, S., McLean Hilker, L. Humphreys, M. Husain, S. Khan, S. Lindsey, S. (2014) *Evaluation of the Madhya Pradesh Safe Cities Initiative*

This report evaluates the situation at baseline of women's experience of violence in cities in Madhya Pradesh for the DFID-funded Safe Cities Initiative, along with other issues such as mobility. The evaluation was conducted using mixed methods including a quantitative survey, focus group discussions and key informant interviews. The baseline sample was 7,486 respondents.

One element of the study was around experience and perception of violence in public spaces. Findings of the survey revealed that after dark, there was a notable contraction in the number of places women tended to go: the overall average across all slums dropped to just over two places out of ten, with well over half of women having been to none or only one of the locations after dark in the previous week. Likewise in all 72 slums where FGDs took place, participants said that the majority of women and girls tended not to go out at all after dark unless they had to. Indeed, both male and female participants said that women generally tried to ensure that they did not walk around alone after dark. The main reason given for this was fear of harassment and attack.

For the 'after dark' measure there was significant variation, with women having greatest mobility in Gwalior and the lowest in Indore. Reasons for variations including connections with levels of energy in particular areas.

Tacoli, C. (2013) The Benefits and Constraints of Urbanization for Gender Equality *Environment and Urbanisation Brief – 27*. London: International Institute for Environment and Development. <http://pubs.iied.org/10629IIED.html>

This article focuses on the links between urbanisation and gender, drawing on other literature to demonstrate these links. It has some mention of the links between energy and infrastructure provision in cities, and incidences of violence against women and girls. It highlights that in many cities women and girls are vulnerable to attacks both in public spaces and within the home. Indeed while cities themselves do not generate gender-based violence, processes of urbanization can heighten the risk factors for women, making them more vulnerable to violence while simultaneously creating economic resources and institutional support for them to deal more effectively with it, whether through informal or formal means.⁹

Transport provision emerges as a key issue linking energy access and VAWG in urban spaces. Balancing paid work with domestic responsibilities increasingly requires mobility in more and more segregated urban spaces, where home and workplace, production and consumption (and social reproduction) are separated. At the same time, the growing cost of essentially private “public” transport in most cities, as well as the very real threat of sexual harassment and physical violence for women travelling alone on public transport or walking act as powerful restrictions on women’s mobility and their right to the city.¹⁰

Tacoli also highlights that “When considering rates of violence against women in urban and rural contexts, the main differences seem to lie in its nature rather than its incidence, with violence by non-partners higher in cities than in rural settings. This is exacerbated by features of poverty, especially in low-income and informal settlements with poor infrastructure and limited, if any, sanitary facilities.¹¹ The distressingly high number of murders of women workers in Mexico’s maquiladoras (assembly factories) suggests that important factors that increase risk include living in low-income settlements that lack street lighting and have secluded, un-policed spaces; also having to walk home at night and the women’s migrant status and lack of social networks” (p4).

As can be seen, while energy access therefore plays some role in the potential incidence of VAWG in cities, there are also a significant number of other factors at play which must also be taken into account. Likewise as can be seen here, much of the evidence around VAWG in urban settings links to wider infrastructure and public service provision in relation to energy, as opposed to household and community energy access.

⁹ McIlwaine, C. (2013)

¹⁰ Levy, C. (2013)

¹¹ Amnesty International (2010)

2.2 Literature that focuses on fuelwood collection.

Bott, S. Morrison, A. and Ellsberg, M. (2005) *Preventing and Responding to Gender-based Violence in Middle and Low-income countries: A global review and analysis*. Washington DC: World Bank - <https://openknowledge.worldbank.org/handle/10986/8210>

This article provides a brief mention of the links between violence against women and girls and energy projects, stating that “Women may benefit from projects that reduce the distance that girls and women travel along insecure routes to reach distant sources of water and firewood. Little information exists, however, on the effectiveness of these initiatives on improving women’s safety” (p41). Once again this article emphasises the relatively weak evidence base on this issue and is representative of the way in which these links are referenced in a number of papers.

ENERGIA/DfID Collaborative Research Group on Gender and Energy (CRGGE) (2006) *From The Millennium Development Goals towards a Gender-Sensitive Energy Policy Research And Practice: Empirical Evidence And Case Studies - Synthesis Report* - <http://energia.org/wp-content/uploads/2015/06/49-From-the-millennium-development-goals-towards-a-gender-sensitive-energy-policy-research-and-practice.pdf>

This paper asserts that “evidence on sexual violence in fuel collection is anecdotal, but this is a problem that deserves further investigation” (p xv). It claims that women collecting firewood outside of their homes and villages not infrequently experience sexual violence and harassment, and cites the following examples:

- In protected forest areas, where poor women are obliged to seek fuel illegally and suffer sexual violence and harassment from forest guards. For example, women fuelwood carriers in Addis Ababa, Ethiopia have been harassed and forced to pay bribes to be able to collect wood and risk sexual assault, placing them under high HIV/AIDS risk^{12 13}.
- The report also claims that in Nepal protected forests, there have been similar reports (however it was not possible to find this statement in the original source)¹⁴.
- There are also reports of bride suicide in India due to inability to meet family fuelwood needs¹⁵.
- On the positive side, improved gender relations and less violence in the household have been cited as a result of electrification. In Kerala, India, the adoption of solar home systems led to a decrease in the drinking problem in villages due to the ability for men to undertake basket-weaving in the evenings¹⁶.
- In Uganda and the Philippines, watching television together in the evenings promoted family discussions and bonding, and men spending more time at home¹⁷¹⁸.

Questions were raised in the case studies and the MDG review papers, about sexual violence, sexual harassment, and power relations in the household and society in relation to energy security. Some evidence from research suggested that lighting and media could affect family bonding and gender cooperation in the household and reduce violence. However these links were not particularly well evidenced and were largely proposed as areas for potential further study.

¹² World Bank (2004)

¹³ Tadesse, T. (2002)

¹⁴ RWEDP/AIT (2001)

¹⁵ Agarwal, B. (1988)

¹⁶ Khuller, A. (2002)

¹⁷ Sengendo, M. (2005)

¹⁸ Lumampao, F. Lopez, V. and Go, L. (2005)

Parikh, J. (nd) *The Energy Poverty and Gender Nexus in Himachal Pradesh, India: The Impact of Clean Fuel Access Policy on Women's Empowerment* -

http://r4d.dfid.gov.uk/PDF/Outputs/Energy/R8346_finrep_parikh.pdf

This research project focuses on poverty, gender, energy and health issues in the state of Himachal Pradesh (HP) in India, a mountainous state, where the energy uses include space and water heating requirements. Moreover, there is effort involved in walking with headloads of fuelwood over hilly terrain, often at high altitudes.

The study covered a sample of 9 districts, 84 villages, 792 households and 4296 individuals from HP. The results show that, in HP, biofuels still meet about 70% of fuel needs. In procuring biofuels, women walk typically 30kms each month, and each trip to collect fuelwood takes on average 2.7 hours. The state has infrastructure to provide kerosene and 31% of the population use it. It found that nearly 30% of women felt the time absorbed in collecting wood to be a problem.

While the study attempted to explore issues of domestic violence in relation to energy access, it appeared that there were no significant findings in terms of the relationship between the two. A lower incidence of domestic violence was reported compared to India as a whole, with only 2% of women in HP were beaten or physically mistreated in the 12 months preceding the study compared to a countrywide average of 11%. However the correlation between this and HP's energy situation was not clear.

ENERGIA (2015) 'Making a difference by producing charcoal briquettes'. Posting on ENERGIA website. Available online at: <http://energia.org/2015/05/1217/>

This article provides anecdotal evidence around violence experienced by women when collecting firewood in rural areas, as part of an article highlighting the improved lives of women who receive business development training and support to produce charcoal briquettes (part of a Practical Action project in Kenya). It states: *"I grew up in the village. So, I know what it takes to go to the woods to get firewood, to carry it on your back, how much time it takes. There is gender violence in the bushes. There is time wasted. Children don't have an afternoon to study. So it means so much."* Again, reduced exposure to gender violence is one of a variety of positive outcomes noted in the project, alongside time-saving, health, economic empowerment and entrepreneurship.

O'Dell, K. and Peters, S. (2014) *Women, energy, and economic empowerment: Applying a gender lens to amplify the impact of energy access*. Westlake: Deloitte University Press. <http://dupress.com/articles/women-empowerment-energy-access/>

To investigate the gender-energy nexus, this paper analyses a combination of quantitative and qualitative data. The quantitative analysis uses both global indicator databases and national census data to understand the complex relationship between electrification and economic opportunity. This data is supplemented by a series of interviews with women in the developing world that examines the impact of energy on their personal lives and the lives of women in their countries.

While there is no reference to gender-based violence and energy access, the paper does include an anecdote from Liberia around the links between energy and security: *"The single biggest challenge is security; the absence of affordable electricity opened the way for the ex-combatants to turn into armed robbers, unleashing mayhem on residents of areas not provided with electricity. Personally, my mother almost died because of the lack of affordable electricity"* (p10). This highlights issues in conflict prone settings and also general safety concerns in communities or areas without access to electricity.

Rojas, A. Schmitt, F. and Aguilar, L. (2015) *Guidelines on Renewable Energy Technologies for Women in Rural and Informal Urban Areas*. Leusden: IUCN and ENERGIA.

http://energia.org/wp-content/uploads/2015/02/15.-Guidelines_on_Renewable_Energy_Technologies_for_Women_in_Rural_and_Informal_Urban_Areas.pdf

This report highlights the multiple effects of energy poverty on women, including hazards involved in firewood collection such as violence. The broader list includes issues around:

- Spending a huge amount of time and effort collecting traditional fuels, a physically draining task that can take from 2 to 20 or more hours per week¹⁹.
- Along with their children, facing exposure to smoke from inefficient stoves in poorly ventilated homes, which kills 1.45 million people each year. With a death every 20 seconds, indoor air pollution is the fourth biggest killer in the developing world.²⁰
- Facing, on a daily basis, hazards related to fuelwood collection: fractures, repetitive strain injuries, back disorders and miscarriages; exposure to burns, smoke and skin diseases from fuel-use; and physical violence, including rapes perpetrated while gathering fuelwood or other resources.
- Finding it difficult to take advantage of opportunities as energy entrepreneurs. Many income-generating activities of women in the informal sector – often critical to family survival– are fuel intensive, and their viability is affected by energy prices and availability. With more limited access to productive assets such as land and technology, and to services such as finance and extension, women’s participation in markets as operators of energy businesses is more limited.
- Ability to benefit only partially from energy interventions as they are constrained by other ‘overriding’ factors such as lower levels of education, mobility and access to information. Furthermore, they are poorly represented in decision-making and organizations at all levels of the energy sector, and lack a voice to make their needs known and choose energy options.

There is no source cited for the statement on physical violence.

United Nations (2012) *Inventory of United Nations system activities to prevent and eliminate violence against women*. New York: United Nations -

<http://www.un.org/womenwatch/daw/vaw/inventory/inventory-2012.pdf>

By providing fuel efficient stoves, the World Food Programme (WFP) aims to contribute to reducing the vulnerability and frequency of exposure to risk of rape, beatings and murder as women and girls search for firewood. SAFE (Safe Access to Firewood and Alternative Energy) combines solutions to protection concerns associated with fuel/firewood collection, environmental awareness, health improvement and livelihood creation/diversification. While much of the SAFE initiative is targeted at humanitarian settings, there is some relevance to more stable rural and urban settings as well. While some of the programmes showed a reduction in time spent collecting fuel only one made the link with a reduction in VAWG. In Uganda, women trained in the construction of stoves are reporting that faster cooking time has allowed them to pursue other activities, and that the reduced time in collection of firewood is decreasing exposure to violence.

United Nations Industrial Development Organisation (2014) *Guide on Gender Mainstreaming Energy and Climate Change Projects*. Vienna: UNIDO.

http://www.unido.org/fileadmin/user_media_upgrade/What_we_do/Topics/Women_and_Youth/Guide_on_Gender_Mainstreaming_ECC.pdf

One case study highlighted in the report is a UNIDO project working with the traditional beer-brewing sector in Burkina Faso, predominantly led by women, which has installed over 1,000 energy-efficient cook stoves to not only promote clean technologies but also ensure safe and decent work. UNIDO’s

¹⁹ UNDP (2007)

²⁰ WHO (2011)

intervention in Burkina Faso also focuses on developing four clusters of women beer brewers to generate collective gains and facilitate their integration into the local value chain. In addition to increased productivity and energy efficiency, the project has improved the health and environmental conditions for over 1,600 women. By providing energy efficient cook stoves and reducing the amount of firewood consumed by 40-50 per cent, the project lessened the frequency of vulnerability and risk of physical and sexual violence imposed on women and girls when collecting fuel²¹.

Welland, A. (2015) *Sexual Violence against Women and Girls: Is Energy part of the Solution?* Posting on Smart Villages website

<http://e4sv.org/sexual-violence-women-girls-energy-part-solution/>

This article proposes two key mechanisms through which energy provision might contribute to addressing sexual violence. Firstly, it suggests that street lighting and a reduced need for firewood collection can restrict the area of vulnerability. Secondly, it suggests that energy can contribute to women's empowerment through employment, education and health, providing women with economic opportunity and resource control as well as heightening gender awareness.

The article quotes the ENERGIA/DFID paper as a key source in linking firewood collection and sexual violence. It also claims that there have been numerous reports of women being raped while out collecting firewood or searching for food and water, however there is no evidence cited for this. One anecdote, which draws on Panjwani's report on 'Energy as a key variable in promoting gender equality and empowering women' refers to the experiences of an Ethiopian fuel wood carrier who is quoted as saying: *"It was a degrading life full of humiliation and shame. We were often victims of rape and beatings by the hoodlums who hid themselves in the forest"*²².

However, the notion that clean cook-stoves (which reduce the need to collect firewood) can help protect women from rape has been met with some suspicion²³. Whilst some NGO's have viewed cook-stoves as "a solution to rape and sexual violence in refugee camps", an evaluation of a UNHCR program to provide firewood to refugee women found that "it was ineffective at reducing the prevalence of rape"²⁴. More on the link between access to energy and VAWG in fragile and conflict affected settings can be found in the parallel query 94.

Welland suggests that perhaps most importantly, giving women ownership or at the very least access to energy and technology, and in doing so altering the use of resources at the household and community level, can give women more bargaining power. This, in turn, can help to shift the social norms that underpin the cycles of sexual violence.

2.3 Sources that evidence the wider links between energy access and gender equality²⁵

Africa Development Bank (2014) Investing in Gender Equality for Africa's Transformation -
[http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/2014-2018 -](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/2014-2018_-_Bank_Group_Gender_Strategy.pdf)

[_Bank Group Gender Strategy.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/2014-2018_-_Bank_Group_Gender_Strategy.pdf) - This article draws some links between the opportunities that energy access and infrastructure can bring for women. While it does not directly draw links between energy access and VAWG, it does highlight the time-saving benefits of energy access, and also draws attention to the complex issues around VAWG, sexual exploitation and road projects.

²¹ Original source found here: www.thegef.org/gef/content/promoting-energy-efficiencytechnologies-beer-brewing-sector - this is the link provided in the article, however it no longer works – another source is <http://www.ecowrex.org/project/promoting-energy-efficiency-technologies-beer-brewing-sector-burkina-faso> but the information on violence is not included

²² Panjwani, A (2005)

²³ DevPolicy Blog (2014)

²⁴ CASA Consulting (2001)

²⁵ Please note that this is a non-exhaustive list, but a small selection of the kind of literature that is available in the issues

Danielsen, K. (2012) *Gender equality, women's rights and access to energy services*. Copenhagen: Ministry of Foreign Affairs of Denmark – http://www.kit.nl/gender/wp-content/uploads/publications/1975_Gender%20Rights%20and%20Energy%20Report%20final.pdf – This study conceptualizes gender and energy in development from a gender and rights perspective and presents an analysis of energy system governance at household, national and global levels. It highlights that the tendency around gender and energy access has been to promote concerns that have been framed as “women’s issues” by the international community and donors such as violence against women and access to legal justice, and women’s economic agency and issues of economic justice have lost out.

ENERGIA (2015) List of Publications - <http://energia.org/latest-publications/> - Provides a good list of resources highlighting the links between gender and sustainable energy.

ESMAP (2013) Integrating Gender Considerations into Energy Operations. Washington, DC: Energy Sector Management Assistance Program (ESMAP) - <https://openknowledge.worldbank.org/bitstream/handle/10986/17479/765710ESM0P1230to0Energy0Operations.pdf?sequence=1&isAllowed=y> – In the energy sector, the gender dimensions of access to services, access to benefits, and exposure to risks and benefits, are being increasingly recognized as important elements to be considered for effective policy making and project design. This briefing note provides a brief overview of the key issues, resources and tools to help integrate gender considerations into energy sector operations. It does also note briefly that where women and girls are responsible for gathering cooking fuel, they are vulnerable to gender-based violence during fuel collection and transport.

Fisher, S. and Mohun, R. (2015) Low carbon resilient development and gender equality in the least developed countries. *IIED Issue Paper*. IIED, London. <http://pubs.iied.org/pdfs/10117IIED.pdf> – Provides insight into the ways that gender is being mainstreamed into energy access and broader low carbon development planning across the least developed countries.

Global Alliance for Clean Cookstoves (2013) Scaling Adoption of Clean Cooking Solutions through Women’s Empowerment: A Resource Guide - <https://cleancookstoves.org/binary-data/RESOURCE/file/000/000/223-1.pdf> - This Report Guide outlines common challenges and best practices for engaging and empowering women in each segment of the clean cooking value chain by examining highly successful case studies in which women play lead roles. Again as part of these case studies it highlights that, in conflict settings, women face an increased vulnerability to physical and sexual violence when leaving the safety of their communities or refugee camps to find fuel to cook.

Gender and Energy Module (2015) organised by E-institute in collaboration with World Bank Group Gender and ESMAP - <http://energia.org/2015/10/course-announcement-gender-equality-and-development-gender-and-energy-module-2/> - Free online course starting on 17th November on gender and energy, including an overview of gender equality and energy; Gender and energy access: household energy and rural electrification; Gender equality and electricity infrastructure; Gender and clean energy: renewable energy and energy efficiency; Gender and energy policies; and Tools and guidance.

HEDON (2015) Boiling point: A Practitioner’s Journal on Household Energy, Stoves and Poverty Reduction – Women, Energy and Economic Empowerment. Issue 66. - <http://energia.org/wp-content/uploads/2015/07/BP66-Women-Energy-and-Economic-Empowerment-compressed.pdf> – Provides an overview of a number of projects and programmes integrating women’s economic empowerment and energy, as well as interviews and report summaries.

Mary Robinson Foundation: Climate Justice (nd) Access to Sustainable Energy – The Gender Dimensions. Dublin: Mary Robinson Foundation. <http://www.mrfcj.org/pdf/Policy-Brief-Malawi-Access-to-Sustainable-Energy-the-Gender-Dimensions.pdf> - The findings of this policy brief result

from a field visit to organisations working on energy projects at the grassroots level in Malawi. The purpose of the paper is to provide a field-based perspective to policy makers on gender, climate change and access to energy.

United Nations Development Programme (2000) World Energy Assessment: Energy And The Challenge Of Sustainability -

<http://www.undp.org/content/dam/aplaws/publication/en/publications/environment-energy/www-ee-library/sustainable-energy/world-energy-assessment-energy-and-the-challenge-of-sustainability/World%20Energy%20Assessment-2000.pdf> - This report analyses the social, economic, environmental, and security issues linked to energy supply and use, and assesses options for sustainability in each area. As part of it, it provides a brief mention of the risks associated with firewood collection, including cuts, falls, bites, and back injuries to sexual harassment²⁶ – also provides a number of references to the links between energy access and gender issues.

²⁶ Government of India (1988) Shramshakti Report. Report of the National Commission of Self-Employed Women and Women in the Informal Sector. New Delhi.

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