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Centre for Population and Environmental Development (CPED) policy brief series is designed to draw attention of stakeholders to key findings and their implication as a research is conducted. The general objective is to contribute to a body of evidence that can influence the development, modification and implementation of policies across various sectors in Nigeria. The primary focus, therefore, is to outline actionable recommendations for policy influence and result utilization by government institutions and other key stakeholders in Nigeria.

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ABOUT CPED

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CLIMATE CHANGE AND ITS IMPLICATION ON WOMEN'S HEALTH IN THE NIGER DELTA REGION

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CLIMATE CHANGE AND ITS IMPLICATION ON WOMEN'S HEALTH IN THE NIGER DELTA REGION

INTRODUCTION:

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to other natural climate variability that has been observed over comparable time periods." Climate change is one of the greatest ecological and environmental challenges of our time. It is also an incontrovertible challenge to human rights, security, and economic development and a threat to global peace, security, and prosperity Climate change manifests in a number of ways, including a rise in average temperatures; changes in rainfall patterns leading to floods, droughts, and, in some areas, desertification; extreme and unpredictable weather patterns leading to more numerous and intense natural disasters; and the melting of glaciers and the polar ice-caps, resulting in rising sea-levels and coastal erosion, leaving low-lying areas uninhabitable. The degree to which people are affected by climate change impacts is partly a function of their social status, gender, poverty, power and access to and control over resources. Climate change effect is not gender –neutral. Women are disproportionately affected .Women in developing countries especially are particularly vulnerable to climate change because they are highly dependent on local natural resources for their livelihood. Women charged with securing water, food and fuel for cooking and heating face the greatest challenges This is notably true for health impacts, making climate change a risk multiplier for gender-based health disparities Women have distinct health needs, such as nutritional demands during pregnancy, which places them at risk of suffering from climate-sensitive disease. According to the World Health Organization(WHO) and the American College of Obstetricians and Gynecologists (American College of Obstetrics and Gynecologists, 2016), women are at higher risk due to biologic, political, and cultural factors (Chauhan &Kumar, 2016; World Health Organization [WHO], 2014; ACOG policy statement). Compounding women's health vulnerabilities is poverty, which amplifies risk on a regional scale. Globally, a total of 1.3 billion people in low- and middle-income countries live below the poverty line, 70% of whom are female (WHO, 2002).Climate change threatens to widen gender-based health disparities, women's social roles and potential for affecting change afford opportunities for solutions. The expectation that women fulfil their roles and responsibilities as care givers of their families often places extra burdens on them during extreme climate events.

EFFECT OF CLIMATE CHANGE ON WOMEN'S HEALTH

There are evidences showing that women and men suffer different negative health consequences following extreme events such as floods, windstorms, droughts and heat waves. A review of census information on the effects of natural disasters across 141 countries showed that although disasters create hardships for everyone, on average they kill more women than men, or kill women at a younger age than men. These differences persist in proportion to the severity of disasters and depend on the relative socioeconomic status of women in the affected country. This effect is strongest in countries where women have very low social, economic and political status. In countries where women have comparable status to men, natural disasters affect men and women almost equally (Neumayer & Plümper, 2007).The study also looked at the specific vulnerability of girls and women with respect to mortality from natural disasters and their aftermath; the study found that natural disasters lower the life expectancy in women more than in men. The research also confirmed that the effect on the gender gap in life expectancy is proportional to the severity of disasters – that is, major calamities lead to more severe impacts on women's life expectancy compared with that of men.

Heatwaves and increased hot weather

There is evidence that vulnerability varies by sex: more women than men died during the 2003 European heatwave, and the majority of European studies have shown that women are more at risk, in both relative and absolute terms, of dying in such events (Kovats & Hajat, 2008).Women have a higher working metabolic rate, reduced heat dissipation through sweating and decreased effective radiative cooling. This situation is aggravated by culturally prescribed heavy clothing garments. Excessive heat results in increase in the production of vasoactive substances, increasing blood viscosity, and affects endothelial cell function, which may alter placental blood flow and increase propensity for gestational hypertension and still birth. Pregnancy also contributes to vulnerability. Prolonged exposure to high temperatures are associated with still birth, congenital birth defects, and preterm delivery—regardless of maternal ethnicity or age, with younger mothers having an even higher risk of negative outcomes (Balbus & Malina, 2009; Basu et al.,2016; Ha et al., 2017; Strand et al., 2011; Van Zutphen et al., 2012). High ambient temperatures are also linked to pregnancy complications, such as gestational hypertension, preeclampsia (Makhseed et al., 1999), and poor neonatal outcomes (Kakkad et al., 2014).

Sea-level rises, heavy rain and flooding

Increasing temperatures are contributing to sea-level rises, and precipitation is becoming

heavier and more variable in many regions, potentially increasing flood risks and multiple associated health hazards. Women suffer disproportionate mortality during flooding. This may be attributed to the gender norms of society that dictates acceptable proper behavior for example, women hardly learn how to swim or go out alone .Additionally, women giving birth in the time period following

Shifting rainfall and temperature pattern

Food insecurity could result from shifting rainfall and temperature pattern and when this occur, women are disproportionately affected due to increased needs during menstruation, pregnancy and breast feeding.

Alteration of geographic distribution of vector- borne diseases

As a result of alterations in temperature and precipitation, the geographic range and abundance of disease vectors is changing, exposing more people to tick borne and mosquito-borne illnesses (Beard et al., 2016;Monaghan et al., 2018; Ortiz et al., 2017; Pachauri et al., 2014 Men and women have a different risk of acquiring VBDs because they occupy different environments throughout the day and have different biologic risks. They are at heightened risk for contact with vectors due to increased time spent around the home near domestic standing water. Pregnant women are a notably vulnerable population. Additionally, physiologic changes during pregnancy increase vulnerability.HigherCO_2production, a chemo attractant for mosquitos, and increased peripheral blood flow and skin temperature together increase biting risk. Furthermore, hormonally induced changes in immunologic function may suppress host defenses resulting in higher intensity of viremia and parasitemia (Kourtis et al., 2014;Lindsay et al., 2000; Mbonye et al., 2005). Additionally, studies have found that pregnant women have a riskof severe malaria that is 3 times as high as that of non-pregnant women (Rijken et al., 2012). Malaria infection during pregnancy results in anemia and diminished trans-placental nutrient transport from placental parasite sequestration, resulting in intrauterine growth restriction and increased vulnerability of the mother to hemorrhagic complications of delivery (Steketee et al., 1996). In a recent study of three districts in India, 23% ormore of maternal deaths between 2004 and 2006 were attributable to malaria, making it the most common cause of maternal death during pregnancy (Kourtis et al., 2014).Other VBDs carry different pregnancy complications. Dengue virus, which has been increasing in severity and distribution in India over the past decade (Mutheneni et al., 2017), is associated with increased risk of cesarean delivery, preeclampsia and intrauterine growth restriction (Pouliot et al., 2010). Zika virus, also transmitted by the aedes mosquito, is an emergent climate-linked infectious disease with devastating fetal could lead to increase in

infectious diseases whe this occurs, women who constitute the majority of those who take care of the sick both as household caregivers and as frontline health workers will be of higher risk of getting infected.

Water Scarcity

Globally, there is an uneven distribution of fresh water, with the highest scarcity in the most populated areas. Shifting rainfall patterns, increased rates of evaporation, and population growth are projected to result in an additional 1–4 billion individuals exposed to drought by the end of the century (Watts et al., 2017). Additionally, the manual labor involved in water harvesting places women and female children at risk for cumulative damage to the spine and neck leading to skeletal pain. Traveling long distances for water also increases exposure to heat stress and heat stroke and threatens women's personal safety by increasing their risk of violent crime (Jalees, 2005). A lack of clean water and proper sanitation infrastructure also poses serious health challenges to women, especially during menstruation and pregnancy when more frequent hygiene may be sought (Birch et al., 2012).

Recommendations for action

Enhance Multisectoral Coordination

Comprehensive strategies to integrate gender vulnerability into climate adaptation and mitigation are needed. Women's health issues can be integrated into multiple levels of planning, including: disaster risk reduction, transportation, water management, infrastructure investment, and agriculture. Private-public partnership scan be leveraged to co-design impactful products and services, such as sustainable agricultural practices. Developing mechanisms for reporting and regular analysis of gender dimensions using common indicators within all sectors will increase transparency and cooperation in achieving this cross-sectorial goal.

Prioritize Education

Investment in skills and capacity building among women will foster leadership and strengthen resilience. Education regarding the gender specific health threats of climate change is needed among policy makers and can be integrated into public health messaging.

Enhance the Usefulness of Health Outcome Data and Statistics

There is a great need to improve public health surveillance and data collection in Nigeria. Collecting high-quality gender-disaggregated data will enable better understanding of gender-climate-health associations. Additionally, health data may be integrated with agricultural, meteorological, and water supply data to identify vulnerable regions and

populations and allow for predictive modeling that can inform community-based interventions.

Enhance Preplanning for Disaster Risk Reduction

A comprehensive assessment of women and men's assets and vulnerabilities is foundational to any risk reduction plan. Such assessments not only provide a more in depth understanding of the effects of climate change, but also reveal the political, physical, and socioeconomic reasons why individuals suffer disproportionately. This creates a stronger opportunity for effective intervention.

Preparations for, and responses to, climate change need to be sensitive to gender dimensions of health care (including mental) and health-seeking behaviours.

Formulation of gender specific policies

Policies to promote mitigation activities that have strong co-benefits in health and other development needs provide a potential gender bridge. Adaptation strategies need to take into account women's and men's relative and different capacities, power, social resilience, vulnerabilities and resources, because gender norms, roles and relations can either enable or constrain adaptive capacities. Recognizing these differences is a necessary and important component of any prospective attempts to address the gendered health consequences of climate change.

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