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Change Horizons Forum

# The climate change impacts on women in Yemen

The self - initiatives and innovative solutions



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**This policy paper was issued by Change Horizons Forum as part of the first dialogue forum project to support and advocate women's rights in Yemen- women's rights and the climate changes.**

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## Executive summary

The climate change represents the most important and dangerous problem of the international problems, which in turn imposes a mandatory cooperation between the world countries to limit its impacts. The climate change has begun to affect the security and stability of the world countries, especially those suffering from conflicts and unstable situations such as Yemen, where climate change is not only an environmental problem but also a problem related to gender justice. It is a multiple threat that exacerbates the existing social, political and economic discriminations between males and females; as well as it affects women's livelihood, health and safety. This paper sheds light on the climate change impacts on women in Yemen, and the self-initiatives they take to confront the impacts. It draws the attention of the policy makers in Yemen to the importance of integrating women in making and implementing national adaptation strategies and supporting the self-initiatives they take. It also suggests one solution with some procedures and recommendations to implement it.

## Important recommendations

- Policy makers should follow a participatory approach in all procedures included in the suggested solution.
- Civil society should focus on supporting the resilience of worker women in Yemen, especially in the agricultural and entrepreneurship sectors with administrative systems that adapt to the climate change.
- Civil society should design training programs for women in local communities on the climate-adapted transformations such as: collecting and using rainwater, energy and food, and building community seed banks to preserve the locally adapted seeds to ensure food security.
- The private sector should use programs that support the climate adaptation such as digital applications that help female farmers to predict the weather, and shift toward production that promotes renewable energy.
- Building alliances at the local and national levels to exchange the experiences between women and to raise their voices in the environmental decisions.

# Introduction

Scientists have identified many phases of the climate change throughout the Earth geological history, since the Industrial Revolution, the climate has been increasingly affected by the human activities that led to the global warming. The climate change has serious impacts on the sea level, plants, and mass extinctions, generally it affects human societies. While the major developed countries cause the climate crisis; the developing countries especially the ones affected by wars bear the consequences due to their: fragility, social, political and economic weak structures, the slow development, and the lack of sufficient information regarding this global problem. In these countries -including Yemen- vulnerable groups face the most severe climate impacts, particularly women who suffer the intersectionality of gender-based vulnerability, the traditional norms, and societal culture; in addition of course to the negative impacts on the environment which reflected on women as they have direct contact with the environment and natural resources when getting food, energy, and water. Indeed, managing such resources is one of their most important traditional roles, which exacerbates the social discrimination.

This paper is an outcome of the project -first dialogue forum to support and advocate women's rights in Yemen "women's rights and the climate change", which is implemented by Change Horizons Forum within a project towards strengthening the resilience of the female defenders of human rights, who are defending the rights of women and children in Yemen. In cooperation with Peace track Initiative Foundation, the Parliament, TOBE Foundation for Rights and Freedoms, and funded the European Union. This paper sheds light on the climate change impacts on women in Yemen as well as the initiatives they take to deal with the impacts; it also draws the attention of the policy makers in Yemen to the importance of integrating women in making and implementing national adaptation strategies, and support their initiatives.

This policy paper was prepared through three research sources: international and local reports references, 6 research papers based on 51 electronic questionnaires, 8 interviews with the government and local authorities, civil society organizations, female and male farmers, displaced women, and host communities in Yemen. The field collected data included 8 Yemeni governorates: (Ma'rib, Aden, Lahj, Abyan, Shabwa, Al-Hudaydah, Taiz, and Hadhramaut). It included also officials, leaders of civil society organizations in the fields of environment and climate change in Egypt and Iraq. The six papers were discussed and enriched during two consecutive days "online" within the project -the first dialogue forum to support and advocate women's rights in Yemen - Women's rights and the climate change; in which held some discussions with climate change's specialists and activists

## Climate change is a global crisis

Heading towards industrial development in the past 150 years has led to the extraction and burning of billions of tons of fossil fuels. These fossil resources have released greenhouse gases such as carbon dioxide. This caused the planet's temperature to rise to 1.2 degrees Celsius compared to pre-industrial revolution. According to the Dictionary of Climate Change Terms issued by the United Nations Development Project in May 2023, "Climate change refers to the long-term shifts in the climate pattern that lead to an increase in the temperature of the atmosphere, oceans, earth, and it affects the balance of ecosystems that support the life and biodiversity. It affects health, and causes more extreme weather phenomena, such as frequent severe hurricanes, floods, heat waves, droughts, and leads to sea level rise and coastal erosion as a result of rising ocean temperatures and melting ice<sup>1</sup>. The climate change causes annually the death of 150,000 people, threatens 20% of wildlife species of extinction by 2050, and causes the losses billions of dollars of the global agriculture-based industries<sup>2</sup>. The Countries seek to spare the world the worst consequences of the climate change by limiting the overall temperature rise to remain below two degrees Celsius. The most important causes of the climate change are natural causes resulting from solar changes and volcanic eruptions which are short-term effects, and human causes such as burning fossil fuels - Coal, oil and gas - which are by far the largest contributor to the global climate change, accounting for more than 75 percent of global greenhouse gas emissions and about 90 percent of all carbon dioxide emissions which causes global warming. Global warming is caused by the generation of heat or electricity, factories, and the cutting of forests.

The economic sectors in various parts of the world are greatly affected by the climate change, and that is one of the most complex effects because the overlapping between the climate change impacts, the environment, and the social conditions. The International Monetary Fund warned of the repercussions of the increase in climate-related disasters on economic development in the Middle East. Its director said: On March 30, 2022, "The frequency and severity of climate-related disasters are increasing in the Middle East and Central Asia faster than anywhere else in the world, which poses a danger." "This is a major impact on the development and prosperity in the region." A new International Monetary Fund document also showed that climate disasters in the region affected and displaced seven million people. It resulted in more than 2,600 deaths and caused material damage worth two billion dollars. Climate disasters also reduce annual economic growth by 1-2 percentage points per capita. In general, climate change has essentially negative effects on global economic conditions. Such effects threaten to decline developed economies, deteriorate weak economies, and form a threat to agricultural productivity in those regions. Agriculture represents the biggest part of their economies, when it is affected it will be reflected on the rise of the food prices and transportations, as well as the deterioration of tourism, health system, and infrastructure.

## Yemen and the climate change

Yemen is among the most vulnerable places in the world affected by the climate change, and water scarcity<sup>5</sup>. According to the report of the United Nations Migration Agency (IOM), at least 13 out of 22 governorates in Yemen were affected by bad weather in the year 2020, which affected more than 62,500 families directly, while thousands of families were indirectly affected since then<sup>6</sup>. The country went under a severe drought in 2022 ranking the third year on the list of the driest years during the past four decades<sup>7</sup>.

A noticeable decrease in rainfall was also recorded in some governorates, while an increase in rainfall was recorded in others, where rainfall varies at the sub-national level from one place to another. During the first half of 2022, most local farmers lost their first planting season due to the decrease in the rainy season, as two-thirds households of local residents reported a decrease in the cultivated area<sup>8</sup>.

According to the National Information Center, since 2007, heavy winter rains have fallen for several days in Yemeni governorates, in contrast to the two common seasons “spring and summer”, such as the capital, Sana’a. According to experts, the percentage of benefit from this rain is very limited due to the fact that Farmers do not expect rain in this season, and most of the governorates only grow summer crops<sup>9</sup>.

In addition, raining for consecutive days caused the collapse of a number of homes and the damage to infrastructure and agricultural lands, since 2015, many hurricanes have struck Yemen, including (Chapala, Mekunu, and Laban), causing widespread floods that claimed the life of dozens and resulted in billion losses of material and human properties, and affected The agricultural sector<sup>10</sup>.

To add, 4,609 hectares of agricultural land were damaged due to locusts and climate change, the resulted losses estimated at approximately 222 million US dollars<sup>11</sup>.

The climate change directly affects the main source of income for rural Yemenis who constitute 70% of the country’s population, numbering 30 million people<sup>12</sup>.

The floods that occurred during July and August 2022 also created unexpected shocks, affecting more than 40,000 people. According to the local authorities, 29 people died in the governorates of Abyan, Sana’a, Dhamar, and Raymah due to the floods, most of whom were displaced. The floods also caused new waves of displacement of 10,000 people in Ma’rib and parts of Al-Jawf Governorates. The annual change in temperatures indicates that it has risen significantly, which has exacerbated the drought and increased the challenges of securing water for personal consumption and agricultural irrigation. Studies expect temperatures in Yemen to increase by 2060 to reach 3.3 degrees Celsius<sup>13</sup>.

The climate change has long-term impacts, such as desertification and rising sea levels, which gradually destroy livelihoods and force communities to abandon homelands and move to more suitable environments. Moreover, Yemen suffers from a range of social, economic and political challenges, the first of which is the ongoing war for almost ten years by which Yemen is experiencing one of the worst humanitarian crises in the world, according to a report by the World Food Program in December 2023, 50% of the Yemeni population suffers food insecurity<sup>14</sup>.

According to the High Commissioner for Human Rights’ 2023 report, United Nations agencies reported that 17.8 million people in Yemen -more than half of the population- lack clean drinking water, sanitation and hygiene services.

## **The intersectoinality of vulnerability and climate change.**

The climate changes unequally affect women more than men and even their rights, for example women in rural and poor areas are particularly at risk, women with disabilities, marginalized and illiterate and those working in marginal work are more vulnerable to the negative impacts the climate change.

Identifying one category of the most vulnerable women affected by climate change in Yemen sounds unrealistic, as it requires a careful approach that takes into account various overlapping factors, as vulnerability is not constant and can vary according to individual circumstances and the social context. Analyzing such factors is necessary to design effective adaptation strategies, ensure that no vulnerable category is left behind, activate the roles of women in facing the climate change impacts, and put efforts to protect the environment and preserve the natural resources.

Women in Yemen suffer from social and economic constraints that make them more vulnerable to the climate change impacts, such as the difficulty of accessing natural resources, the lack of adapting strategies, especially women who depend heavily on climate-affected sectors like agriculture or fishing. The climate change impacts on such sectors lead to less productivity which results in less income and increases women's poverty. Displaced women whether by the conflict or natural disasters face additional adapting challenges with the climate change impacts, due to loss of livelihoods, weak social networks, limited access to basic needs. Displaced women live in unsafe and unstable conditions which make them more vulnerable to the climate change impacts. Furthermore, disabled women face additional difficulties in dealing with the climate change impacts due to the lack of infrastructure or services appropriate to their needs. Likewise, marginalized women face further challenges that make them more

vulnerable due to the discrimination and limit access to support systems.

## **The prominent women's rights affected by climate change in Yemen**

The climate change affects women in Yemen in different ways, depending on their social and economic category and geographical location, generally the poorest and most isolated women suffer terribly from the climate change impacts. In general, the climate change impacts on the Yemeni women's rights are divided into direct and indirect impacts.

### **Direct impacts** **The direct climate change impacts on the Yemeni women's rights are:**

#### **The right to access to basic resources and services**

Yemeni women suffer from difficulty in accessing resources for reasons related to traditional culture, discriminatory behaviors, and gender-based violence. These reasons combine with the climate change impacts and the war repercussions in Yemen exacerbate this suffering. The climate change impacts have hindered women accessing basic resources, such as water, food, energy and health services, consequently increasing the rates of food insecurity, malnutrition, Gender-based violence, decreasing of health care, and educational opportunities. Due to the climate change impacts, women are forced to travel long distances up to 6 hours or more per day to fetch water, while others resort to using water from unclean sources<sup>15</sup>.

Moreover, in several areas, floods caused the blocking of main roads, which immobilized transportation and hindered the access to basic services. Women considered the most vulnerable group facing that, as many are unable to deal with such disasters due to societal culture. Customs



and traditions prohibit Yemeni women from doing sports like running or swimming. Women and girls drowning in Yemen has turned into a social phenomenon in recent years, a local newspaper reported the death of 9 girls/women drowning in no more than 35 days in 2022, according to the same article 60 women and girls in Yemen drowned during the period 2015-2022<sup>16</sup>.

The low level of education of women in Yemen leads to weak access to information and assistance related to the climate change and disasters, which in turn affects their abilities to early respond. Many women are unable to have their own agricultural lands, which means that female farmers are unable to make decisions related to adaptation and confronting the climate challenges affecting agricultural activity therefor increasing their fragility.

### **Nutrition, health, clean water and education Rights.**

Women who are traditionally responsible for managing energy, fetching water, and providing nutrition, face great difficulties as a result of the climate change impacts. In Yemen, more than 75% of the population lives in rural areas, where women represent about 95% of the workforce there<sup>17</sup>. Agriculture is the largest sector in which women work in Yemen, and female farmers face risks related to soil erosion, desertification, and drought. These negative effects threaten their ability of providing food for themselves and their families, also threaten food security at the local and national levels. Women and girls in Yemen are responsible of fetching clean water, walking long distances in unsafe conditions as a result of water scarcity, which consumes time and efforts at the expense of other activities like: work, education, and health care. This also has increased the discrimination against them. In Taiz Governorate, according to the collected data, the dryness of some wells and water sources and the scarcity of rainfall during the past three years caused the scarcity of groundwater wells that supply water to population centers, which led to a decrease in the individuals' share of clean water, and an increase in water's prices or its unavailability. This created another suffering for families, and cost them to pay high prices to buy water from (water tankers), or to go to fetch water from distant areas. This also generated conflicts and societal disputes in many areas, the most common of which occurred between women and girls who were responsible of fetching water. The matter is not limited to that: "Most women suffer from health consequences due to carrying water containers on their heads which affect their spines and heads. According to the collected data, one of the women in Taiz Governorate, Al-Shamayatain district, suffered from headache that caused her to lose consciousness, When she was medically examined, it turned out that the reason was that she was carrying a water container on her head, as she couldn't afford to buy water. Water scarcity has increased the distances girls travel to reach school, limiting their opportunities of education and improving their good chances in the future. Girls may be forced to drop out of school to help taking care of the family, the farming or fetching water. Furthermore, climate change impacts hinder women from accessing health care and reproductive health services, according to those interviewed, the rise in temperatures in Aden Governorate and Al Mokha District in Taiz Governorate also led to the spread of diseases and epidemics such as dengue fever and skin diseases, especially among women, children and the elderly.

## The right to work

The climate change impacts on the rights of farmer females in Yemen are the most severe. In the governorates of Lahj and Taiz, according to those interviewed, have led to the erosion of soil and agricultural land for two reasons: either lack of rainfall, which leads to the soil drying and then its erosion; or torrential floods which lead to soil erosion due to waterlogging. Some agricultural crops are a source of income for families by selling them to provide their basic needs. Corps as red corn, maize, millet, and hays which is a source of food for sheep, cows, and goats. Such animals represents a source of food products that serve the needs of the local and national market. As a result of the scarcity of rain and the drought, agriculture declined, which led to the moving of many farmers to the cities. The rock slides due to torrential floods in the governorates of Lahj and Taiz also led to the damage of the crops and the blocking of roads in the valleys. According to the collected data, the climate change impacts threaten the continuity of the women projects who raise livestock and bees as well. The scarcity of seasonal rains caused the scarcity of crops and hays which caused their prices to rise significantly, areas of livestock pastures receded, and the excessive logging of trees led to a decrease in the vegetative cover that constitutes a habitat for beekeeping.

On the other hand, a large number of women depend on home projects in Yemen as a source of income. These projects are not sensitive to climate change and are affected faster than other businesses. Women's reliance on projects that are susceptible to climate change means that women economic options shrink with the increase of the climate crisis. To add, women consist the largest number of the poor people in the world, thus stop working due to climate change increases the poverty rates. According to the United Nations

agencies, 122 women between the ages of 25 and 34 suffer from poverty for every 100 men of the same age<sup>18</sup>.

## The displaced and marginalized women's rights.

The United Nations Environment Program estimates that 80 percent of those displaced by climate change are women<sup>19</sup>. The results of the questionnaire in the governorates of Taiz, Lahj, and Shabwa indicate that displaced men and women are among the most affected groups in the society by the climate change impacts, especially those in camps or unsafe living places. They are the most vulnerable of the spread of diseases and epidemics, such as cholera, dengue fever, and other diseases, as a result of stagnant water. In addition, rain and torrential floods caused the sweeping away of refugee camps in a number of areas, and caused "the drowning of five displaced girls who were on their way back from school," according to one of the displaced people in Lahj Governorate. Marginalized men and women are considered the most affected because they are among the poorest groups in the society, during the rainy seasons, they are exposed to many diseases and damages, because there are no kitchens in their homes or the camps, women are forced to cook in the open in unsanitary conditions, which increases their suffering. Moreover, "fetching water From distant places caused marginalized girls to drop out of education," according to one of them in Taiz Governorate, On top of that their homes were demolished, with major losses as a result of the rock slides that struck their homes in Taiz, Abyan and Lahj governorates.

## The Indirect climate change impacts on the Yemeni women's rights

The indirect climate change impacts on the Yemeni women's rights represent in: exacerbation of discrimination in times of disasters and crises local communities often impose additional restrictions on women out of protection, for they are viewed as the most vulnerable to adapt. In many fragile and conflict-affected countries, including Yemen, the climate change impacts and environmental degradation often thwart efforts to promote peace and stability<sup>20</sup>. Which reduces the opportunities for women's political participation. Climate change also affects the texture of the family and society, which may affect the role and rights of women, as the effects can impede the laws, human rights system, and the rights that women have obtained previously.

## Absent suffering

Climate change greatly affects human and women's rights in Yemen as well as the rest of the world, thus the interest in the climate change crisis is increasing. However, the extent of awareness of the climate change impacts on women depends on various factors, such as education, culture, religion, society and government. Governmental and non-governmental organizations, academic and media institutions, and civil society are among those working to increase awareness of the problem of the change impacts on women. According to 70% of the collected data, climate change affected them directly and indirectly, and its impacts on them was varied and uneven, even if they haven't heard about it. The group between 22 and 35 years is the group that has heard about it, but only 25% of them know that there are multiple effects on Yemeni women, while 40% do not know that, 35% are not sure, also only 35% of them believe that the government and

Local authorities are making efforts to reduce the climate change impacts, while the rest agree that local authorities, civil society organizations, and the private sector have not yet fulfilled their roles to support and protect the society from the climate change impacts in Yemen.

## The current public policies

A study issued by the Arab Reform Initiative indicates that there are 31 legal texts in the Yemeni law regarding environmental protection and the establishment of specialized environmental bodies, which were issued between 1995 and 2006. However, according to the same study, these laws were incomplete, which made them a reason for the randomness of environmental decision-making, its weak coordination, and the overlapping of the environmental bodies' work in Yemen. Accordingly, the lack of awareness among policy makers led to the issuance of policies that hinder vertical and horizontal coordination and integration between the ministries concerned with the environment. The Supreme Council for Environmental Protection, which since its establishing in 1995 had been affiliated with the Prime Minister, was transferred to the Environment Public Authority in 2005, which is affiliated with the Ministry of Water and Environment, that decision hindered coordination between all the relevant ministries, as the decision taken by the specialized authority now relates to one ministry and has nothing to do with other ministries. This is at odds with the Ministerial Resolution No. 28, which stipulates cooperation between all government institutions and bodies in order to protect the environment. Moreover, the Authority's Board of Directors has not met in the first place since Its establishment, and the war started in 2015 hindered any resumption of its meetings<sup>21</sup>.

According to a website specialized in climate change in Yemen, Yemen signed 28 agreements in the field of climate change and environmental preservation until 2002<sup>22</sup>.

Including agreements related to biological diversity, the United Nations Convention to Combat Desertification, the Climate Change Convention, and the Convention on International Trade in Endangered Species of Fauna and Flora. Yemen has also developed several policies and action plans related to biodiversity conservation and sustainable development, including the National Water Strategy, the National Environmental Action Plan and the National Action Plan to Combat Desertification<sup>23</sup>.

According to the Investigative Journalism Foundation, arrangements are currently being made in Aden to begin a project to prepare the national adaptation plan with funding from the Green Climate Fund, and to arrange updating the nationally determined contributions document<sup>24</sup>.

While, according to the Saba Net website, the first national conference on climate change and environmental disasters began in Sanaa, which was organized by the Ministry of Water and Environment in partnership with the ADRO Organization<sup>25</sup>. Aiming to “making a national plan to adapt and mitigate the climate change impacts”.

There is no central body in Yemen to coordinate the climate change after the Supreme Council for the Environment was transformed into a body affiliated with the Ministry of Water and Environment before the war. The war exacerbated the weak coordination and integration due to the political divisions, as a consequence there is no coordination body between the various parties regarding rainfall forecasts or weather conditions. There are hardly any early warning systems and emergency response planning - as is the case in “Sailah City of Sana’a”, which according to press reports has reduced the accidents caused by torrential floods in the Sailah road.

In Yemen, local authorities are responsible for confronting the climate change impacts that usually lead to natural disasters, in accordance with Articles 41 and 84 of the Local Authority Law No. 4 of 2000 and its amendments, Paragraphs

12, Article 13, Paragraph Ten of the Executive Regulations of the Local Authority Law issued by Republican Decree No. 269 in 2000.

According to Article 49 of the Executive Regulations for Local Councils, and according to those interviewed, local authorities, local councils, and civil defense bodies in Yemen are actually responsible for coordinating climate information and warnings, in light of the absence of early warning systems.

Despite the legal texts and agreements concerned with environmental affairs and climate change in Yemen, they still fall short of performing their basic roles effectively, and they do not focus on explicitly reflect the interests and needs of women affected by the climate change in the policy making or implementation. In fact, there are not policies from which it can be inferred that policymakers in Yemen acknowledge the climate change impacts on women.

A large number of international and local organizations play a role in supporting the adaptation plans at the national and local levels. They also implement programs to raise awareness of the dangers of climate change impacts on women, improve the livelihoods of local communities, and enhance their resilience, but they remain incomplete efforts in the absence of a government work unit that coordinates between the private sector, civil society, the government and the various state sectors on the vertical and horizontal levels. The war stands as an obstacle of the official authorities in Yemen to coordinate about the climate. The deteriorations of the infrastructure and the economy also stand as obstacles to Launch adaptation plans, as well as does the weak awareness of the policymakers and society about the risks of the climate change impacts on women. The absence of national adaptation strategies in Yemen is another obstacle for obtaining funds from the climate funds in accordance with the climate agreements.

## Self-initiatives

Women in Yemen responsibly face the climate change impacts, and deal with them as makers of innovative solutions with individual efforts rather than victims. According to the collected data, a number of female farmers in Taiz Governorate worked to place sand barriers made up of Bags filled with sand in front of farms to stop floods and protect them from erosion, also place them in front of the houses located near the places where floods occur to prevent the floods from destroying houses. A number of local women also filter drinking water by boiling it and adding chlorine to it for they are unable to provide clean water. A number of female farmers decided to limit growing crops to seasonal agriculture instead of continuously growing crops. Others change crop types to match the rainy seasons. While women in local communities rationalize the use of water to avoid traveling long distances every day to fetch it. Additionally a number of home business owners have switched to using renewable “solar” energy to generate electricity. Women in the countryside and cities also collect and reuse rainwater. According to the collected data, women contributed to repairing homes affected by torrential floods using materials from the local environment such as: clay, stones, and woods. What’s more, women in the countryside learned handicrafts in addition to their original professions in farming and animals husbandry to improve their families’ income, and they built other sewers for the flood to slow its flow for fear of destroying farms. Housewives grow some needed vegetables for daily use in pots on the roofs or the backyards.

These initiatives, which Yemeni women take, are based on their experiences and daily practices in managing natural resources, but some of these initiatives, according to the collected data, were

not environment friendly as a result of their lack of awareness of the climate change impacts. For example, in the main cities they resorted to excessive logging trees, however, it is not an environment friendly solution because it threatens to reduce the vegetative cover. A number of those interviewed cook food by burning plastic bags and bottles, while other reduce the use of water at home to the point that cleaning with water is done every third day as a result of water scarcity. Furthermore, female farmers in several places left the farms due to the desertification, erosion, and low production crops, for the difficult economic conditions prevented them from having financial support to rehabilitate the farms. Other female farmers learnt handicrafts, abandoning livestock and beekeeping because of the receding vegetative cover.

## Regional experiences from Egypt and Iraq

The population of the Egypt is more than 100 million people<sup>26</sup>.

It is also the 87th most vulnerable country to climate change<sup>27</sup>.

Its impacts threaten food security, health, and biodiversity, and have negative repercussions on many Egyptian women. As women usually bear the burden of climate changes because they constitute the largest portion of Egypt’s poor and have fewer resources, which have weakened their conditions and the help to empower them in the face of climate changes. Most notably the increasing unemployment rate among females, which reached 16% in 2021, compared to the unemployment rate among Males, which amounted to 5.6%. in addition to the weak female contribution to the labor force, which amounts to about 5.063 million working women, compared to 24.296 million men in 2021, also the illiteracy rate for females reached 30.8% compared to 21.2% for males, according to 2017 population census data<sup>28</sup>.



Previous figures show that women in Egypt and Yemen share the intersectionality of gender-based vulnerability and climate change, however the Egyptian experience is rich in individual and collective women initiatives, civil society organizations, and the private sector. The experience is based on a large number of political, economic and social policies and procedures and is led by the government, ministries and competent bodies. In addition the initiatives led by civil society, the private sector and women in Egypt, which have achieved tangible effects in mitigating climate change on women and building their capabilities to adapt. Some of these initiatives: the “Messages of the Sea” initiative, implemented by the “Zaytouna” Center to support the rights of women and children, as this initiative works to empower women economically by recycling waste to make handicrafts, using biodegradable and environment friendly materials. The “World in Colors” initiative, it was launched with the support of the Arab House Center for Research and Studies and with the participation of many parties and civil society organizations in Egypt. The initiative focuses on raising awareness of the impact of climate change on women and less-represented groups in Egypt, developing policies and legislations that limit potential impacts and achieving climate justice<sup>29</sup>.

Climate School this initiative focuses on raising awareness among male and female readers about the risks of the disproportionately climate change impacts on women compared to its impacts on men<sup>30</sup>.

While the policies undertaken by the competent authorities vary to reduce the climate change impacts on women, support their personal initiatives, enhance the gender-sensitive perspective in climate adaptation, mitigate and respond to its impacts, and enhance women’s voices and their effective participation in the environmental governance and the justice environmental transition to the green economy. One of the most prominent of these policies is the

establishment of the National Council for Climate Change, with which Egypt has become one of the few countries in the world that has a mini-cabinet for the climate change headed by the Prime Minister according to Resolution No. 1129 of 2019, with the aim of integrating the concepts and procedures with sectoral plans and strategies necessary to deal with the climate change within a unified national strategy that was finally launched on May 30, 2022<sup>31</sup>.

Egypt also launched the National Climate Change Strategy 2050<sup>32</sup>.

The national strategy for empowering women<sup>33</sup>.

The comprehensive perspective on women, environment, climate change, and the Decent Life Program, which is the largest regional development program on the African continent. The Egyptian government is interested in the social dimension in adapting to the climate change, through developing and innovating social protection programs to reduce the rate of social inequality and achieve justice and equality, Such as: “Insuring agricultural crops, compensating affected groups by the climate change, supporting active labor market policies in creating green jobs, and others.

The Egyptian experience is a diverse and integrative experience that coordinates between the various sectors in the state on a horizontal basis, organizes the specializations at the vertical level of the state agencies, involves different societal groups and civil organizations, and focuses on the most vulnerable groups, especially women.

In Iraq, the political and social environment is similar to the environment in Yemen, The two countries are involved in multiple conflicts, and are being struck by the climate change impacts. Moreover, Iraq is suffering waves of dust storms that impair visibility, that it has led to the disruption of the functioning of the drinking water systems. In addition, Iraq suffers from water scarcity and salinity.

Women's situation in Iraq is no different, according to statistics issued in 2021, the number of Iraqi women over the age of 15 years is about 13 million women, but only about one million women work in the labor market. Many women work in the agricultural sector and food processing factories. The International Labor Organization report indicated that the agricultural sector occupies 8.4% of the total workforce in Iraq as the estimated rate women working in this sector is 20%, compared to 5% of the workforce in industry, and 13% in the service sector.

In the same context, the report shows that 95.8% of workers in the agricultural sector hold irregular jobs and are highly exposed to income fluctuations. The official statistics of the International Labor Organization do not include working women without pay in rural areas, agriculture and industry, which is not a small percentage of women who work to support their families as well.

Iraq is one of the most affected countries by the climate change and its challenges, the Population, especially women, are exposed to environmental changes and threats that directly affect their quality of life. Iraq is suffering from rapid climate change, and one of its most prominent impacts is related to the lack of water resources, water is considered vital for agriculture and daily use. The war conditions make men preoccupied with fighting, in which women, especially rural women, found themselves alone in bearing the responsibilities of providing the basic needs for their families. Women bear the burden of providing food for the families, which makes them more in need for additional resources and strategies to secure food. Besides women are exposed to greater health risks, especially pregnant women and children. The climate change impacts presented in lack of resources, increase in diseases, migration, and high temperatures have severe psychological effects shown clearly on women. There are increased rates of depression, mental illness, and trauma. As a result of the

climate change impacts, the ongoing migration has led to an unbalanced population distribution in Iraq, with 70% percent of them moving to urban areas, which has a negative impact on agricultural development. This phenomenon forced women and girls to travel long distances to fetch water exposing them to great risks.

In light of all the climate change impacts in Iraq, Iraq and its various sectors are seeking to reduce the effects, despite its unstable economic, security, and political conditions, still it is in the stage of developing a national adaptation plan to the climate change that is funded by the Green Climate Fund (GCF) in cooperation with the United Nations Environment Program (UNEP). The Ministry of Health and Environment, the Ministry of Agriculture and other relevant institutions are working in cooperation with many UN international agencies, especially the United Nations Development to improve livelihoods and local communities' resilience. Baghdad Municipality also announced the resumption of work on implementing the green belt project for the capital, after a 20-year hiatus, within an area of 940 acres that includes planting 120,000 trees; while the Central Bank of Iraq announced last year the launch of the development initiatives to confront desertification and the climate change in cooperation with many ministries and government agencies. In addition, the Ministry of Water Resources intends to Construct 36 small dams to collect water during the next year. While civil society organizations' efforts are focused on encouraging projects of artificial refilling of groundwater, reforestation, and decontamination of contaminated areas. During the past few years, a number of non-governmental environmental organizations have been established to fill the shortcomings of the government institutions. These organizations have extensive experience in monitoring and reporting on the climate and environmental issues despite their recent and limited nature, which in the continuing internal conflicts contribute to creating new paths for

interaction between the government and civil society, this stands as an opportunity for the Iraqi government to strengthen peace-building processes and enhance the dialogue in the post-war period.

In a related context, many women continue saving water, searching for easier methods of farming, with the aim of mitigating the climate change impacts. For instance, one woman searched online to find alternative methods for agriculture without using chemical fertilizers, which increased diseases, especially cancer. She began using it after communicating with the agriculture directorate in her governorate and was able to provide alternative means of agriculture. Many women also took initiatives of afforestation campaigns, and some women researchers presented studies in this field.

The Iraqi experience is somehow modest in mitigating the climate change impacts on women, and integrating of women into its policies has not been a priority. However striving to develop a national strategy, overcoming political conflicts to create partnerships with civil society and activating adaptation mechanisms, even with limited sources, are measures that are important to emulate.

## The proposed solution

The solution to adapt and mitigate the climate change impacts on women in Yemen is a single but complementary solution that works to integrate women as partners with government agencies, the private sector, and civil society organizations in making policies that contribute to adapt and mitigate the climate change impacts on women. It can be worked in the short term reaching the long term in order to mitigate the repercussions of the war and establish the peace process. Where the adapting and mitigating of the climate change impacts on women can become a step of the peace-making in Yemen, by integrating the agenda of women, peace, security and climate change adaptation policies that overcome the political divisions.

The proposed solution includes multiple procedures as follow:

- Integrating women in launching a national plan to adapt and mitigate the climate change impacts through adaptation plans at the governorates level that are appropriate to the specificity of each governorate.

- Activating laws related to the environment and issuing government decisions and national and local complementary policies to reduce the climate change on women.

- Raising the awareness of the local communities, political elites, community leaders, policy makers and women about the climate change.

- Supporting the self-initiatives created by women to adapt the climate change in local communities.



- Turning into the green economy and focusing on supporting sectors where women lead work such as the agricultural sector.

**The proposed solution and its procedures can be implemented through the following recommendations:**

-Policy makers should follow a participatory approach in all procedures included in the proposed solution.

-Civil society should focus on supporting the resilience of worker women in Yemen, especially in the agricultural and the entrepreneurship sectors, with administrative systems that adapt to the climate change.

-Civil society should conduct training programs for women in local communities on the climate-adapted transformations such as collecting and managing the rainwater, energy and food, and building community seed banks to preserve the locally adapted seeds to ensure food security.

-The private sector should use work programs that support climate adaptation, such as designing digital applications that help female farmers to predict the weather, and shift toward production that promotes the use of renewable energy.

-Building alliances at the local and national levels that enhance the exchange of experiences between women and make their voices heard in the environmental decisions.

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# The Researcher

Bilqees Al-Abdaly is a researcher and consultant in peace-building, women's rights and climate change. She prepared a number of studies in the field of women, peace-building, mediation and the role of the United Nations in the Yemeni negotiations. Bilqees is the President of Change Horizons Forum. She worked on implementing several projects through her organization and in partnership with other organizations in the fields of climate change, peace-building and mediation. She also prepared a number of policy papers, including: "Promoting Women's Mediation in Yemen", "The Effects of Negative Social Discrimination on Gender Equality", and the impact of awareness in protecting women and girls". Bilqees is a member of a number of women's rights and peace-building coalitions at the local, national and regional levels. She is holding a pre-master's degree in political science and a regional "voice" fellowship.

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# The Forum

Change Horizons Forum CHF, is a civil society organization, founded in 2013, a non-profit organization; it is specialized in women's rights, peace-building, community coexistence, climate change, citizenship and the rule of law. The forum has implemented several projects, dialogues, forums and consultations related to women's rights, peace-building and climate change. The forum is a member of a number of women, peace-building and climate change networks.





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