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Women's Voices in Water Governance and Management: The Lake Chad Case

Bertero, L., Quartero, T.

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Abstract

The domain of water management and water governance is still shaped through the eyes of men. Thus, how water is distributed, who has access to it and who can make decisions on its usage relies also on gender. Arguably, gender inclusion is still an issue since, also in this field, men are overrepresented and derive more benefit than women do. In this context, the new challenges posed by climate change may lead to question the knowledge and practices at the basis of mainstream water governance and management and, eventually, adopt an approach based on gender equity.

This paper takes as an example the current situation of the Lake Chad to analyse the limitations of women participation in water governance and the absence of gender mainstreaming in this area of policy making. The research methodology consists of a literature review, highlighting the shortcoming of pre-existing studies on this topic, and a series of interviews to key experts on filed in order to investigate the gaps between theoretical studies and the reality. Starting from a conception that sees women as drivers of change rather than as victims, this study inquiries whether and how the political, social and environmental crisis in the Lake Chad basin may be an opportunity for women to have a role in the decision making process regarding the use of water and, in general, be an excuse for a comprehensive social change towards gender equity in the area. Finally, the article focuses on the involvement of the transboundary water management organisation that govern the lake Chad waters, the Lake Chad Basin Commission (LCBC), in development projects on water, by looking whether women with their values, knowledge and experiences are included in the organisation and whether they play an incisive role in the planning and in the implementation of their projects.

1. Introduction

Water is crucial to all phases of human life that the UN in a resolution of 2008 has declared the right to water as a universal and fundamental human right. Indeed, access to water affects not only the livelihood of a population, but also its prosperity and stability (or security in a broader term). Water, though, is not unlimited. On the contrary, water is often not equally distributed or when available, this resource is polluted or expensive or, as we will see, distributed partially (Pahl-Wostl, 2017). Over the last decade, the increasing climate change and the nefarious policies and decisions on natural resources management has aggravated the situation making water a precious and rare resource whose management and governance has caused several conflicts at a local, national and international level (i.e. tensions between Egypt, Ethiopia and Sudan and upstream countries over the control of the river Nile).¹

In this context, it is arguable that local access and usage of water depends on various and interconnected issues, including gender. Indeed, lack of access to water usually affects the most vulnerable part of the society, mostly women, children and minorities, even if they are the ones that in practice collect and use this resource the most. In particular, according to Coles and Wallace (2005, p. 8), women are “*essential providers and users of water*”. As showed by various studies (WHO and UNICEF, 2017; Wahaj, Hartl, and Lubbock, 2012), across low-income countries, women not only are responsible for managing water for productive and domestic uses as well as for sanitation and hygiene purposes, but, in 8 out of 10 households without water in the house premises, they are also responsible for water collection. For example, in sub-Saharan Africa, 75% of households water cannot be collected from an in-house source and collectively women spend at least 15 million hours each day fetching and carrying water, while men spend less than half of the time per day for this activity - around 6 million hours (Fontana and Elson, 2014). Moreover, it is important to underline that women’s needs to have access to water for domestic use (generally treated as a women’s domain) sometimes conflict with and it is subjugated to men’s demands of water for productive purposes (generally treated as a men’s domain), i.e. livestock, agriculture (Masanyiwa, Niehof & Termeer, 2015). In case of disagreement on water management, however, it is usually men that have the power to decide how water should be used. Thus, women use and require more water than men, but only a small percentage of women worldwide have full access and control over water (Sever, 2005). Furthermore, as hinted before, unlike men, women often do not have a role in decision making, management and problem analysis (Agarwal et al., 2000, 18) regarding water collection and usage.

¹ For further information please see: CSA, “Water Diplomacy and Culture of Sustainability: The River Nile” (2018). Available from: <http://csapiemonte.it/it/international-conference-nile-water-diplomacy-and-sustainability>

Such powerlessness, as Das and Hatzfeldt argue (2017; also see Masanyiwa, Niehof & Termeer, 2015), is mainly due to the fact that the relationship between water and women mirrors societal gender hierarchies and gender inequalities, leaving women and girls carry the immediate burden of water provision and water rationalisation without having effective agency on it. In other words, how water is distributed, managed and accessed depends on various institutional, structural and social factors, among which there is gender. As a consequence, when designing and implementing development projects related to water management and governance, this imbalance of power should be taken into consideration and possibly it should be overcoming by addressing structural disparities. On the contrary, projects, policies and strategies that do not take into account the gender gap and women's needs and aspirations risk to exacerbate gender inequality in water governance and distribution (Kevany & Huisinigh, 2013) and in the society in general.

The aim of this paper is to analyse if, in theory and in practice, women are actively excluded in the decision-making processes of water management and, if so, whether such exclusion may have effects on women's rights. In order to do so, this paper is divided in two sections. The first part consists in a literature review, highlighting the shortcoming of pre-existing studies on this topic, by referring, when possible, to empirical researches and to a series of interviews to key experts on the field in order to investigate the gaps between the political and juridical panorama and the reality.

The second section, instead, takes as an example the current situation of the Lake Chad to analyse the limitations of women participation in water governance and the absence of gender mainstreaming in this area of policy making. The article focuses on the Lake Chad and the Lake Chad Basin Commission (LCBC) in development projects on water, looking whether women with their values, knowledge and experiences are included in the organisation and if they play an incisive role in the planning and in the implementation of projects.

2. Methodology

The reader must be aware that there are very few and limited studies on the Lake Chad Basin Commission (LCBC) and, more in general, on gender issues in water governance and management. This is due to a lack of field work (i.e. interviews, archive research) in the area, limited online documentation by the LCBC and other organisations involved and sporadic published reports of ongoing projects which take in consideration gender issues and water governance and management around the Basin. In particular, the authors of the paper have encountered difficulties in tracing the names of the LCBC senior and executive members as well as reports on the organization activities, which have limited our study. Nonetheless, although these above-mentioned points limit the research,

we also acknowledge the difficulty to carry out fieldwork because of the critical situation in the area, the scarcity of funds and time. For the research purposes of this paper we have used some of these limited studies (either reports or published papers) which sustained our discussion on such topic. Furthermore, it must be acknowledged that this is a desk research and no fieldwork was conducted. This remark is important as part of our findings come from looking at women inclusion in various LCBC high level conferences, but such analysis has been done with online published information and not from an archive research. Finally, regarding the interviews conducted, also due to the current health crisis and other factors, we weren't able to reach out to local communities and NGOs within the Lake Chad area. The interviews done have all been carried out remotely through online platforms, recorded and saved on both the authors devices. The research language has been English, however, in two different interviews, a different language has been used (French and Italian), allowing a better exchange between the interviewee and the authors. The interviewees have various backgrounds, experiences and knowledge of the links between gender, water management and water governance. In order to develop the theoretical aspects of this paper we have contacted Professor Lyla Mehta (an expert on water and sanitation, climate change, rights and access and resource grabbing) and Professor Marzia Fontana (expert in the field of gender equality and trade policies, and gender-aware macroeconomic modelling). Moreover, to enrich our research about the Lake Chad and the LCBC organization, the authors have interviewed Dr. Chitra Nagarajan (a journalist and writer on climate change, conflict, feminism, foreign policy and migration with a special focus on Nigeria and the Lake Chad region) and Aboukar Mahamat (coordinator for OSC ACEEN, member of the technical committee for the BIOPALT project and more than 20 years' experience of working with the LCBC).

3. Transboundary water management and gender issues.

The UN-Water report (2018) estimates that there are 263 transboundary lakes and river basins which account for an estimated 60% of global freshwater flow. Worldwide, around 153 States include some territory within such basins, and 30 countries lie entirely within them. In Africa transboundary river basins cover around 60% of Africa's total land area (Medinilla, 2018). Furthermore, as Chikozho (2014, p. 118) highlights, "*several of the 55 transboundary river basins in Africa are shared by ten or more countries (making) transboundary river basin management (TRBM) in the continent quite complex*".

Nowadays, also as a response to several water conflicts, there are a plethora of international agreements, including the most recent UNECE Water Convention² and its Protocol³, which, in theory, intend to facilitate transnational cooperation on infrastructure investment, navigation and management of water flows and levels (Medinilla, 2018; Wirkus and Böge, 2006). Often such international agreements establish a competent organization that supervise the respect and the implementation of the treaty itself. As Earle and Bazzilli (2013, p. 104) have argued, “*these organizations receive a legal mandate from the respective international agreements that created them, [...] (and they) perform a range of functions as delegated to them by the member states.*” In designing their strategies and policies, the primary aim of these organizations is to move away from conflictual approaches of resource allocation and move towards a consensual approach to water governance; thus, protecting, managing and equally dividing the right to use the shared water resource among bordering countries as well as resolving conflicts between party states and encouraging sustainable socio-economic development. (Medinilla, 2018; Earle and Bazzilli, 2013). Wirkus and Böge (2006) notice how, in the past few years, in Africa, there has been an increased attention, although still limited, towards transboundary water management organizations. For example, new organizations have been created, while pre-existing organizations such as the *Organisation pour la mise en valeur du fleuve Sénégal* (OMVS); the Niger Basin Authority (NBA) and the Lake Chad Basin Commission (LCBC) have gained greater attention by their party states and international organizations (Wirkus and Böge, 2006).

3. Women and water management and governance in theory

Over the past decades, women’s key role as water providers and users, and therefore the necessity of their participation in water-related projects, has been recognized in various international principles and protocols. As Ivens (2008, p. 63) so clearly states: “*since the 1970s and 1980s, women’s involvement in water management has been considered crucial to improve programme and project effectiveness due to women’s considerable roles, concerns and priorities in water management.*”. In other words, starting from the 70s and, in particular, from the First World Conference for Women Mexico, human rights practitioners and activists have tried to bring consciousness of gender issues in development projects (the so-called WID approach and later on, the GAD approach). Indeed, this period has marked a new era in which women are not considered only as wives and mothers, but also

² The Convention, adopted in Helsinki in 1992, was originally negotiated as a regional framework for the pan-European region. Following an amendment procedure, since March 2016 all UN Member States can accede to it. Chad and Senegal have become the first African Parties in 2018.

³ Protocol on Water and Health.

as a crucial driving force for development. Women should not be relegated to the private sphere only, but they should be active in the public domain too. Since then, international treaties and non-binding documents have paid more attention to gender mainstreaming in development projects, including those relating to water. For example, the Dublin Principles (1992, No.3) stress women's active role in the water management and the necessity to implement specific policies that address women's specific needs as well as to "*equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them*". In 2000, almost a decade later, the Millennium Development Goals has included targets promoting gender equality and women's empowerment, also in regard to safe water and sanitation (Goal 7C). Later, as Salo (2015) underlines, the 2002 World Summit on Sustainable Development (WSSD) appealed to governments to support gender sensitive programmes of 'Water, Sanitation and Hygiene' (WASH). In 2005, the UN General Assembly proclaimed the decade 2005-2015 as the International Decade for Action and voiced out the need to design and implement water projects "*whilst striving to ensure women's participation and involvement in water-related development efforts*" (WSSCC and WEDC, 2006). Finally, the 2030 Agenda for Sustainable Development, as well as universalising the access to water and by raising the standards of the MDG (Mehta, 2020, interview with the author), has recognised gender equality as a singular developmental issue to be addressed. In 2015, a decade later, the Millennium Development Goals has included targets promoting gender equality and women's empowerment, also in regard to safe water and sanitation (Goal 7C). Finally, the 2030 Agenda for Sustainable Development, overcoming the limits of the MDG (Mehta, 2020, interview with the authors) has recognised gender equality as a singular developmental issue to be addressed. Goal 5 of the total 17 goals, in particular, focuses on key issues and it recognises that for humanity to realise gender equality aspirations of the goal, action needs to be taken across all sectors including water resources management. Moreover, it is remarkable how, over the last years, organisations as UN Women and ILO, through a human rights based approach, have increasingly been focused on gender problems such as unpaid care work handling also themes such as water management and sanitation for better care (Fontana, 2020, interview with the authors). Additionally, at a regional level, within the African context, gender has begun to be perceived as central to the African visions on water governance (Salo, 2015). The African Development Bank, the African Union and the Economic Commission for Africa (UNECA) have stressed the close connection of gender and water in the African Water Vision 2025, which aims at "*an equitable and sustainable use and management of water resources*", in particular "*public awareness and commitment [...] for sustainable water-resources management, including the mainstreaming of gender issues [...]*" (UNECA et al., 2003, p. 2). However, this process is still far to be accomplished both at the international and regional level,

and sometimes it seems to retrograde for instance, the fore-cited UNECE Water Convention with its Protocol do not refer to women in any sort.

In the aftermath of the previously mentioned international protocols, various transboundary water management organisations, but also local and national institutions and/or organisations have recognised the need to address gender issues in water governance. Salo's report (2015, p. 21) on "gender and water policies in Africa" underline how, although unevenly, gender is perceived as a pivotal aspect in trans-boundary river basin protocols and/or agreements. For example, in 2012, the Nile Basin Initiative launched the "Gender mainstreaming Policy and Strategy" aiming at achieving "*gender equality and women's empowerment in all NBI policies, strategies, processes, programs and projects*" (NBI, 2012, p. 10). More recently, in July 2020, the Executive Director of the Nile Basin Initiative, Professor Seifeldin Hamad Abdalla, has declared that: "*Ensuring equality for women on decisions about water is critical for their social and economic empowerment and plays a vital role in strengthening community resilience, as women are the most affected. The Nile Basin Initiative (NBI) sees gender mainstreaming as essential to its work [...]. Involving women also brings to the table their knowledge on water and natural resource management*" (SIWI, 2020). Another example can be found in the Lake Chad Basin Water Charter, which clearly poses "*special attention to the needs of women [...] regarding the management of water resources and the environment in the Basin*" (LCBC, 2011, p. 31).

Thus, in theory, gender mainstreaming in legislation on water is considered as a pivotal medium to design effective development projects while allowing women to play a role in decisions about water governance and management (Salo, 2015). Earle and Bazilli (2013, p. 102) also argue that there is an underlying expectation that "*good water management practice would address gender issues at all levels of water institutions, including the international transboundary*". Nevertheless, there are two main critics to the theoretical desire to include women in water management. The first argument is that such aspiration may arguably be realisable only together with a more general national and international desire to reform gender roles and gender norms, as also Fontana has underlined (Fontana, 2020, interview with the authors). Otherwise, even if revolutionary, these aspirations end up being episodic cases without any resonance in the area.

The second is that often such process of inclusion is based on an instrumental approach to gender equality meaning that gender objectives are outlined in order to accomplish other general development goals. In this context, the accomplishment of gender equality is never the final aim, but rather an instrument. On the contrary, development projects and organisations that want to include and address women with their needs and desires should privilege an intrinsic based approach that

aims to fully realise women's human rights independently from any other development goal. It is arguable, indeed, that women's rights are not just an instrument to implement men's rights.

4. Women and water management and governance in practice.

Despite the theoretical progress in gender inclusion in international agreements as well as in development planning, Coles and Wallace (2005) argue that, in many low-income and developing countries, women are still actively excluded in discussions and projects about water management and/or are extremely under-represented in those decision-making organisations responsible for the management of shared water resources. The current low level of women participation in water management at all levels is due to various factors. First of all, water rights usually coincide with land rights which are often attributed to men only. According to UN Women (2019), only 13,8% of landholders worldwide are women since such rights are given to households, usually men. In concrete, not having land and water rights means that women cannot sell, manage or control the economic output from their lands. Such lack of rights is linked to the fact that the public, political and economic spheres are men's domain while women are relegated in the domestic and private sphere, as already underlined previously. Therefore, women are often not present and represented in public institutions and committees. According to GGO and EGI (2015), women hold only 12% of top ministerial positions in environment-related sectors worldwide, as well as in district or community level committees. As a consequence, their point of view and their knowledge is more than often overlooked. In sum, insecure land and water rights are a huge obstacle for women in participation in sustainable water management since they may not have a say over how land and water (and, in general, natural resources) are used and managed. Moreover, even when women manage land without owning it, they may not be able to access loans to invest in technologies and other innovative instruments (FAO, 2018).

Furthermore, community and social norms as well as gender dynamics crystallizing women's traditional roles are responsible for restraining women from actively participating in water management. Women involvement in public activities, indeed, may be considered time consuming since they are usually in charge of household activities. In this regard, older women, widows or single women may be more active since they have relatively less households' duties. Another barrier to women's participation in water management may be gender-based violence. Worldwide, 1 in 3 women (World bank, 2019) experiences some form of gender-based abuse in her lifetime (the incidence may be much higher though). Based on discriminatory norms, gender-based violence is used as a form of control, subjection and exploitation to maintain and reinforce gender inequality.

Despite the relationship between gender-based violence and management of natural resources (including water) is complex, a recent research from the International Union for Conservation of Nature (IUCN) shows that this type of violence can both be caused by and exacerbate the gender gap in control over natural resources, especially when such resources are little and under stress. It is not a casualty that there are strict links between conflicts, climate change and gender-based violence (IUCN, 2020).

Finally, lack or low levels of education may contribute to the confinement of women in the private domain making them illiterate or not giving them necessary communication and negotiation skills. As a consequence, they may be less confident in speaking in public spaces and they may not be recognised as enough authoritative to make decisions on politics (including on water problems). Women, thus, remain outside the decision-making processes at local, national and international level, and consequently their needs and expectations remain outside the scope of water related projects. In sum, it is arguable that women remain invisible.

Even when women are included in water management institutions (but it happens mainly at the local or national level), it is difficult to speak of gender mainstreaming⁴. As Earle and Bazilli (2013, p. 102) rightfully point out, women's inclusion in such institutions is "*more about visibility of women than women's equal power in decision-making forums*". In other words, even when women are represented in water management forums and institutions, power imbalances still work, and they often remain passive observers in meetings still needing to be encouraged to stand up and speak. Moreover, the presence of women in such institutions and forums does not guarantee the inclusion and taking into consideration of gender issues. In contrast, discussions in such assemblies could still be men-centred and not look at women's concerns. Finally, the discussion of women's representation is very much linked with those on bottom-up approaches in development projects, as an alternative to the top-down strategies. In particular, as also Fontana (2020, interview with the authors) underlines, it should be made clear that the participation of local women, especially when they are also the beneficiaries of a development project, should be privileged over the inclusion of women who are not local and thus are limited in the comprehension of the needs and desires of the female population in the targeted area.

Dr. Dajani (2020, interview with the authors) rightfully stress the necessity to reinforce the dialogue between international organizations, which try to implement a universally accepted framework, and

⁴ meaning an approach that integrates a gender equality perspective at all stages and levels of policies, programmes and projects (Council of Europe)

local, regional and national bodies. This is because in order to implement strategies that are understood and agreed by the local communities a

It is arguable that gender empowerment regarding water management projects does not consist uniquely in women's representation in institutions or organisation. We believe that Dr. Dajani (2020, interview with the authors) is right in pointing out that On the contrary, gender mainstreaming means a revolution in the decision-making process allowing for alternative approaches to the management of water. Thus, women's representation is not alone sufficient (even if necessary), but it should be accompanied by policies and strategies that take into consideration and address women's needs and aspirations as a starting point for the designing of projects. In a domain, indeed, where the rules are made by men and the structure embodies men's vision, women's participation is not solved uniquely by allowing women (and minorities) into decision making process. Instead, it is crucial to analyse and question the principles at basis of water management organisations, as well as their values and strategies. In other words, for a complete inclusion of gender issues in water development projects, policy makers should go beyond the mere inclusion of women, but they should extend their participation by giving them an effective voice in the definition of practical needs and strategic agency.

This process is not easy, and it involves activities of education, cooperation and coordination between women, creation of resilience and capacity building and, in general, all the activities that may challenge traditional gender norms and roles in the targeted area. In particular, academic literature and empirical research have defined various approaches that may be used to fully realise gender mainstreaming. One of them is "co-production". Co-production refers to the active involvement and engagement of actors in the production of knowledge that takes place in processes either emerging or being facilitated and designed to accomplish such active participation (Voorberg, Bekkers, & Tummers, 2014). Even though, traditionally, knowledge, often equated uniquely with scientific expertise, is considered to be universal, in reality it is closely linked to the social groups that produce and reproduce it. Exchanging knowledge, therefore, provides a solid basis for those projects in which a lot of stakeholders, including women and minorities, are involved. In these cases, co-production can reduce costs, improve the quality of services and products and expand citizens' participation in decision-making processes on public services. In particular, in the domain of water management, knowledge about this resource is often of scientific character and, therefore, it is linked to men since most water managers and engineers are men (Harvard, 2017). However, scientific knowledge does not and should not exhaust all knowledge at the basis of a water-related projects. On the contrary, the expertise at the basis of water projects should include cultural factors, gender sensitivity and attention to issues like class, caste, ethnicity, religion and so forth (with, thus, an intersectional approach). Only

by having an extensive scientific and cultural knowledge, programs and policies can aim at inclusivity. Moreover, it is important to underline that this approach may be successful only if all stakeholders and community partners are considered equal and are acknowledged; hence if participation is fully inclusive.

Another strategy is the involvement, if possible, of women's cooperatives that are already present in the territory and that were established for a specific goal or to carry out daily activities. In these cases, such cooperatives, that may be women only cooperatives or mixed groups depending on the context, should be taken as a starting point for consultation (Fontana, 2020, interview with the authors). This strategy, as affirmed also by Nagarajan (2020, interview with the authors), may be an alternative method to the consultation of leading males and guides of the community, by giving voice to marginalised groups.

In sum, there are two considerations to be done when speaking of gender mainstreaming in development projects, including those on water management. First, women's participation in decision-making processes is surely necessary, but often not sufficient. As, indeed, also Nagarajan argues (2020, interview with the authors), gender mainstreaming is not only about representation, but rather about the new perspective on gender strategies and policies that are brought on the table. Indeed, strategies, policies and activities implemented should take into account women and involve them in a broader way that goes beyond mere formal participation. For instance, when implementing training programmes for women, women themselves should be involved in organising and teaching courses. On the contrary, often such programmes are held by men. Second, when adopting gender mainstreaming strategies and practices as a basis of development projects, they should be designed and implemented keeping in mind the societal and political gender norms and practices in force *in loco* in order to make the strategy successful. For instance, if the idea is to create focus groups with women to exchange knowledge necessary for the project, such focus groups should be planned in suitable hours for women. Moreover, often training programmes or activities for women are taken by women on voluntary basis and in their free time. However, almost all women spend the majority of working hours in house and family care, hence are not able to take on such programmes. One solution to solve the problem may be, for instance, the provision of subsidies or the reinforcement of welfare in order to help and support women through their daily activities and allow them to have more free time to spend. Often, instead, especially when development projects have a top-down approach or are designed by men for men, these reflections are not taken into consideration and strategies of this kind tend to fail despite their potential on the paper.

5. Why is it important?

Participation of women in decision-making processes and gender mainstreaming in water-related projects may have several benefits at the individual and societal level. Ivens's study (2008) best presents the possible good direct benefits of addressing gender issues in water management projects as well as in including women in decision making positions. For example, improved and closer access to water supplies and sanitation seems to produce positive effects such as better health for women and girls as increased quantity and quality of water enhance women's dignity, but it also decreases the exposures to risks and threats associated with water fetching like gender-based violence, water-borne diseases, animal attacks and overall physical issues caused by the constant heavy water loads (Ivens, 2008, p. 64). Furthermore, other direct benefits of gender-oriented projects are linked to enhanced school performance by girls who could reduce their absenteeism and/or dropout due to, for example, less time needed to collect water (see Kevany and Huisingh, 2013, p. 55). Thus, it is arguable that successful gender mainstreaming in water programmes may be a first necessary step for a cultural and societal revolution of women's roles and expectations. Moreover, as a study from the Intergovernmental Panel on Climate Change (IPCC) has showed, strengthening women's access to and control over land improves sustainable management efforts, successful environmental programming and sustainable development. For instance, at the national and international level, countries with more women parliamentarians are more likely to ratify environment treaties (IPCC, 2018).

6. The Lake Chad: an introduction

While Lake Chad is easy to identify on world maps, it is very complex when seen up-close. Lake Chad, the fourth largest lake in Africa, is situated on the edge of the Sahara Desert, and provides a vital source of water to human, livestock and wildlife communities (Odada, Oyebande, Oguntola, 2005). Eight different countries (namely Cameroon, Algeria, Central African Republic (CAR), Chad, Niger, Nigeria, Sudan, and Libya) share its basin; although, as Amali, Bala and Adeniji (2016) point out, Chad and Niger are those with the largest share of the basin territory while three quarters of the lake water is supplied by rivers from the CAR and Cameroon. Arguably, the Lake has always had a crucial role in the economic, political and social life of the communities living there. The main economic activities in the area of the Lake are agriculture (primary cotton, millet and sorghum), fishing, and animal husbandry. In other words, communities with different backgrounds, cultures and

languages which live around the shores of Lake Chad have been depending on this water source to survive.

Nonetheless, it has been highlighted by various studies that the Lake Chad has been shrinking. According to Ifabiyi (2013) the lake has decreased by about 95% from 1963. On a similar account, Gao et al. (2011) underline that from the 1960s to the 1980s, the area of Lake Chad shrank from 22000 km² to about 300 km². This phenomenon has had repercussion on the wildlife and, consequently, on economic activities. As Steely (2014) underlines, Lake Chad used to be home to numerous fishing activities that have nowadays been abandoned due to the shrinking of the lake, thus turning many fishermen in the area towards farming. In general, the decreases in water levels have had considerable impact on the local population: crop failure, livestock death, loss of livelihood, forced migration, and increasing hydro-political conflicts within and around the Lake Chad Basin (Ifabiyi, 2013). However, it is important to underline that the Lake is known for being highly variable at every time scale, whether seasonal, perennial, millennial or geologic, this variability reflecting that of rainfall in the upstream basin, whose impact is exacerbated by the basin's topographic configuration (Lemoalle and Magrin, 2014). As a consequence, the cosmopolitan population living there has learned how to adapt to the variability of the environment by adopting various strategies (Lemoalle and Magrin, 2014) such as diversification of crops, pastoralism and migration towards more fertile areas (Nagarajan, 2020, interview with the authors). Nevertheless, over the last years, the current climate crisis, including the shrinking of the lake, has been particular harsh being accompanied by a political and social conflict and an increasing demographic pressure. As the FAO's report (2017) points out, since 2013, the communities in the region have also been the target of terrorist groups, mainly Boko Haram. The presence of Boko Haram in the region has deeply affected farmers in the region as *"the perception of insecurity and the threat of being kidnapped has prevented (them) from fully engaging in agricultural activities"* (FAO, 2017). All these environmental, political, social factors together have led to an increased competition and conflict over the use of the resources left in the area and, consequently, poverty. In this context, the singularity of the current situation has rendered the classic copying mechanism to the crisis, internalised by the local population, inefficacious. For instance, the population has had to find new methods to cultivate lands after the police has introduced crop bans. Also, due to movement restrictions imposed by governments, the local population have been limited in migrating, which was, as seen previously, one of the typical responses to the Lake's water variations.

Within this framework, women represent about 52% of the population. In general, according to the traditional gender roles, women are perceived uniquely as spouses and mothers and they are usually relegated to the domestic sphere, not having, instead, decisional and managerial power in the public

one. They usually have a heavier workload in terms of productive and domestic work but have “*lower access to education, information, agricultural extension services, inputs and credit as compared to men*” (Amali, Bala and Adeniji, 2016, p. 5). From an economic perspective, Amali, Bala and Adeniji (2016) report that, although women play an important role in various activities ranging from cultivating cereals to processing of harvested fish, gender inequality is still deeply rooted in the lake Chad area. According to them, indeed, even if women have a crucial role in agricultural work, they do not often have rights over their lands and natural resources. Also, in trade, women are often retailers, but not wholesalers not having full rights on the products sold (WFP, 2017). This situation is also emphasised by a study conducted by WFP and USAid (Pepper, Brunelin and Renk, 2016/2017, p.16) which points out that “*gender divisions in market activities reflect general gender disparities existing in the four countries of the Lake Chad Basin*”. Such gender division is more than often produced and reproduced by traditional and religious norms that strongly limit women’s future prospective. Also, in this area, then, a significant barrier to change, as cited previously, is the *quasi* impossibility to get an education. According to Plan International (Jay and Gordon, 2018) adolescent girls are far less likely to attend secondary school in almost all locations. Such impossibility to being schooled is often due to the domestic and agricultural workload. Girls, in particular, are charged of collecting water for their family before going to school. Beyond this, the cost of education has raised rendering a lot of girls not being able to attend school since they are unable to afford it. Consequently, women face higher levels of illiteracy which impede them to participate in the political sphere.

However, thanks to globalisation, modernity, but also due to the new challenges the current conflict poses, traditional roles, over the last decade, have been slowly changing (Nagarajan, 2020, interview with the authors). While men have been called to the arms, have been killed, have been put in prison or have migrated to find better jobs, women have increasingly experienced new challenges. Indeed, due to men’s absence, women, often “left behind”, have been constrained to take responsibility for the whole household and to have a role in the decision-making process especially at a familiar and community level. In other words, it is arguable that women are gradually joining the public sphere becoming more economically independent, deciding how to use and manage their properties and natural resources, including water. As a consequence, thanks to their new roles, women are starting to develop new perceptions on their own role in the society and on the future role of their female children. They, thus, have adopted new practices and have started to cultivate new dreams such as that of sending their female children to school (Nagarajan, 2020, interview with the authors). At the same time, however, women face two main challenges. The first, as mentioned before, is the presence of Boko Haram. Plan International’s report (Jay and Gordon 2018) suggests that around

34.7% of adolescent girls interviewed in Nigeria, Cameroon and Niger have felt unsafe due to experiencing of violence at the hands of Boko Haram. More in particular, since 2012, women, especially of Christian religion, have been continuously targeted, kidnapped and abused by Boko Haram for instrumental purposes since none was directly involved in the conflict. Accordingly, also wives of Boko Haram members have been targeted by the governments without being responsible for any activity of the terrorist group. Such narrative, thus, seems to reinforce the proposition according to which in conflicts women face increased gender-based violence since they represent both the land of the enemy and the reproductive source that has to be conquered and eliminated. However, according to Chitra Nagarajan (2020, interview with the authors), not all women are passive to this phenomenon. On the contrary, there is empirical evidence that sometimes women join by themselves Boko Haram groups with the hope to escape gender roles and norms in their own community. Unfortunately, as Nagarajan (2020, interview with the authors), has underlined, they end up in terroristic groups where such gender roles and norms are reinforced and often try and end up leaving the group.

The second challenge is the impossibility to fully control their reproductive rights. On the one hand, access to healthcare has increased thanks to the presence of humanitarian organisations. On the other, due to the increased levels of GBV, the increased number of pregnancies outside the marriage and the incapability of women to look for other children, there have been high numbers of unsafe abortions especially among poor women. Indeed, since in Nigeria, for instance abortion is a crime (if not to save the mother), girls and young women recur to unsafe and even deadly methods to not continue their pregnancy.

The question then is whether such gendered reform will be sustained over time, also when the conflict will cease to exist. In this regard, the answers are many since different ministries and political representatives have very various stances. If on the one hand, it seems that there is an attempt to guarantee women's rights such as the right to education, on the other there is a strong difficulty, instead, to embrace intra-housing change of gender roles.

7. The Lake Chad Basin Commission

In this context of political and social crisis first and foremost⁵, thus, the management of water of the Lake Chad has become crucial especially in order to maintain peaceful relations between the riparian

⁵ as both Mehta and Nagarajan have underlined, even if climate change has surely had an impact on the current crisis, its effects should not be overestimated.

States. The Lake Chad Basin Commission has increasingly assumed a delicate role in the development cooperation between Cameroon, Chad, Niger and Nigeria.

The Lake Chad Basin Commission (LCBC or, in French CBLT - Commission du Bassin du Lac Tchad) was set up in 1964 by the Heads of State of Cameroon, Chad, Niger, and Nigeria, becoming one of the oldest transboundary basin organisations in Africa. The LCBC was created with the aim to “*promote the shared and sustainable management and exploitation of Lake Chad and other water resources – rivers*” (Galeazzi et.al, 2017). In 1994 the Central African Republic (CAR) was accepted as a new member in the LCBC and Libya joined in 2008, while Sudan, Egypt, the Republic of Congo and the Democratic Republic of Congo have still observer status (Galeazzi et.al 2017). Since the early 2000s, after a period of difficulties, mainly related to internal deadlocks of its member states, the LCBC has outlined its vision for the lake’s management by suggesting a cross- border diagnostic analysis and a long-term strategic action plan or PAS (Lemoalle and Magrin, 2014). In 2012 the LCBC adopted a Water Charter, which straightened the cooperation among states in order to “*achieve the sustainable management and development of Lake Chad*” through “*integrated, equitable, coordinated management of the Basin is shared water resources*”, as well as to “*collectively (through the Commission) control and prevent actions likely to have a noticeable effect on the Lake and associated watercourse*” (LCBC, 2011, pp. 9 – 13 – 20).

As previously mentioned, the LCBC’s Water Charter also stresses the importance to give voice to women, youth and vulnerable social groups in “*the formulation, execution and monitoring of projects and programmes on water resource management*” (LCBC, 2011, p. 15). The LCBC has subsequently stressed the priority of a focus on a gender-sensitive approach in transboundary water management. For example, in 2015, the African Development Bank (ADB) approved the multinational project PRESIBALT (Programme to Rehabilitate and Strengthen the Resilience of Lake Chad Basin Systems, 2015-2020), consistent with the Five-Year Investment Plan (2013-2017) of the Lake Chad Basin Commission (LCBC), which aimed at improving and sustaining regional and national governance of the Lake Chad basin, integrated water resources management and livelihood interventions to reduce pressure on basin resources and ecosystems (African Development Bank, 2018, p. 1). One of this project’s focuses has been to reduce gender disparities in the Lake Chad basin, by facilitating the participation of women in the programme as well as in decision-making processes but also by enhancing the organisational capacity of women’s producer groups (African Development Fund, 2014, p. 12). Furthermore, in the 2018 “Regional Strategies for the Stabilization, Recovery Camp; Resilience of the Boko Haram affected Areas of the Lake Chad Basin Region”, the Lake Chad Basin Commission, in collaboration with the African Union, reinforced the relevance of “*the mainstreaming of gender issues, (which) must be accompanied by specific and urgent action [...] to*

ensure that women and youth are empowered to participate fully in planning and decision-making processes” (Lake Chad Basin Commission & African Union Commission, 2018, p. 44). Finally, UNESCO, in collaboration with the Lake Chad Basin Commission and the African Development Bank, launched the BIOPALT project (2017/8-2020) which would “*provide early warning systems for droughts and floods to strengthen the resilience of local communities to climate change, train 300 policy-makers, scientists and community leaders, and mobilize 30,000 lake residents for the peaceful management of natural resources and water, [...] to implement income-generating activities based on green economy to improve the livelihoods of local communities*” (UN/POP/MIG-1ES/2019/10, p. 11). De facto, this project aims to encourage the return of displaced populations and maintain populations in the area, in particular young people and women (UN/POP/MIG-1ES/2019/10). For example, one of BIOPALT’s activities focuses on the production of the Spirulina, an alga rich of proteins (60 to 70% of dry matter) and vitamins, which, in the area, is mainly harvested by women. In this way, BIOPALT’s aim to ecologically rehabilitate a spirulina production site in the basin area could have a direct and positive outcome on women’s financial self-sustainability (BIOPALT website). Moreover, BIOPALT provides support to the NGO Kouri, based in the Lake Chad region of Niger, in the creation of a fodder farm, far from the insecure areas of the lake, to produce and serve the herders of Kouri bulls in fodder for these animals, which have been recognised as extremely well adapted to the semi-aquatic environment as well as good milk producer. UNESCO estimates that such activity would benefit around 5,000 people, including 2,000 women (BIOPALT website). It is therefore clear that, in the past decades, the Lake Chad Basin Commission has moved towards, at least theoretically, a stronger gender-sensitive approach from the approval of the 2012 Water Charter to the implementation of various projects, which have a clear focus on women’s important role within the communities in the Lake Chad basin.

Nonetheless, the authors of this paper believe that these few and insufficient steps have had a limited positive outcome for women and that they are incapable to address the deeper levels of gender inequality that still persists in the area and within the LCBC. Despite the process done, *de facto*, women are still largely excluded not only from any decision-making positions in the organisation but also in the overall planning and execution of transboundary water management projects. Salo (2015) argues that in order to facilitate gender mainstreaming policies and progress in water governance there must be a supportive political and institutional environment. In her research “Gender and Water Policies in Africa” on gender mainstreaming policies in selected African countries and regional transboundary riparian organizations, she clearly underlines how Cameroon, Nigeria have a “medium level of gender mainstreaming” (i.e. have gender quotas for women’s representation in decision making processes or national gender policy and strategy) while Chad is categorized as a country

which has a “low level of gender mainstreaming.” Salo’s study does not take into account Niger, but by looking at the extremely low position of the country (189) in both the Gender Development Index and the Gender Inequality Index, we can cautiously suggest that Niger’s gender mainstreaming policies level is similar to the one of Chad. Moreover, Salo’s analysis (2015) on transboundary lake basin commissions seems to suggest that the Lake Chad Basin Commission does not have a gender sensitive approach in project implementation. Although Salo’s report may not be completely representative of the LCBC new progresses in gender mainstreaming policies, her study presents a truthful picture of gender-related issues in the LCBC. We argue that one of the reasons behind this absence of gender mainstreaming policies could also be ascribed to the lack of (or extremely limited) women participation in the LCBC decision-making processes. For example, the Lake Chad Basin Commission Executive Secretary “has always been a man”; the other executive positions (General Directorate of Operations -nowadays Technical Directorate- and the General Directorate of Administration and Finances) are held by men, namely Dr. Boubakari Mana (up until February) and Dr. Nadingar Titdjebaye (Aboukar Mahamat, 2020, interview with authors). As presented in the methodology, the Lake Chad Basin Commission does not document any of its senior or executive personnel (with the exception of the Executive Secretary), hence it is extremely difficult for the authors of this paper to further document the presence or absence of women in decision-making positions. Nonetheless, we are prone to believe that women are alienated from any executive or senior position within the organization. As Mahamat (2020, interview with authors) has pointed out, with limited exceptions, almost all positions within the LCBC (i.e. Executive Secretary, Directors or LCBC functionaries) are held by men. Moreover, from an analysis (even if limited – see methodology) of the LCBC highest executive conferences, it is possible to conclude that women are underrepresented in crucial meetings, which clearly limits the possibility to influence the overall shared water governance and management processes as well as to tailor certain water policies to women’s needs and desires. For example, the “64th Ordinary Session of the Council of Ministers of LCBC” (2019), the highest panel of the LCBC, was attended by around 50 people⁶, among whom there were ministers of the LCBC member countries, LCBC representatives as well as other LCBC technical and financial partners. By looking at this picture, it is possible to identify only five women, of whom one is the Minister of Production and 1st Commissioner of Chad to LCBC; the other are not recognizable (LCBC, 2019, website). Furthermore, at the commissioning ceremony for the PRESIBALT project, which would benefit 15 million people (including 52% of women) and, as previously noted, was sensitive to women inclusion in decision making processes, there were around

⁶ estimated done by looking at the official photo taken at the conference (LCBC, 2019, website)

25 people⁷, representatives of the LCBC, ADB and other stakeholders. Out of 25 people, only one woman is clearly identified (LCBC, 2016, website). At the consultative meeting for the implementation of the “Regional Stabilisation Strategy (2018)” there were around 20 people, none of whom were women, even if, as pointed out beforehand, such “Strategy” was to empower women and include them in decision-making processes. Finally, by looking at BIOPALT technical committee, which “*plays a key role in the execution of the project’s activities (and) [...] advise and guide the Project Management Unit*” (BIOPALT Project, 2018, p. 4), it is possible to identify only one woman, Dr. Oumarou Ibrahim Hindou. Thus, it is clear that there is a lack of active participation of women in high level conferences as well as in international project executive panels, which in theory should aim at gender inclusion. Furthermore, Mahamat (2020, interview with authors) has rightfully stressed the lack by the LCBC of women’s broader inclusion in projects planning. He argues that, most of the time, the LCBC’s projects on the ground, that are meant to concentrate on women’s needs, focus on the infrastructures, which may ameliorate women’s overall conditions in the area, but they are not implemented by taking into consideration their particular needs.

In sum, thus, there are two interrelated problems. Firstly, there is an absence of women’s representation in the majority of these posts (at the ministerial, national, regional level) which, on the contrary, are all held by men. Secondly, the absence of women voices in such contexts, particularly in international projects, de facto does not bring any new gender perspective in water-related programmes. In the projects implemented by the LCBC, there is no presence of strategies and policies that want to fully include women. As a consequence, development projects are still outlined and implemented without considering women’s’ role in the area, their specific needs and everyday activities. The beneficiaries, thus, result to be always men while women remain relegated, again, in their private sphere. Such lack of inclusion not only limits the possible positive outcomes of these programmes, but it fails to empower women and foster gender equality in the area. Moreover, if it is true that such development projects can succeed in women’s empowerment only if accompanied by national and international willingness to change traditional roles, the lack of such willingness is not an excuse for organisation at all levels for not including women.

8. Conclusions

Women have always been key providers and users of water, especially for domestic use. This statement has been increasingly recognised and entrenched in international treaties, political documents and organisations’ strategies and policies at the local, national and transnational level.

⁷ estimated done by looking at the official photo taken at the conference (LCBC, 2016, website)

However, despite the progress, in practice women are still excluded from decision making processes and their specific needs and aspirations are not considered when designing and implementing water-related development projects. We are far, thus, from the so-called gender mainstreaming. On the contrary, it is fundamental to consider and implement two and essential elements to accomplish gender mainstreaming in water management projects: 1) women's representation in the whole decision making process, including the follow up; 2) embodiment of gender at the basis of the legislation, policies and strategies of an organisation, as well as of the projects designed and implemented by the organisation itself.

In the Lake Chad Basin context, we argue that women's absence in decision making positions within the LCBC and the lack of inclusion of women in the overall planning and executions of projects' activities, strongly limits a comprehensive gender-based approach as well as the long-term outcomes for gender mainstreaming in the Lake Chad area. As it has been suggested, there is a lack of research, particularly fieldwork-based, on women's inclusion in transboundary basin organizations and the effects their absence affects not only the overall executions of projects but, most importantly, women in local communities. Through the case study of the lake Chad Basin and the LCBC, this paper highlights that there are underlying issues with allowing women to engage in water governance and management. De facto the authors urge for a wider research on this topic, in particular of lake Chad, which the escalating humanitarian crisis may have negatively affected the few steps taken towards gender mainstreaming in the area.

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