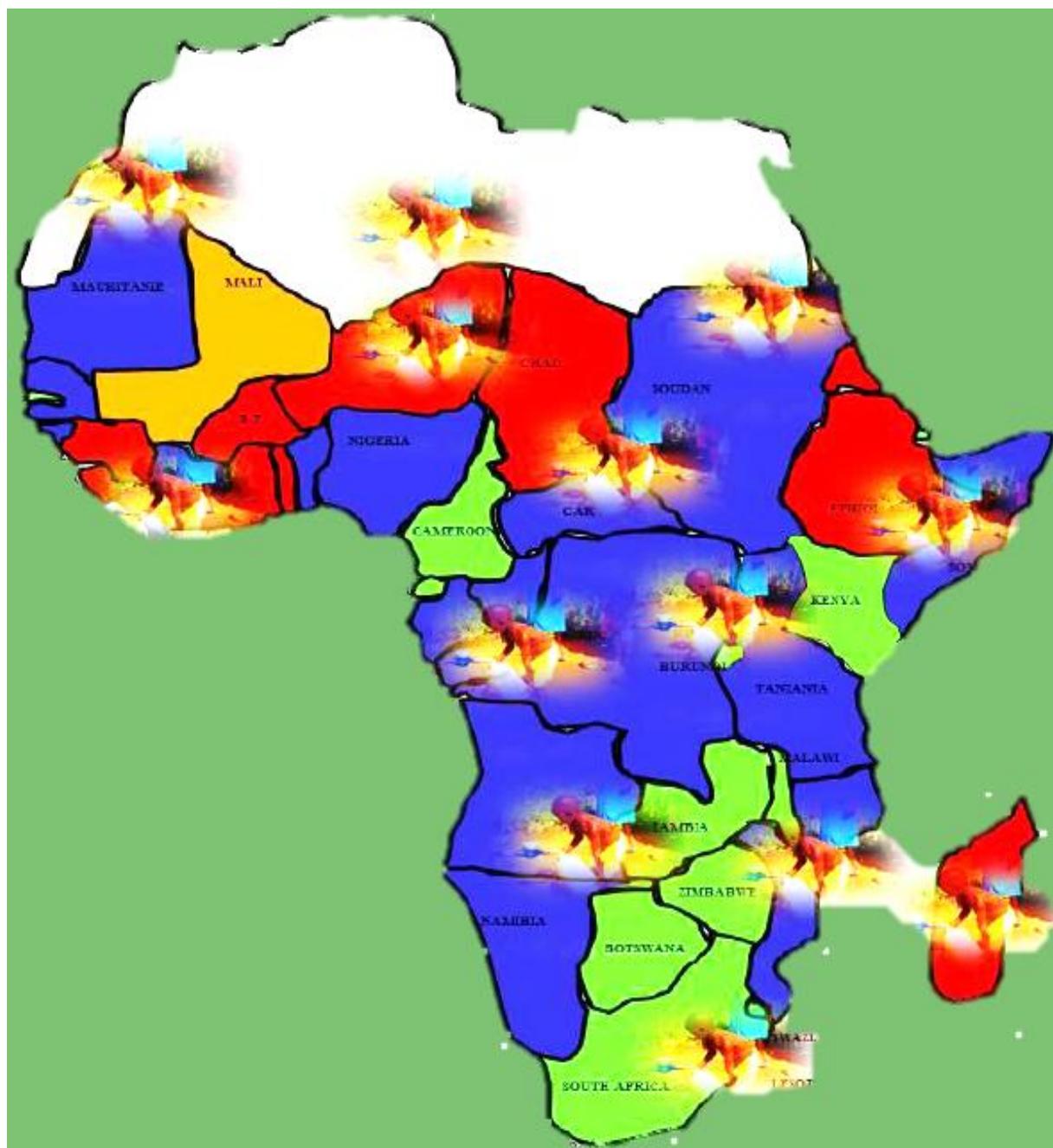# Concepts and Context of the Global Water Institute:
Approach to Reintegration of Ex-Combatants through Water Strategies

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Concepts and Context of the Global Water Institute: Approach to Reintegration of Ex-Combatants through Water Strategies

I. Executive summary

The Global Water Institute (GWI) has anticipated the growing role of climate change on human and environmental security and has put water as its strategy for the prevention of social conflicts and reconstruction in post-conflict countries. The interconnectedness of environmental and human security is one that cannot be overlooked, considering that a large part of human security is tied to the access of a population to natural resources and their vulnerability to environmental change, and the fact that human activities and conflict can both directly and indirectly impact this environmental change.

Hundreds of thousands of ex-combatants in Africa make the environment unliveable and unsustainable, adding further stress to already weakened state structures and traumatized populations that often times are faced with imminent food crises and food price volatility. The inclusion of ex-combatants in the implementation of water-related programs is essential for environmental sustainability.

Such efforts should be regulated and cannot succeed without the careful coordination at both the local and national level. Therefore, GWI has put forth that priority should be given to putting the reintegration of ex-combatants on the National Planning Agenda in post-conflict countries in order for a credible and authoritative national institution to oversee, plan, and implement DDR efforts. GWI proposes the formation of the Implementation and Monitoring Bureau, which would be responsible for coordinating reintegration efforts across its member states and overseeing the implementation and coordination of water-related programs.

II.   Definitions

DDR: the Disarmament, Demobilization, and Reintegration process lays the groundwork for safeguarding and sustaining the communities in which these individuals can live as law-abiding citizens, while building national capacity for long-term peace, security, and development. It is important to note that DDR alone cannot resolve conflict or prevent violence; it can, however, help to establish a secure environment so that other elements of a recovery and peacebuilding strategy can proceed.

Demobilization: the process by which the armed force of the government and/or opposition or factional forces either downsize or completely disband.

Disarmament: the collection, control, and disposal of small arms and light weapons, and the development of responsible arms management programs.

Economic reintegration: the process through which the ex-combatant's household builds up its livelihood, through production, and/or other types of gainful employment.

Environmental security: the area of research that address the linkages among the environment, natural resources, conflict, and peacebuilding.

Ex-combatants: refers to a former member of an armed group with a military structure to further political or social cause. Used interchangeable with the term *demobilized forces*.

Horizontal inequality: inequalities among culturally formed groups that have economic, social, political, and cultural status dimensions, which affect individual well-being and social stability.

Human security: best understood as a paradigm for comprehending global vulnerability and individuals' susceptibility. It holds that a population-centred view of security is essential for national, regional, and global stability.

Reintegration: the process whereby former combatants and their families and other displaced persons are assimilated into the social and economic life of (civilian) communities.

Social reintegration: the process through which the ex-combatant and his or her family feel part of, and are accepted by, the community.

Vertical inequality: lines inequality among individuals or households, not groups and its measurement is often confined to income or consumption.

Water security: represents a unifying element supplying humanity with drinking water, hygiene and sanitation, food and fish, industrial resources, energy, transportation and natural amenities, which all depend upon maintaining ecosystem health and productivity.

III.   The "added value" of GWI concept

A.   *Introduction*

The U.N. World Water Report of 2006 noted that "[t]here is enough water for everyone."[1] However, these "water resources […] are limited and unevenly distributed" as well as wasted and polluted.[2] The "global crisis" is thus not due to a lack of water, but to a lack of water management. It has been argued that "[i]n most cases, it is not the lack of water that leads to conflict, but the mismanagement."[3] In order to prevent conflict over water, decisions on its management should be made locally to ensure that local rights and practice are taken into account. In essence, there is no possibility for such efforts to become viable if human security cannot be assured.[4]

The Global Water Institute (GWI) presents a holistic, yet practical way to approach post-conflict development. By employing ex-combatants in water-related development projects, GWI's "added value" facilitates transition, while addressing deep-rooted causes of conflict and encouraging conflict sensitivity in future development. The interconnectedness of environmental and human security is one that cannot be overlooked, considering that a large part of human security is tied to the access of a population to natural resources and their vulnerability to environmental change, and the fact that human activities and conflict can both directly and indirectly impact this environmental change. GWI was founded on the premise that water can be used for the prevention of conflicts as has thus become intrinsically connected to economic development, environmental security, and social stability. It stresses the urgency of a future roadmap that takes the incidence of climate change on water and food availability into account.

The current pace of environmental change and an increasing demand for natural resources are causing new challenges to human security. According to the United Nations Environment Programme (UNEP), it has become increasingly "clear that the exploitation of natural resources and related environmental stresses can become significant drivers of violence," which can be related to "[d]emographic pressure and urbanization, inequitable access to and shortage of land, and resource depletion."[5] These issues can have a profound effect on the stability of and relationships between communities within a country.

Potential consequences of climate change can also spark "drivers of violence," related to, for example, water availability and the prevalence of disease. These can also be "increasingly seen as threats to international security, aggravating existing tensions and potentially generating new conflicts."[6] As formulated by UNEP's 2009 report, linkages can be found in the relationship between natural resources, the environment, and conflict. Research has shown

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[1] UN-Water, *Water: A Shared Responsibility—The United Nations World Water Development Report* 2 (March 2006), 3.
[2] Ibid., 12.
[3] Valerie Ndaruzaniye, *Water for Conflict Prevention*. Symposium (Global Water Institute, November 2009), 29.
[4] Ibid., 10.
[5] Ibid., 8.
[6] Ibid.

that natural resources can be "an important contributing factor" in the outbreak of conflicts, in financing and sustaining conflicts, in undermining peacemaking efforts, and in the disruption of livelihoods.[7]

In order to protect livelihoods in a post-conflict country, it is "critical that the environmental drivers and impacts of conflict are managed, that tensions are defused, and that natural assets are used sustainably to support stability and development in the longer term."[8] Importance thus lies in factors that could spark "a relapse in violence or impede the peace consolidation process" are addressed in a post-conflict situation. According to the UNEP, both the environment and natural resources can "concretely contribute to peacebuilding" efforts, because of the fact that they support economic recovery, develop sustainable livelihoods, and can contribute to dialogue, cooperation, and confidence building.[9]

B.   *Alternative approach to reintegration*

GWI has anticipated the growing role of climate change on human and environmental security and has put water as its strategy for the prevention of social conflicts and reconstruction in post-conflict countries. GWI believes that the inclusion of demobilized forces in the implementation of water-related programs is essential for their success. This concept is thus based on finding a common solution to issues in respect to water scarcity as well as to efforts in reintegrating demobilized forces. Being part of the broader Disarmament, Demobilization and Reintegration (DDR) program, GWI offers an alternative to standard approaches in the reintegration of demobilized forces.

The objective of DDR is essentially to contribute to security and stability in post-conflict countries in order to establish recovery and development efforts.[10] As formulated by the United Nations in its *Integrated DDR Standards*, the program was initiated in order "to deal with the post-conflict security problem that arises when ex-combatants are left without livelihoods or support networks […] during the vital transition period from conflict to peace and development." The aim is thus to socially and economically integrate ex-combatants into society "so that they can become active participants in the peace process." This way, "DDR lays the groundwork for safeguarding and sustaining the communities in which these individuals can live as law-abiding citizens, while building national capacity for long-term peace, security and development."[11]

These factors also come back in GWI's concept. Water is a significant factor in order to ensure sustainable livelihoods and has become a source of conflict in itself. It is important to note that "[t]he pressure placed on the environment due to a growing population can be exacerbated by the lack of alternative livelihoods." [12] For example, the basic resource

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[7] Ibid., 8, 11, 19.
[8] Ibid., 19.
[9] Ibid., 19, 22.
[10] UN-Water, *Water: A Shared Responsibility*, level 1: 1.
[11] Ibid., 2.
[12] Ndaruzaniye, *Water for Conflict Prevention*, 14.

necessary for agricultural practices, which is often the main source of subsistence, is water. If this is no longer available or accessible, "people are often forced to search for job opportunities in the cities or turn to other, often illicit, ways to make a living."[13] By creating employment opportunities in water-related programs for ex-combatants, GWI provides an alternative to this group, thereby preventing them from reverting to a life filled with conflict.

GWI gives assistance to post-conflict countries through training and working with demobilized forces in the field of water to ensure both environmental security and societal stability. Employing these forces in this field can potentially "create peace dividends, bridge divided societies, and ensure sustainable water security in countries recovering from conflict."[14] This approach intends—and attempts—to ensure both human and environmental security in a particular post-conflict situation.

GWI gives ex-combatants a means of support in order for them to develop a sustainable livelihood within a community, which prevents conflicts from ensuing. By facilitating the economic reintegration of ex-combatants within a community, GWI also supports the wider economic recovery of a post-conflict country. Such peacebuilding approaches fit into a wider framework of development, in which "social cohesion and public trust" can also be rebuilt in order to ensure human security and to work towards sustainable economic development.[15]

GWI thus provides a common solution to both issues of water stress and scarcity as well as to efforts in reintegrating demobilized forces, as they are motivated to work in water-related programs that can facilitate their social and economic reintegration. Population stability as well as conflict prevention can originate from this "added value" and it can eventually even become a source for sustainable economic development in the long run.

C.   *Conceptual diagram*

Since the end of the Cold War, conflicts have taken a direction that has been characterized by the involvement of new actors—numerous sub-state and non-actors, ranging from rebel groups and banditry to paramilitary groups, have redefined the way states have answered new conflict variables, which can be linked to a shift from interstate to intrastate conflicts. Accordingly, the narrative on the evolution of conflict is also evolving to include new "predatory social conditions" that challenge states to find proper ways of answering to these new challenges—for example seen in GWI's focus on ex-combatants. [16] The new war paradigm has led to the apparition of "military entrepreneurs" that have complicated the understanding of the new conflict variables, where the evolution of armed "violence" and

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[13] Ibid.

[14] Jennifer Dabbs Sciubba, *The Future Faces of War: Population and National Security* (Santa Barbara, CA: ABC-CLIO, 2011), 162.

[15] United Nations Environment Programme, *From Conflict to Peace Building: The Role of Natural Resources and the Environment* (February 2009), 22.

[16] Mary Kaldor, *Old and New Wars* (Cambridge: Polity Press, 2007), 113.

both "economic" and "political" factors are becoming linked and often interdependent on one another.[17]

This evolution means that both state actors and practitioners in the field of conflict must learn new ways by which the prevention of conflict can be best understood and addressed. It is in this new conflict narrative that GWI proposes a strategy focused on *water for all by demobilized forces*. GWI's strategy is outlined in four pillars, known as *GWI added value*.
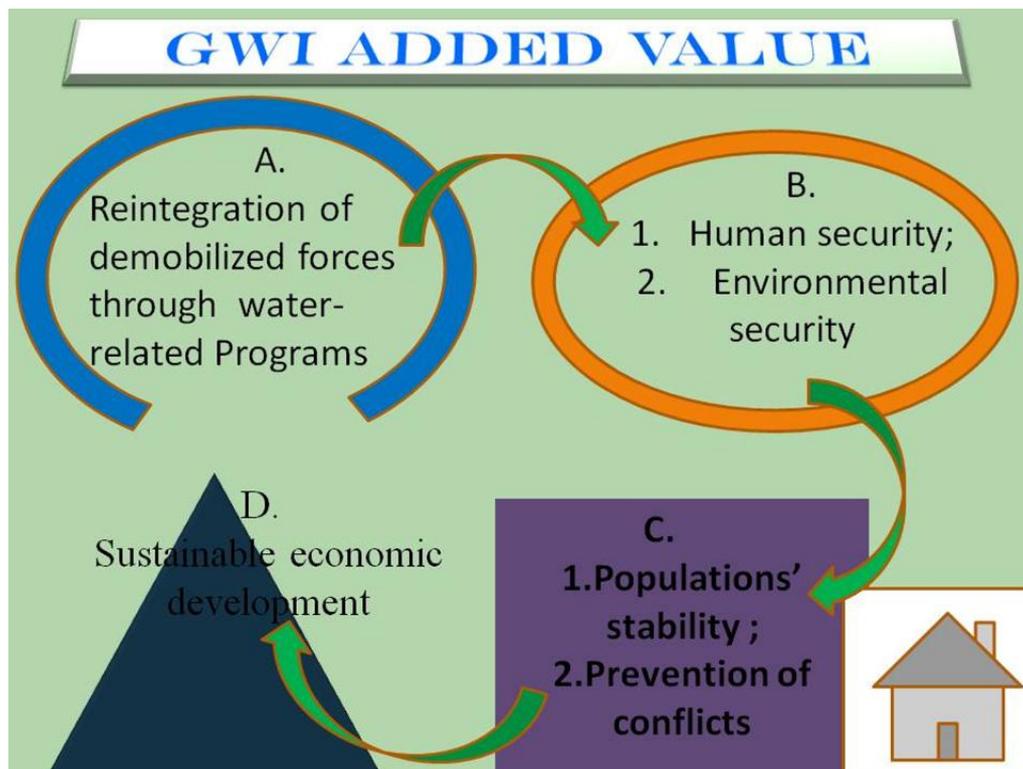
Pillar A: reintegration of demobilized forces through water related programs underlines the need to understand the process of bringing ex-combatants back into civil life and addresses GWI's focus within the DDR process, namely the reintegration phase. *Pillar A* entails that a quintessential attribute of a successful reintegration phase stems from the ability of stakeholders to grasp the nature of what originally drove people to take up arms. One theory that has been formulated around so-called "vertical inequalities" is that of "greed and grievances," which people use as motives to join militias and/or rebel groups.[18] This aspect of "greed and grievances" involves a rationalist approach that presents a structural problem,

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[17] Herfried Münkler, *The New Wars* (Cambridge: Polity Press, 2005), 49.

[18] See for example Paul Collier and Anke Hoeffler, "Greed and Grievance in Civil War," *Oxford Economic Papers* 56 (2004), 563-595; Paul Collier, Anke Hoeffler, and Mans Södderbom, "On the Duration of Civil War," *Journal of Peace Research* 41 (2004), 253-273. In their original research, Collier and Hoeffler propose that "greed" is a basis for conflicts; rebels act on self-interested material maximization to initiate conflicts. Collier's main argument is that grievances have become a trademark for civil wars where an abundance of natural resources is present along with important economic gains. According to Collier, this presence of natural resources creates grievances, which, in turn, are likely to result in rebellion and violence.

which often leaves out many reasons that lead people to engage in violence in the first place.[19] These reasons are multi-causal with multifaceted forms of grievances—societal, economic, political, and cultural—as conflict triggers.

A focus on the macro level helps to explain the reasons for the outbreak of conflict and to analyze the importance of demobilized forces in the transformative narrative of conflicts. The particularity of so-called "horizontal inequalities" allows development of GWI added value, which can be all encompassing of the multitude of "vertical" and "horizontal" variables that are often overlooked in the reintegration phase, but become salient in the ex-combatant discourse.[20]

Given these "horizontal inequalities," the grasping of historical grievances and of the best reintegration process requires a deep analysis, not only of the combatants, but also of their political, societal, economic, and cultural environments as well as their interaction within their ethnic group and society as a whole. It is rarely the case that a conflict is solely driven by what is too commonly categorized as a "resource conflict." Access inequalities can become a driving factor in shaping a permissive opportunity structure for sustaining hostilities with an impact on duration, intensity, and character of the conflict. Hereof, conflict can create predatory behaviour and conditions that can lead to a vicious circle, and thus prolongation of the conflict, which can further weaken the structure of the state.

In the case of armed groups, combatants joining these groups, and the groups alike, can have an incidence on natural resources that are necessary to recruit and sustain their activities, often at the detriment of local communities. The impact on the population fuels the conflict circle as displaced civilians may be driven to take part in predatory behaviour themselves in order to survive and/or take revenge. Furthermore, these behaviours are often exacerbated by weak state structures that present an opportunity for rebellion to gain strength that allows for opportunity structure.

Programs for the reintegration of ex-combatants should be inclusive of these variables in order to reach optimal results. Research has shown that conflicts, seen under a multi-causal lens, are never static and are a reflection of a current paradigm that evolves over time. It is unlikely that both "greed and grievances" are absent from conflicts; however, explanations can be found together with other variables.[21]

Having understood these variables, the goal of GWI added value is to provide solutions to existing structures of reintegration within a model of DDR in a natural resource—water—

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[19] Jon Barnet and Neil Adger, "Climate change, human security and violent conflict," *Political Geography* 26 (2007), 643.

[20] Frances Stewart, "Crisis Prevention: Tackling Horizontal Inequalities," *Oxford Development Studies* 28 (2000); Frances Stewart, "Horizontal Inequalities: A Neglected Dimension of Development," *QEH University of Oxford,* Working Paper no. 81 (2002). Stewart suggests that "in every major conflict there is an interaction between economic, political and cultural factors, with group perceptions and identity (normally historically formed) being enhanced by sharp group differentiation in political participation, economic assets and income and social access and well-being." The latter encourages practitioners to consider a horizontal and a vertical approach to conflict resolution and reintegration process.

[21] Christopher Cramer, "Does Inequality Cause Conflict?," *Journal of International Development* 15 (2003), 408-409; Stewart, "Crisis Prevention."

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setting that can achieve sustainable economic development. Additionally, it provides solutions that are an integral part of the fundamental elements of both human and environmental security. It is important to note that the DDR process in itself is the initial step that demonstrates a state's willingness to move beyond the conflict stage into a post-conflict reconstruction. GWI's approach starts at the reintegration phase of DDR, which aims to provide ex-combatants with means of reintegration into civil life in order for them to become citizens who contribute to their community's economy.

Two important aspects form *pillar B: human security and environmental security* within this reintegration process. The emergence of new intrastate conflict catalyzes the importance of leaders and practitioners to assess threats to environmental security and to recognize iit having the possibility to drive nations into conflict. As mentioned previously, conflicts are never mono-dimensional and, in this respect, GWI presents water not only as a means of reintegration for ex-combatants, but also as a means to link overarching issues that are related to water and sanitation, environment, and water and food issues into *pillar C: population stability and prevention of conflicts*.

Within the GWI added value model, environmental protection and water security can be linked to situations of urgency, especially in fragile areas of ongoing conflicts or in post-conflict phases. In practicality, environmental security seeks the answer through its inverse—environmental insecurity. [22] Stress resulting from environmental insecurity heightens the conditions that make conflict more likely and often acts as determinant source of conflict, which can be the core cause of conflict multiplier or even shape the nature of conflict. Similarly, water resource management becomes a very sensitive matter for both state and non-state actors.

Therefore, conflict prevention and conflict management in water allocation have to become "integral parts of water policy in countries that are directly affected by water security" and by extension, to water insecurity.[23] The latter encompasses water stress as consumption exceeds ten percent of supply and water scarcity directly linked to human and natural phenomenon. Climate change, water deficits, and insecurity pose the threat of future weakening of the post-conflict situation if not properly addressed. Being part of a DDR roadmap, such factors can further exacerbate aspects of "horizontal inequalities" in terms of poverty, livelihood, weakened state structures, and migration.[24]

Human security is to be looked through a multi-causal lens that includes "vertical" and "horizontal" factors. The DDR process comes with its load of difficulties that stem from ex-combatants' previous activities and from the population as a whole in awaiting security improvement. The idea is that, with these programs, post-conflict settings do not become a so-

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[22] Jon Barnett, *The Meaning of Environmental Security: Ecological Politics and Policy in the New Security Era* (London, UK: Zed Books, 2001), 8-9.
[23] Takahashi Kazuo, "Globalization and Management of Water Resources: Development Opportunities and Constraints of Diversified Developing Countries," *Water Resources Development* 17 (2001), 485.
[24] See Robert Kaplan, *The Coming Anarchy* (New York, NY: NY Vintage Books, 2000), 20. Kaplan has referred to the environment as "the national security issue of the early twenty first century" where water presents "a classic case of how environmental disputes fuse with ethnic and historical ones" is likely to be the root of war.

called "hotbed" for re-escalation, thus leading to more insecurity. Within the human security paradigm, two concerns are outlined: one, the concern for ex-combatants to gain employment in order to facilitate civilian reintegration; two, ensuring that ex-combatants do not fall into criminal activities through the use of their skills as "violence entrepreneurs," which is likely to have repercussion among the population.[25]

GWI proposes to palliate these threats by implementing, in cooperation with all national and local stakeholders, water-related programs for reintegration that generate employment of ex-combatants in activities that are beneficial to the community, but also to the overall development of a country. Having established some of the components to human security, GWI defines it as a paradigm for understanding global vulnerability and individuals' susceptibility. The proper implementation of human and environmental security could provide answers to states' challenges in addressing viable and lasting DDR processes, with the endgame being the achievement of *pillar C: population stability and prevention of conflict.*

Pillar D: sustainable economic development is the central pillar to the GWI added value model and resides in the role played by ex-combatants in their ability to fully reintegrate into civilian life and gain acceptance among their peers. Water presents the intrinsic qualities of GWI added value to the life of communities that most benefit from its development. Simply put, GWI added value is thus part of a whole and a willingness to achieve positive change in breaking the circle of violence and conflict once and for all.

The four pillars of the model cannot be applied independently without resulting in a domino effect, but represent a blueprint that can lead to the improvement of socioeconomic conditions for all parties. In similar fashion, interconnectedness between each pillar requires careful planning and advising with all stakeholders. Shortcomings in *pillar A* would prolong human insecurity and environmental insecurity, which, in turn, can contribute to population instability and conflict prolongation.[26] Similarly, shortcomings in *pillar B* are likely to result in the increase of ex-combatants rejoining the rebellion. The lack of sustainable economic development in *pillar D* would result in a triggering effect where the DDR process failed to achieve its objectives.

D.   *Suggestions to the model*

As argued in the United Nations' *Integrated DDR Standards*, a post-conflict situation—in which DDR usually takes place—can often be "characterized by insecurity and lawlessness, poor or badly functioning economies, and a lack of social services and social cohesion."[27] A program similar to GWI initiative will have to keep particular characteristics and contexts of

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[25] Michael Brzoska, "Embedding DDR Programmes in Security Sector Reconstruction," *Security Governance in Post-Conflict Peace Building* (Geneva, Switzerland: Geneva Centre for the Democratic Control of Armed Forces, 2005), 99-100.

[26] As cited by the World Bank, "a structured DDR process, which demobilizes combatants in stages and emphasizes their ability to reintegrate into society, may reduce the risk of ex-combatants turning to violent crime or rejoining rebel groups in order to survive." World Bank, *Breaking the Conflict Trap* (Washington, DC: World Bank, 2003), 159.

[27] UN-Water, *Water: A Shared Responsibility*, level 2: 1.

that situation in mind before proceeding to actual implementation. As put forth by the UN, there is a possibility that violence could flare up again in the immediate post-conflict period as "putting right the political, security, social and economic problems and other root causes of war is a long-term project."[28] One of GWI's objectives is to increase human security—such reintegration efforts should therefore be "based on respect for the principles of international humanitarian law and promote the human rights of both programme participants and the communities into which they integrate."[29] Subsequently, mechanisms should be put in place to minimize possible reprisal, stigmatization, or discrimination of ex-combatants. It is therefore of particular importance that local customs and traditions are understood as well as the social fabric of a country. Only when these mechanisms can be ensured, will there be a successful reintegration by ex-combatants using water-related programs.

As argued throughout this chapter, the process of reintegrating ex-combatants is related to rebuilding both human and environmental security, which, in fact, cannot be achieved without a fifth major contributing actor, namely the state. Failure to gain legitimate and concerted efforts on the part of the state actor cannot in itself present a sustainable option for the reintegration of ex-combatants nor does it offer any chance for the proper conduct of long-term employment opportunities and development of projects in the field of water resource management.[30] The state, with its monopoly on violence and democratic institutions, is the appropriate and safer environment for ex-combatants to reconcile with other members of the community. Research suggests that "success" in the reintegration of ex-combatants is "due less to any specific blueprint from government or plans drawn up by local politicians than to the approach perfected by the prisoners themselves."[31]

The state is responsible for ensuring special care in the reintegration programs for female ex-combatants and ex-child soldiers as well as disabled ex-combatants.[32] Given the fact that conflicts do not affect women and men the same way, GWI's programs will have to take into account "horizontal inequalities" in terms of social, political, cultural, and economic access that are gender specific and will thus vary from country to country and region to region. Child soldiers and the disabled will also need to be reintegrated into civil society and will require a specific approach tailored to them. The GWI added value model and water-related programs promote the all-inclusive variables that can create favourable environments for reintegration and reconciliation of all ex-combatants.

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[28] Ibid., 6.

[29] Ibid., 9.

[30] Bill Rolston, "Demobilization and Reintegration of Ex-Combatants: the Irish Case in International Perspective," *Social & Legal Studies* 16 (June 2007), 274. Looking through literature on DDR process Rolston underlines that "political will, as has been found in DDR programmes worldwide, is the chief criterion for success."

[31] Ibid,. 275-276.

[32] Kees Kingma, "Demobilization of Combatants After Civil Wars in Africa and Their Reintegration Into Civilian Life," *Policy Sciences* 30 (August 1997), 161. Studies show that too often reintegration fails to reflect the reality of female ex-combatants as well as for child soldiers. In this prospect, GWI added value needs to take into account the fact that "DDR programs generally take too little specific consideration of female ex-combatants, their children and the wives of ex-combatants. Women have usually acquired new roles during wars, and are often expected by men to return to their traditional roles. Reintegration creates tensions."

IV.   The reintegration of demobilized forces on the National Planning Agenda

A.   *Introduction*

This chapter calls upon members of government and their appropriate ministries to make water and sanitation policies a top priority on the National Planning Agenda (NPA). The chapter is divided in two sections—the first section presents a purely academic assessment of ex-combatants' lives prior to demobilization. The second section outlines four sub-sections that present GWI's proposed strategy of *water for all by demobilized forces* and answers the question of why the reintegration of demobilized forces should be a priority on the NPA. Aligning NPA policies with the mandate of the Millennium Development Goals (MDGs) is essential to stability and socioeconomic development. Bridging the divide between the NPA and the MDGs represent an even greater responsibility and a mark of trust on the part of states that commit themselves to attaining these goals.

The end of several armed conflicts in recent years has created opportunities to redirect resources from the military to development purposes. In turn, this can offer the creation of further opportunities for sustainable peace and human development. The integration of demobilized forces is closely linked to security issues as its impact depends largely on how the ex-combatants are able to reintegrate into civilian life. This reintegration is not only a social process, but an economic one as well.

It is important to understand where initiatives fit in the country's social fabric, given that reintegration of ex-combatants into civilian life is integrally connected to its wider socioeconomic development. Therefore, initiatives for the reintegration of ex-combatants should essentially be community-focused in order to provide "peace dividends to conflict affected communities with a view to neutralizing potential triggers of armed conflict and also facilitating effective reintegration of ex-combatants."[33] The perception of the wider population on the ex-combatants is thus fundamental for their success in reintegration efforts and can become part of "social security," stability, and economic development. The willingness of communities to accept ex-combatants will depend largely on their actions within those communities during the war—for example, there are possibilities that some of these combatants could face retaliation. Another example within reintegration efforts are the challenges ex-combatants can face due to "their unfamiliarity with traditional practices" within their community—this group could "feel alienated and [could be] perceived as strangers because of their newly acquired cultural attitudes."[34]

Most rural communities often centre on subsistence farming and cattle herding. However, these rely heavily on the availability and accessibility of natural and human resources, including "fertile farmland or grazing areas and water, access to seed or cattle, labour, agricultural and pastoralist skills, and relevant local knowledge about, for example, seasonal

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[33] United Nations Development Program, *Sudan Disarmament, Demobilization and Reintegration Program.* (UNDP in Sudan, 2012).

[34] Julie Brethfeld, *Unrealistic Expectations: Current Challenges to Reintegration in Southern Sudan* (Geneva, Switzerland: Small Arms Survey, Graduate Institute of International and Development Studies, 2010), 33.

conditions, migration routes, and the management of plant and animal diseases." [35] These agricultural practices often play a significant role in the "social fabric of communities as well as in their economic survival."[36] One aspect in economic reintegration is thus to consider the existing norms in place within a community—if these are "disturbed, tensions can occur and could even escalate into open conflict."[37] Given that developing livelihoods is a long-term process, a necessity lies in such reintegration efforts to be regulated at the national level, provided this is "a national responsibility" on which depend the overall internal security and socioeconomic development.[38] However, it is important that reintegration initiatives involve local communities from an early stage to "help to prevent mistakes, increase the support of the community, and shape economic reintegration in a locally appropriate way."[39]

Regulation of reintegration efforts for ex-combatants at the national level, such as with GWI's concept, is significant because there are numerous challenges to conquer before its implementation can be called successful—including "a combatant's reluctance; difficult terrain; inadequate logistics; insufficient staffing; intervention by political leaders of armed groups; insecurity and risk." [40] These programs can thus not succeed without careful coordination at both the local and national level. The reintegration of ex-combatants within a national strategic plan should be prioritized, because then a credible and authoritative national institution can be ensured to plan and implement projects for this group.

It can be said that "DDR is an important and necessary part of the peace consolidation process," because reintegration initiatives can neutralize potential triggers of armed conflict and facilitate the effective reintegration of ex-combatants.[41] Therefore, coordination of such long-term efforts on a national level is essential as its level of success depends on having sufficient funds to complete the implementation of the programs and to provide for contingencies in a flexible way. Only then can dividends of peace be secured and resurgence of conflict can be prevented.

Stakeholders ought to verify whether or not the NPA makes reintegration of demobilized forces a priority and the extent of additional national and international efforts that are made to stop and prevent conflict re-escalation. The necessity of understanding the terms of what practitioners are faced with while analyzing conflict and post-conflict environments are explored. From 1989 onward, nearly all peacebuilding operations have been part of a DDR operation where, as outlined by the United Nations, "reintegration is the only common denominator among DDR programs," which has become the focus of GWI.[42]

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[35] Brethfeld, *Unrealistic Expectations*, 26.
[36] Ibid., 27.
[37] Ibid.
[38] Kingma, *Post-war Demobilization,* 6.
[39] Brethfeld, *Unrealistic Expectations*, 30.
[40] United Nations Department of Peacekeeping Operations, *DDR in Peace Operations: A Retrospective* (New York, NY: United Nations, 2010), 9.
[41] Brethfeld, *Unrealistic Expectations*, 36.
[42] *Cartagena Contribution to Disarmament, Demobilization and Reintegration* (Cartagena, Colombia, 2009), 6-17.

Furthermore, GWI embraces the third approach of DDR as cornerstone elements of its water-related programs. Reintegration is therefore not a standalone part of DDR, but an interrelated component of a sequence of events that need to take place in order to move out of the conflict circle and into a recovery phase for society.[43] It should be noted that DDR process can often work in unison with the Security Sector Reform (SSR) as the recovery phase often involves the reintegration of ex-combatants in civilian life. [44]

B.   Assessing root causes: life prior to demobilization

The following key points investigate the importance of why reintegration of demobilized forces is to be a high priority on the National Planning Agenda in post-conflict countries. These points put in perspective the role that ex-combatants played in their previous conflict environment, along with their role in the post-conflict environment. When developed alongside the GWI added value model, they indicate a pragmatic approach to answering the question of why the reintegration of demobilized forces needs to be a priority on the NPA. GWI believes that its approach in water-related programs tailored for ex-combatants can become an integral part of a win-win vision for and by all stakeholders within the NPA.

As mentioned in the previous chapter on *pillar A* of the GWI added value model, the root causes should be observed through a multidimensional lens that takes into account "horizontal" and "vertical" variables as to why individuals choose or are forced to join rebel groups. These points, in order to be assessed with the most efficiency, should be fully taken into account in the initial drafting of the NPA.

b.1.   Defining ex-combatants:

The literature on who is and who is not a combatant varies. As the nature of conflicts has changed over time, so has the nature of the people who take part in them. Previous traditional warfare terminology referred to "demobilized soldiers," but the narrative of conflict has evolved to include more and more civilians as a new variable of conflict, thus rendering the term "soldier" no longer suitable.[45] The issue of today's DDR is that many civilians who had taken part in fighting activities do not go through the demobilization process, hence the use of "ex-combatants" becomes more suitable. Similarly, the definition of who fits the frame of "ex-combatant" is country-specific and will vary according to a country's own "political dimensions, social climate, and social status of the ex-combatants."[46] As previously put, GWI

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[43] World Bank, *Demobilization and Reintegration of Military Personnel in Africa: The Evidence from Seven Case Studies* (Washington, DC: World Bank, 1993).

[44] The UN OSAA report on "Linkages Between DDR and SSR" was presented at the Second Conference on DDR and Stability in Africa from 12 to 14 June 2007. It underlined the importance of "synergies between DDR and SSR [as] essential if peace, stability and development are to be achieved in fragile states."The post-conflict SSR differentiates three primary goals: (I) to rebuild and/or reconstruct the security sector with the inclusion of demobilized forces and to ensure the DDR of all actors.; (II) to ensure the state's ability to regain security authority in the country under democratic oversight demanding transparency of security forces; (III) to ensure that security can be maintained throughout the state by establishing good governance structures.

[45] Eugenia Date-Bah, *Jobs After War: A Critical Challenge in the Peace and Reconstruction Puzzle* (Geneva, Switzerland: International Labour Organization, 2003), 77.

[46] Ibid.

focuses its attention and efforts on the implementation of the last part of DDR, the reintegration phase.

b.2. Ex-combatants: willing or forced participants?

Dozens of case studies of ex-combatants throughout Africa have been catalogued in order to frame the reasons that push people to join or force to join rebel groups. Research has shown that there are a variety of reasons leading people, and especially young people, to participate in violence; some joined out of anger and insecurity, others for prestige or ideology, some were forced to join, while others were simply seeking an income-generating activity to get out of poverty.[47] Practitioners are faced with added difficulties when trying to implement proper reintegration programs. Again, there is no single solution. Each country demands approaches that are tailored to its socioeconomic, political, and cultural dimensions. GWI is dedicated to take these variables into account in order to ensure optimal conditions for reintegration initiatives. Accordingly, GWI encourages members of government to include these variables in their NPA.

In the case of ex-combatants, a very thin line exists between victims and perpetrators.[48] Often, upon returning home, ex-combatants are labelled as criminals and are shunned away from social reintegration. These "labelling" and "name branding" fallacies must be avoided if reintegration truly aims at being all encompassing. GWI added value through water-related programs proposes that cooperation between demobilized forces and local population fosters stability, which can contribute to human and environmental security and sustainable economic development.

b.3. Labelling of ex-combatants: victims or heroes?

The dichotomy on labelling ex-combatants presents two discourses: on the one hand, ex-combatants are seen as heroes, where the issue becomes a moral one that is now part of the "nation's historical identity."[49] The role of ex-combatants in past political and/or social conflict can serve as a basis for the peacebuilding process and the "liberation narrative" of the country.[50] On the other hand, ex-combatants are seen as victims that are "needy, helpless and potentially dangerous: antisocial, roaming from the countryside to the cities, idling on the streets, prone to drunkenness, promiscuity and crime, and incapable of engaging productively in the economy."[51]

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[47] Peter Uvin, "Ex-Combatants in Burundi: Why They Joined, Why They Left, How They Fared," *Multi-Country Demobilization and Reintegration Program*, Working Paper no. 3 (October 2007); Rachel Brett and Irma Specht, *Young Soldiers: Why They Choose to Fight* (London, International Labour Organization, 2004).

[48] Koen Feyter, *Out of the Ashes: Reparation for Victims of Gross and Systematic Human Rights Violations* (Antwerp, Belgium: Intersentia, 2005), 107.

[49] Lalli Metsola, "'Reintegration' of Ex-Combatants and Former Fighters: A Lens into State Formation and Citizenship in Namibia," *Third World Quarterly* 27 (2006), 1123.

[50] See for example Lalli Metsola, *The Struggle Continues? The Specter of Liberation, Memory Politics and 'War Veterans' in Namibia*, edited by Tobias Hagmann in *Negotiating Statehood: Dynamics of Power and Domination in Africa* (Oxford: John Wiley & Sons, 2011), 66-67. This is an example that was vivid in the reintegration of Swapo ex-combatants in Namibia. In this case, "liberation narrative" was adopted by Namibia in the Veterans Act as a frame for "remembering and voicing memories but also for forgetting and silencing."

[51] Metsola, "'Reintegration' of Ex-Combatants and Former Fighters," 1123.

This kind of rhetoric is not a standalone issue, but fits into a narrative that is often shared by part of the population and authorities alike. In this sense, GWI has optimized its added value to encompass the civilian and the ex-combatants variable in order to remove the victimization stigma felt by ex-combatants through programs that foster reintegration and reconciliation.

GWI programs through water-related employment would help to alleviate the social stigma and help "pacify" ex-combatants, which adds value to the long prospect of stability, democracy, and peace, but also to the added value of human security.[52] Reintegration of ex-combatants fits the prospect of long-term sustainability that profits ex-combatants as being seen as an integral positive part of society, but also adds to the benefit of all by lessening the feeling of insecurity, crime, and negative effects on the economy of post-conflict countries. In this respect, it is important for practitioners and all stakeholders to grasp the post-conflict trauma that often overwhelms ex-combatants and find the appropriate measures to ensure that the once heroes do not become victims—and the victims can regain a sense of pride as contributors to society. GWI firmly believes that water-related programs can help ex-combatants regain their place among civil society, but acknowledges that this process should also involve the local population for the effectiveness of the programs.

b.4. *Gender and ex-combatants:*

The role of men and women varies in conflict and the reintegration of demobilized forces should take such gender specifics into account. It is the case that women in DDR processes often find themselves as indirect beneficiaries of DDR programs. In African societies, the label of ex-combatants often carries an even greater societal burden for women. Therefore, gender perspectives need to be implemented in NPA and members of governments should make sure they provide female ex-combatants with socioeconomic opportunities for reintegration. There is hope to believe that women's entrepreneurial skills through water-related programs can reduce the gender inequalities in DDR programs and enhance reintegration. Similarly, strategies should also need to be put in place for demobilized child soldiers and demobilized disabled people.

C. *GWI's strategy as a priority for the NPA*

Having understood the reasons that can lead people to join rebellions, this section wants to draw attention to a major reason for putting the reintegration of demobilized forces as a priority on the National Planning Agenda in post-conflict countries. The failure of properly reintegrating ex-combatants is likely to create a cause-and-effect mechanism in which ex-combatants, along with climate change, can further exacerbate the leading factors of human and environmental security. Cycles of violence and conflict can be perpetuated when "chronic poverty, weak states, migration and livelihoods" are not addressed.[53] The following points highlight GWI's strategy in regards to the major contribution demobilized forces will have when set as a priority on the NPA:

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[52] Ibid., 1124.

[53] Jon Barnet and Neil Adger, "Climate Change, Human Security and Violent Conflict," *Political Geography* 26 (2007), 43.

c.1. Economic reintegration through water-related programs:[54]

GWI's suggested strategy is to exploit the enormous potential of demobilized forces that have made war and learned strategies, which justifies their determination with much courage. GWI stresses that this is proof of ex-combatants' ability to obey, to work in teams, and acquire training within a new strategic professional orientation in order to promote socioeconomic cohesion, which, in turn, can reduce human and environmental security threats.

The goal is to ensure that all levels of ex-combatants receive equal access to reintegration. For example, in Uganda, ex-combatants had a clear lack of education and skills, and it was found that no plan of action had been undertaken to improve them. These ex-combatants found it very difficult to take part in the reintegration programs.[55] Processes of reintegration within the NPA should include provisions for education access for ex-combatants who have not finished school. They should also establish vocational training programs to enhance employment opportunities.[56] To this end, economic reintegration through water-related programs presents viable solutions to the issues listed above.

c.2. The role of water-related programs for the prevention of environmental degradation:

The reintegration of ex-combatants also has the potential long-term benefit for stopping environmental insecurity. Many of those who had joined rebel groups, in order to sustain their activities, have engaged in illegal activities, which can add stress to an already fragile environment. Forced migration of populations due to conflicts not only puts further stress on the environment, but on overpopulated areas as well—thus adding another link for conflict. GWI believes that human and environmental stability and security can only be acquired if quality programs tailored for social and economic reintegration of ex-combatants are prioritized on the NPA as well as by international policymakers. Since environmental security is closely linked to human security, the reintegration of demobilized forces should indeed be a priority on the NPA.

Ex-combatants may be the first population segment to revolt and provoke social conflict if their socioeconomic conditions are not improved. GWI's strategy of environmental security cannot be achieved without including ex-combatants in water-related programs to make water accessible to all segments of a given population. In doing so, GWI builds on a mutual relationship between the environment and the population by establishing training programs that would meet the objectives of the NPA in terms of human and environmental security.

c.3. Sustainable DDR programs:

▪ *Creating success:*

There is not a "one size fit-all" solution to sustainable reintegration. Through careful consultation of the NPA, local, regional, national, and international stakeholders have determined four strategies to guarantee the proper implementation and tailor a curriculum that

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[54] See Nat Colletta et al., *Case Studies in War-to-Peace Transition: The Demobilization and Reintegration of Ex-Combatants in Ethiopia, Namibia, and Uganda* (Washington: DC, World Bank Publications, 1996). These variables are based off the reintegration process in Ethiopia, Namibia, and Uganda.

[55] Ibid., 261.

[56] Ibid., 59.

can best prepare ex-combatants to return to civilian life. These four income-generating areas require a lengthier discussion that is crafted for the specifics of each of the DRR programs, which can be outlined as followed:[57]

- Skills training for ex-combatants;
- Use of placement units that build the link between training and employment opportunities;
- Income generating activities that could start during the training period and work with governmental help along the NPA goals;
- Resettlement schemes that facilitate ex-combatants' return but are done in a manner that espouses the learned skills (e.g. do not resettle a person with irrigation skills in a soil prone to poor agriculture, do not resettle fishermen in water polluted areas, etc.).

GWI believes that its water-related programs lend themselves to a variety of possible job training in water-related avenues from forestry and fisheries to agriculture and health services.

▪ *Avoiding pitfalls:*

As research has shown, there are several variables that can best prepare DDR programs from failing. Some of recommendations are summed up here:[58]

- GWI acknowledges that the failure to present ex-combatants with a role in the post-conflict narrative can increase the likelihood that the latter will return to former activities;
- GWI recommends preventive measures that prevent ex-combatants from dropping out of DDR programs and which can become a priority in order to achieve the guidelines set forth by the NPA and the MDGs;
- GWI warns against the branding of vulnerability of ex-combatants through social stigma where many feel disconnected from the new reality of post-conflict economy and society;
- GWI water-related programs should bring out the potential and skills of ex-combatants in the economy rather than through a bribe;
- GWI is aware that ex-combatants leaders might want to turn the DDR process in a personal political gain. Similarly, local and/or regional leaders might want to be recognized as having facilitated the demobilization process and might expect something in return;
- GWI stresses that the failure of reintegration can lead to future security issues, which, in turn, threaten peace and security stability;
- GWI realizes the gendered character of many DDR programs, but also the importance of gender in reaching the MDGs, especially the ones on gender

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[57] Ibid., 159-162. The book presents a detailed account of ex-combatants reintegration as part of a national agenda. It also underlines the various specificities and difficulties encountered whilst reintegration phase.

[58] See for example David Last, "The Human security Problem-Disarmament, Demobilization and Reintegration" in *A Source Book on the State of the Art in Post-Conflict Rehabilitation*, unpublished report prepared by PRDU for the Regional Socio-Economic Development Programme for Southern Lebanon (University of York, 1999); see also Mark Knight and Alpaslan Ozerdem, "Combatants in Transitions from War to Peace Guns, Camps and Cash: Disarmament, Demobilization and Reinsertion of Former Combatants in Transitions from War to Peace," *Journal of Peace Research* 41 (2004), 506; Charlotte Watson, "Socio-Economic Reintegration of Ex-Combatants: What Role for the European Union?" *Reintegration Briefing Paper—1.1 International Alert* (2009).

equality. However, GWI wants to avoid a repeat of past mistakes and advocates that water-related programs must be developed in consultation with both authorities and communities in order to avoid further divide between men and women.

One of the main complaints that arise from reintegration comes from resentment of communities that feel discriminated against and express grievances for the preferential treatment ex-combatants receive. Therefore, it is important that social trust must be re-established between ex-combatants and their communities.[59] To address the social trust issue, GWI has suggested in the past that social trust could be bridged by bringing both civilian and former military officers and ex-combatants together. This could be a starting point for considering what needs to be done in water-related programs and the reintegration of demobilized individuals in order to ensure populations' stability and security of natural resources, which they all ought to share, thereby thus preventing conflict.[60]

c.4.   Benefits of employment as a long-term vision:

GWI reiterates its strategic vision for water-related programs and wants to remind the readers of the preponderant role played by water policy as one of the most strategic imperative for the African continent. Water is a commodity that could lead to conflicts that have become exacerbated by the impact of climate change over water access and food security. Given the role that water plays in human and environmental security, the GWI training of ex-combatants in water-related programs would have benefits in:

- Ex-combatants returning to active employment can again contribute to the livelihood of his/her family;
- The repetitious practices and codes of conduct, coupled with a degree of power over the territory and its inhabitants, contribute to a sense of identification with the party and the government;
- A sense of belonging and recognition are created in which "government employment facilitates the continuation of a life-historical narrative built around participating in the liberation struggle;"[61]
- Employment creates a sense of belonging and is an indicator of citizenship.

These benefits present a strong incentive for governments to consider the integration of GWI's proposed strategy in their NPA.

D. Cautiousness regarding the NPA

Reintegration as part of the NPA is not a *fait accompli*, but part of a long-term effort of rehabilitation and reconciliation. Efforts of reintegration have been "continually marred by 'misconduct,' such as people not taking up jobs, failing to perform, or trying to swap their position for better [money generating] jobs."[62] Furthermore, research continues to fuel debates on whether or not ex-combatants should or should not fit the format of beneficiary groups.

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[59] Colletta, "The Transition from War to Peace in Sub-Saharan Africa," 8.
[60] Ndaruzaniye, *Water for Conflict Prevention*, 29-30.
[61] Metsola, "'Reintegration' of Ex-Combatants and Former Fighters," 1027.
[62] Ibid.

What is clear in the case of DDR is the fact that ex-combatants often agree to demobilize "if at least some of the reasons that led them to armed conflict were addressed in the post-war recovery process."[63] This can become even more problematic when many of their numbers do not fall within the DDR process, and many self-demobilized carry resentment with them of having been left out by their commanders or the state.

GWI's words of caution demand that states that have made human and environmental security an objective of their NPA abide by their promises. While the NPA is the first step in a roadmap for bringing about successful reintegration of ex-combatants, along with assessing states' urgent needs in terms of human and environmental security, GWI insists that members of government, with the support of civil societies, must be at the forefront of endorsing initiatives that would ensure the proper implementations of the NPA.

This chapter outlined that the reintegration inscribed in the NPA is not a monolithic process. It should integrate variables that take into account the conditions of pre-conflict and post-conflict environment along with all the variables that characterize a functioning state. Once studied and understood, these variables can increase the feasibility and the effectiveness of reintegration programs as required in NPA. GWI added value through water-related job creation and skill training presents an effective way for long-term solutions to enable sustainable peacebuilding and reintegration efforts. It is thus important to note that the significance in examining ex-combatants through multi-causal lenses represents the many layers that need to be addressed by GWI before it can even develop a program.

V.   The issue of water in African post-conflict countries

A.   Introduction

The scarcity of water is a relevant problem faced by many countries today. The use of water "has been growing at more than twice the rate of population increase in the last century, and […] an increasing number of regions are chronically short of water."[64] According to the United Nations, thirty-five percent of the world's population currently do not have access to safe drinking water and sanitation and it is estimated that fifty percent of the global population will be living in water-stressed regions by 2030. Many countries around the world are thus faced with increasing demands on insufficient water supplies, which are also related to, amongst other, issues such as population growth and accumulating demands on the world's arable land due to both increased urbanization and industrialization.

As water is rapidly becoming the most valuable global resource, due to drought and overuse in the upcoming decades, it has become clear that current issues centre around one dichotomy: viewing water as either a market commodity or as a human right. As put forth in a recent report on climate-induced migration and its linkages to environmental and human security by

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[63] Sultan Barakat and Alpaslan Özerdem, "Impact of the Reintegration of Former KLA Combatants on the Post-War Recovery of Kosovo," *International Journal of Peace Studies* 10 (Spring/Summer 2005), 32.
[64] International Decade for Action 'Water For Life' 2005-2015, *Water Scarcity* (Focus Areas: United Nations Department of Economic and Social Affairs, 2012).

the United Nations High Commission for Refugees (UNHCR), African states need to address several problems related to the growing issue of privatization.[65] There is a need to readdress the way Africa will approach climate change hazards and the issue of safe drinking water, considering that it is projected that the continent's population will reach 2.7 billion by 2060.[66] Additionally, there is also a need to assess whether or not water privatization provides an alternative solution for the improvement of exhausted water and sanitation facilities.

Generally speaking, water resources in Africa are widely scattered throughout the continent. While some regions receive more than enough water, others experience constant drought, which is the case in the Horn of Africa. The causes of water scarcity are varied. Some are natural and others are the result of human activity. On average, the population growth rate in Africa is about 2.4 percent, which results in an increase in water demands. This is mainly related to the development needs of the growing populations and, primarily, from the need to produce sufficient food to feed the increasing population. Other causes include climate change, land use, and water quality and management. There are insufficient resources to fully and effectively utilize Africa's resources, which can be considered the greatest cause for issues with water stress and scarcity on the continent.

The availability and accessibility of water resources on the continent will also play an increasingly important role in the recovery of livelihoods and economic development in post-conflict countries as they are "at risk of relapse into protracted conflicts because of water scarcity."[67] Water thus plays a fundamental role in the recovery and peacebuilding of a post-conflict situation, seen in the fact that there are increased numbers of ex-combatants who need to be reintegrated in society, but also with an often weakened and traumatized population. Countries emerging from a conflict need to restore access to basic water and sanitation services, which are at the source of basic development goals. Providing water services is a way that can help people return to their normal daily activities and can play a critical role in recovery efforts in the aftermath of conflict.

These variables, coupled with the growing effects of climate change, add another level to what GWI sees as a cause for human and environmental security. As it was mentioned in the previous chapters, water scarcity can lead to increased human and environmental insecurity. The following paragraphs are developed through variables that either have a direct or indirect causality to the issue of water in post-conflict countries. GWI advocates that good water governance and water education remains the primary entry point in bringing awareness to water-related issues.

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[65] Tamer Afifi et al., *Climate Change, Vulnerability and Human Mobility: Perspectives of Refugees from the East and Horn of Africa* (UNHCR Report no. 1, June 2012).

[66] Jerome C. Glenn, Theodore J. Gordon, and Elizabeth Florescu, *2012 State of the Future* (The Millennium Project, 2012); Karl Gernetzky, "Report on global economic outlook envisages high rate of growth in Africa," BD Live. August 30, 2012: Economy.

[67] Ndaruzaniye, *Water for Conflict Prevention*, 22.

History has showed that "water rationality" has prevented states from engaging in what are often seen as "water wars."[68] Water is the source for life. Water also carries with it the potential to drive states to conflict, for example through the desire to possess or control water as an instrument for war. Such causes are heightened by both human and environmental insecurity, where inequitable access to fresh water for local communities and degradation of the environment are likely to add extra stress on the state in terms of good governance.[69]

Over the course of history, water has been used "as a political or military target or tool [...] Water resources and systems are attractive targets because there is no substitute for water. Whether its lack is due to natural scarcity, a physical supply interruption or contamination, a community of any size that lacks sufficient fresh water will suffer greatly. Furthermore, a community does not have to lack water to suffer. Too much water at the wrong time can also lead to death and great damage."[70]

This chapter briefly outlines some of the components that fit GWI added value strategy in programs for demobilized forces and reintegration through water management. It is in this fast-paced and quickly evolving narrative that GWI focuses on two important African crises that are likely to impact the discourse on water in the years to come.

B.   *Depleting water and climate change*

Although a number of African governments have recognized the urgency of adaptation action, securing water should be their top priority. Climate change is anything but monolithic and its effects are far more reaching than simply reducing the climate change debate around temperature variations. While arguments within academia exist on the origins of climate change and global warming, GWI stresses that the need to find urgent answers to the growing water-related issues linked to climate change must be taken now rather than later. A growing population and "its many associated effects (e.g. urbanization, water pollution, and deforestation)" have resulted in increased pressure on water availability, which, in turn, has a direct impact on "our health, environment, and economic well-being."[71]

These growing concerns have been reported in the latest UNICEF report on safe drinking water and sanitation. The report indicates that "884 million people in the world still do not have access to safe-drinking water from improved sources, [with] Sub-Saharan Africa

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[68] Aaron Wolf, "Conflict and Cooperation Along International Waterways," *Water Policy* 1 (1998), 261-262. Historically, over 3,600 treaties have been signed over different aspects of water—145 in the 1900s alone. Caution must be used over the term "water wars" and Wolf's article presents a good historical and multidisciplinary analysis of the term.

[69] Extensive research was conducted in the following articles in the domain of the environmental and water challenges along with their incidence on conflict: Peter Gleick, "Water in Crisis: Paths to Sustainable Water Use," *Ecological Applications* 8 (August 1998), 571-579; Peter Gleick, "Water and Terrorism," *Water Policy* 8 (2006), 481-503; Ragnhild Nordås and Nils Gleditsch, "Climate change and conflict," *Political Geography* 26 (August 2007), 627-638; Kathryn Furlonga, Nils Gleditschbc, and Håvard Hegred, "Geographic Opportunity and Neomalthusian Willingness: Boundaries, Shared Rivers, and Conflict," *International Interactions* 32 (2006), 79-108.

[70] Peter Gleick, *The Water Conflict Chronology. In The World's Water 2004–2005: The Biennial Report on Freshwater Resources* (Covelo, CA: Island Press, 2004), 234–255.

[71] Bellie Sivakumar, "Climate Change Impacts on Water Resources Planning and Management: Scientific Challenges and Beyond," *Stochastic Environmental Research and Risk Assessment* 25 (May 2011), 584.

[accounting] for over a third of that number."[72] These alarming numbers have put the feasibility of the MDGs in jeopardy and make the target of halving "the proportion of the population without sustainable access to safe drinking water and basic sanitation" by 2015 hard to accomplish. [73] While the links between climate mitigation and adaptation are increasingly being recognized, future climate impacts are complex and difficult to predict. The past and current greenhouse gas emissions have already had adverse impacts on socio-economic development of poor nations. Yet, what should now be feared the most and seriously mitigated are climate-induced social and political conflicts related to water insecurity.[74]

C.   Post-conflict states

Hundreds of thousands of ex-combatants make the environment unliveable and unsustainable, adding further stress to already weakened state structures and traumatized populations that often times are faced with imminent food crises and food price volatility. These categories of people joined or were forced into armed groups for years, they made forests their sanctuary, cutting trees for wood-fuel, which, in turn, increased environmental stress, added to soil erosion, and polluted the ecosystem. Within the African context of human and environmental security and water, GWI also acknowledges the following variables:

c.1.   Water, violence, and conflict:
Based on research, there are several categories that characterize the role of water in outbreaks of conflicts:[75]

- Water as a complex resource:
  Water-related issues upstream can have direct repercussions anywhere along the downstream areas. Water is an integral part of the ecosystem. Therefore, interdependence creates factors that affect the whole environment. Additionally, water stocks vary according to the season of the year, the geographical location, and meteorology;

- Access to water quality:
  Water quality is not always a sign of a lack of water, but is often related to poor governance and the lack of resources, dedicated to proper water management and access to adequate "capital, technology, and know-how."[76] These are, in part, the result of weak state structures in areas, such as wastewater treatments, fisheries,

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[72] WHO/UNICEF, *Progress on sanitation and drinking-water 2010 update* (2010), 7.

[73] United Nations, *The Millennium Development Goals Report 2010* (New York, NY: Department of Economic and Social Affairs, 2010), 60.

[74] Valerie Ndaruzaniye, "Water Security in Ethiopia: Risks and Vulnerabilities' Assessment," *GWI Issue* 2 (2011), 2.

[75] Annika Kramer, *Water and conflict (Policy Briefing for USAID)* (Washington, DC: Adelphi Research, Center for International Forestry Research, Woodrow Wilson International Center for Scholars, 2004).

[76] Peter Gleick, "Water and Conflict: Fresh Water Resources and International Security," *International Security* 18 (Summer, 1993), 91.

forest management, use of pesticides in agriculture, and unchecked industrial activities;[77]

- Access to water quantity:

Reports by international experts show that water quantity is also a leading factor in disputes between upstream and downstream communities. Inevitably, the quantity of water used upstream by agriculture, irrigation, industries, and population has an impact on the quantity and quality of the water downstream. Conflicting issues are also present within different sectors and groups of the same community as, for example, farmers claim rights over the urban industries and one ethnic group claims their ancestral right to a river over another group.[78]

c.2. *Water and livelihood*

Water is a direct component in the livelihood of populations, but also in the balance of ecosystems, and is therefore directly connected to human and environmental security, especially in Africa. Water quality and/or quantity can fuel the circle of violence by forcing migration from rural areas to overcrowded cities, and also from arid areas towards wetlands, thus adding stress to water resources and tensions between communities.[79] One of the perpetuating factors of "the internal wars and conflict plaguing Africa, South Asia, and Latin America during the last decade, is poverty as a result of loss of livelihood, which are often caused or exacerbated by environmental degradation."[80]

c.3. *Water and migration*

Many scholars predict that environmental degradation resulting from climate change will have implications on human security variables, migration, and incidences on conflict.[81] Historically, water scarcity has always been a reason for migration, which, in turn, has the potential for tensions between local and arriving communities—this pressure is increased when scarce resources are at stake.[82]

Water availability will continue to be a contributing factor to migration, particularly in those regions "where compounding factors of poverty and vulnerability to natural hazards are present."[83] In fact, such pressures due to the effects of climate change will exacerbate and alter

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[77] Kramer, *Water and Conflict*, 5.

[78] UNESCO World Water Assessment Programme, *Water for People, Water for Life* (United Nations World Water Development Report, 2003).

[79] Alexander Carius et al., *Policy Brief on Water, Conflict, and Cooperation Issue 10* (United Nations and Environmental Security, 2004), 60-61.

[80] Leif Ohlsson, *Livelihood Conflicts: Linking Poverty and Environment as Causes of Conflict* (Stockholm: Sweden: Environmental Policy Unit, 2000), 1-2.

[81] See for example Rafael Reuveny, "Climate change-induced migration and violent conflict," *Political Geography* 26 (August 2007), 656-673; also Nils Gleditsch, Ragnhild Nordas, and Idean Salehyan, *Climate Change, Migration and Conflict* (New York: International, 2007) and reports on *Climate change 2007: The Physical Science Basis* and *Climate change 2007: Climate Change Impacts, Adaptation, and Vulnerability* (Geneva: Intergovernmental Panel on Climate Change, 2007).

[82] Nicol Alan, Yacob Arsano, and Joanne Raisin, *Prevention of Violent Conflict and the Coherence of EU Policies Towards the Horn of Africa: EU Policies and the Risk of Conflict in Ethiopia's Awash Valley* (London, UK: Saferworld, 2000), 60-61.

[83] UN-Water Decade Programme on Capacity Development, *Water Related Migration, Changing Land Use. and Human Settlements* (5th World Water Forum: Topic 1.2, 2009).

existing patterns of water availability and quality. This will have different impacts in rural and urban areas. For example, millions of vulnerable people in rural areas are expected to move to cities due to the fact that they are unable to secure livelihood and hope for a better future elsewhere.

c.4. Water and peacebuilding

Water as the source for life has the capacity to positively influence the reconciliation and the reconstruction process. In recent reports, the UNEP program has acknowledged the role of water as an important part in the steps of peacemaking, peacebuilding, and peacekeeping process.[84] Furthermore, water can "promot[e] human security at the local level, interregional cooperation [as well as for] peacebuilding and trust among countries."[85]

GWI strongly believes that post-conflict reintegration programs have the capacity to decrease the chances that conflict will occur in the future. The GWI added value model provides tangible opportunities in the development of water-related programs that add to the prospects of improved human and environmental security. Employment opportunities can bring long-term benefits that fit the sustainable vision of programs envisioned by GWI. To this effect, GWI stresses that coordination is required among all national, regional, and local stakeholders as well as among international organizations and NGOs.

VI. Concluding remarks

A. Proposing an Implementation and Monitoring Bureau

As addressed before, regulation of reintegration efforts at the national level, as suggested in GWI's concept, is of significant importance as there are numerous challenges that have to be faced before their implementation can be facilitated in a "practical, timely and cost-effective" manner.[86] These initiatives cannot succeed without the careful coordination at both the local and national level. GWI has put forth that priority should be given to the reintegration of ex-combatants within a national strategic plan in order for a credible and authoritative national institution to oversee, plan, and implement DDR efforts.

In GWI's proposal, the Implementation and Monitoring Bureau (IMB) could be an agency within the African Union (AU) that would be responsible for the coordination of reintegration efforts across its member states. It is intended that the IMB would be led by an official at the ambassadorial level and could offer a platform in which "the effectiveness and efficiency in the reintegration of ex-combatants through water programs" in post-conflict countries can be ensured.[87] Such an office would have an advising role to national governments as well as having the influence to shape domestic policies. It would thus be an overarching AU department that can oversee the implementation and coordination of water-related programs that are in line with transboundary environmental protection and water preservation and

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[84] United Nations Environment Programme, *From Conflict to Peace building*, 5.
[85] UNESCO, *Water in a Changing World* (World Water Assessment Programme, 2009), 308-309.
[86] Ndaruzaniye, *Water for Conflict Prevention*, 35.
[87] Ibid., 4.

security, which, in turn, can make a positive impact of both human and environmental security in post-conflict situations.

As noted before, a large part of human security is essentially tied to the access of natural resources and population's vulnerability to environmental change, which is both directly and indirectly impacted by human activities and conflicts. This interconnectedness between environmental and human security is thus one that cannot be overlooked and should therefore be seen as a paradox that cannot be seen separately. Environmental issues are often a source for not only social conflicts, but also for diplomatic disputes and sabotage as well. In the last decade, there have been numerous conflicts over water; for example, in Ethiopia:

- A three-year drought led to a widespread conflict from 2004 to 2006—the so-called "War of the Well"—over limited water resources, in which over 250 people were killed. The situation took a turn for the worse due to a fact that effective government and central planning lacked;[88]

- In 2006, there were conflicts over water and pasture in the Somali border region, in which over twelve people died and dozens were injured;[89]

- A conflict between communities on a disputed border over the ownership of a new borehole led to multiple deaths and injuries as well as an entire community being driven from their homes in 2009.[90]

The IMB could assess such conflicts in a more objective and general sense in order to find a common solution to the challenges posed. Of course, it continues to be important that local communities are involved and can have input in this process, which effectively underlines the significance of the Bureau as its overarching role would ensure a unified approach that can transcend borders.

The IMB would also be able to mobilize funding for development projects as well as ensure that these funds are used in an efficient manner. The institution would not only provide data and information to the countries involved, but also to the international community in order to communicate the effectiveness and necessity of development aid. In this way, the IMB would be a platform allowing to convey and to coordinate projects. It could also be a partaker that would collaborate with donors, agencies, and international organizations in post-conflict countries.

B.   *Pros and cons to GWI's concept*

GWI provides assistance in post-conflict countries through training and working with ex-combatants in the field of water in order to ensure both environmental security and societal stability. The employment of these forces in this field can potentially "create peace dividends,

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[88] Emily Wax, "Dying for Water in Somalia's Drought: Amid Anarchy, Warlords Hold Precious Resource," *Washington Post.* April 14, 2006: A1.; "At least 16 Killed in Somalia Over Water, Pasture Battles," *Associated Press.* June 8, 2005; "'Dozens Dead' in Somalia Clashes," *BBC News.* December 6, 2004: Africa.
[89] "Somalis Clash Over Scarce Water," *BBC News*. February 17, 2006: Africa.
[90] "Water Pipe Sparks Ethiopian Conflict," *BBC News*. March 13, 2009: Africa.

bridge divided societies, and improve water security in countries recovering from conflict."[91] GWI's dual approach can prove to be advantageous, because of the fact that the economic reintegration of ex-combatants is specifically facilitated through the creation of employment opportunities in water-related programs. It is the intention that this approach will be able to contribute to human and environmental security in the long run within a post-conflict country—because with no stability, there can be no economic development and without such development, there is an increased chance of conflicts erupting.

When a community is prone to conflicts, there is an increased chance of a situation escalating as a result of security threats to, for example, livelihood. Such threats are often not only a consequence of a lack of resources, but of mismanagement of these resources. Therefore, numerous factors should be taken into account to prevent "a relapse in violence or impede the peace consolidation process," including so-called "drivers of violence," and perceptions and concerns within a community and of ex-combatants themselves. As argued in the International Labour Office's 2006 report, "the reintegration of ex-combatants must be inclusive and part of wider recovery strategies" so that communities can get a chance "to cope with ex-combatants and other war-affected populations without creating disparity in unfair treatment among them."[92] This is an important factor considering the fact that there have been examples in which young people have caused disruptions in order to receive the same opportunities as ex-combatants.

GWI can only meet these goals in the countries and communities in which it is present and can also not be met by GWI alone, meaning that GWI needs other organizations and institutions to meet its own goal. Many factors have to be taken into account; therefore, it is important that collaborations are set up and agreements are made, both nationally and locally. At the moment, GWI works together with experts in both water and conflict management and outsources expertise when necessary.

Whether or not such initiatives can be called successful or not is determined by many variables. One determining factor, for example, is the willingness of ex-combatants to actually reintegrate into society. Successful execution and implementation of water-related programs by this group can lead to a sense of accomplishment and pride in their work as well as a belief that they have been an important and contributing factor in the wider socio-economic development of a country. It has been noted that GWI's employment efforts should focus on those ex-combatants who are vulnerable and sensitive of returning back to illicit behaviour in order to prevent both human and environmental security. At the same time, one must recognize that the implementation of programs can be a lengthy process and can question whether or not ex-combatants have the patience and persistence for this before returning back to their old means. It is also the question whether former fighting counterparts can work together despite having continuing rivalries and grievances against one another. In the same line, the question then arises what ex-combatants do when they are not willing to reintegrate and what effect such situation has on wider recovery efforts.

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[91] Dabbs Sciubba, *The Future Faces of War*, 162.
[92] International Labour Office, *Socio-Economic Reintegration of Ex-Combatants*, 9.

The resources that are needed to cope with such challenges in water development and reintegration efforts are immense and are not always available in every situation. Despite such limitations, GWI's concept attempts to use available resources to the best advantage through its dual approach in water development and in workforce. This way, water-related programs could not only provide ex-combatants with economic stability, they could also provide peace and stability to the local community. Additionally, such efforts could increase the likelihood of these ex-combatants reintegrating into society in a more permanent manner, which decreases the chance of returning back to old patterns.

C.   GWI's key achievements

Chapters of GWI have been established in several African countries. Located in Livingston, GWI-Zambia explores challenges and opportunities for local communities that are integral in ensuring sustainable water security in the Southern Province of the country. An example of an initiative is the sensitizing campaign in the summer of 2012, which involved the participation of the government at all levels. Additionally, GWI started a collaboration of information sharing with the Department of Hydrology of the University of Zambia.

GWI has been working closely with the Ministry of Water in Togo since early 2011 and the chapter of GWI-Togo was created in 2012. The chapter of GWI-Burkina Faso was also established in the same year and is located in the capital of Ouagadougou. Before the office in Burundi's capital of Bujumbura was opened in 2012, GWI-Belgium had already been working in the country since 2008. GWI's concept has, for example been applied within the Burundian Transitional Programme for the Reintegration of Ex-Combatants (BTPRC), which is a national project tackling the issue of effective reintegration of ex-combatants and their respective families for security and populations' stability proposes. Additionally, GWI has organized multiple dialogues and, with the support of the Ministries of Security and Defence, a roundtable with ex-combatants in this country.

In the last few years, GWI has been invited to share its expertise at multiple workshops and events, such as during the 12th edition of the European Green Week and at NATO's Scenario Creation Workshop on energy and environmental security risks. GWI is part of the Africa, Climate Change, Environment and Security Dialogue Process (ACCES) and has taken initiative to coordinate members' effort in the theme of water security. GWI has organized several trainings, policy briefings, and roundtables related to both water and environmental security and development. For example, GWI initiated an ACCES policy briefing to recapitulate findings on negative impacts of climate change on security in Africa, following a weeklong-conference in Addis Ababa, Ethiopia in October 2010, which was organized by the African Development Forum in partnership with the UN-Economic Commission for Africa.

Supported by the AU, GWI organized a symposium in 2009 on water scarcity and its ramifications on security. Agreement was made that the creations of a common policy to monitor environmental security related programmes on the African ground can offer a solution to both water security and populations' stability.

Since its foundation in 2008, GWI has gained experience in:

- raising public awareness (through conferences, workshops, and dialogues with stakeholders and local communities in Belgium, Burundi, Ethiopia, Hungary, Sweden, Togo, and Zambia);
- setting forums for dialogues directly with concerned communities as well as with political officials and policymakers;
- motivating central and local government leaders to implement water-related projects benefiting disadvantaged groups;
- bringing government and policy leaders to the field to witness what GWI does, thereby having them experience a direct contact with local communities in great need for water access;
- holding yearly several roundtables, policy briefings, conferences, and symposiums in Europe and Africa;
- offering training within its Brussels headquarters to several young academicians specializing in environmental and water security policies.

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The Global Water Institute (GWI) strives to remain the most highly valued institution for its pioneering and specialized action in the reintegration of ex-combatants through water-related programs. GWI is based in Brussels and focuses primarily on post-conflict countries.

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