Concepts and Context of the Global Water Institute
Approach to Reintegration of Demobilized forces and Water Management

Ian Levely
September 2010

I. Introduction

This report seeks to put the Global Water initiative’s (GWI) approach to water-related development and job provision for former combatants into context. GWI’s goal is to facilitate water-development and employment for former combatants in post conflict development. This addresses two key issues that many post-conflict countries in Africa currently face: increasing access to water and the reintegration of former combatants. Both of these challenges should be considered part of a broader planning agenda that reduces the chances of conflict by promoting environmental and human security and enables development.

The principle underlying GWI’s approach is that these two factors are linked, as both affect the chances that conflict will reoccur. Ex-combatants often engage in peace-spoiling activities when they have few other opportunities. This can hinder development by making business, education and other aspects of everyday life necessary for growth more dangerous and difficult. Improving access to water is in and of itself an important development and human-security goal, however a lack of access to water can indirectly impact these areas as well: higher incidence of diseases such as cholera, can have devastating effects on education as children miss classes when sick, and a lack of human security can make traveling to school more dangerous, lowering human capital development -- especially for girls.

By employing ex-combatants in projects that increase communities’ access to water, there are more benefits in terms of development and conflict prevention than the immediate effects. This “added value” that comes from combining reintegration and access to water is the backbone of the strategy that GWI proposes.

The first section of this report examines this concept and its feasibility. The second emphasizes the reintegration of ex-combatants as an essential part of national agendas in post-conflict countries. The third section deals with water and its relation to development and conflict.

Next, the fourth section explores the link between unemployment among ex-combatant populations and environmental security: a lack of jobs for ex-combatants may push
individuals in the direction of peace-spoiling activities. This, in turn, may have adverse effects on environmental security as individuals can no longer safely travel to collect water or firewood, for example. In the worst case scenario, unemployment may make recruitment easier and can lead to renewed conflict.

In order to realize Reintegration of Demobilized forces and Water Management (RDWM) projects, GWI proposes the creation of an Implementation and Monitoring Bureau (IMB) that would be responsible for coordinating RDWM across African Union member states. The IMB would be headed by an ambassador-level official and offer a platform for communication and coordination as well as disseminating best practices in water-related development projects – especially among post-conflict countries.

Section five examines the potential effect on environmental security that this institution might have, along with the benefits it would bring to the African continent, as well as donor countries in Europe and the rest of the world. The final section offers some concluding remarks.

II. The GWI concept: its value and is it feasibility

The Global Water Institute’s approach presents a holistic yet practical way to deal with post-conflict development. By employing former combatants in water-related development projects, GWI facilitates transition and addresses both immediate and deep-seated causes of conflict and encourages conflict sensitivity in future development.

In the post-cold-war era, the nature of conflict has changed fundamentally. The main security issues facing most states — particularly in Africa — are internal rather than external. Along with this shift has come a change in the way that we understand conflict and the mechanisms through which it is propagated. While there remains legitimate debate over whether actors in civil wars are primarily driven by “greed” or “grievance,” there is strong support for the notion that unemployment and discontent — especially when there are perceptions of unfair distribution of resources — contribute to the risk of violence. This effect is especially present in areas that are still in the process of recovering from violent conflict and civil war.
Ex-combatants can present a particularly acute risk in post-conflict settings in which there are few employment opportunities and generally poor economic conditions. In such situations, there is a substantial risk that some of these individuals may resort to peace-spoiling activities such as bandity or joining/rejoining rebel factions. The first component of the GWI concept is the reintegration of demobilized forces through water-related programs directly addresses this problem. Providing employment opportunities decreases the incentive to engage in criminality or other destructive livelihoods.

The standard approach to reintegrating ex-combatants is to provide job training, usually as part of a broader Disarmament, Demobilization and Reintegration (DDR) program. There is often a lack of jobs in post-conflict settings, however, which limits the effectiveness of DDR programs in their ability to transition former combatants into the economy. Directly employing ex-combatants avoids this pitfall. Employment provides individuals not only with livelihoods, but also helps them to build new social ties—crucially, new ties outside of their former factions. Concentrating on water-related development projects that benefit local populations could have peripheral effects on the reintegration process, as the participants can be seen as helping their communities.

Civil war can have disastrous consequences on a population's Environmental security, and water security can be an urgent problem for communities in which infrastructure has been damaged. Environmental-security issues can also cause conflict, however. This may occur as people lose their livelihoods because of environmental degradation. The resulting grievances combined with lower opportunity costs of joining a rebel group can lead to violence. State capacity may also be diminished by damage to the environment which limits its ability to respond to emerging threats. Both of these issues will likely be exacerbated by climate change. Given this, programs that target environmental security after civil war have far-reaching effects that go beyond the immediate benefits of improving environmental security.

There is a growing trend to view security challenges in the context of human security rather than traditional state-level approach. Applying this to a post-civil-war setting in which cease-fire agreements have mitigated or eliminated challenges to state security, human-security threats often persist. This often includes threats to personal safety as former combatants turn to banditry to earn a living using the skill set they have gained while fighting. This has been observed in several countries including Mozambique and South Africa. Programs envisioned by GWI that provide employment opportunities for former combatants can mitigate this threat.

Programs that enhance human and environmental security have intrinsic value, but also eliminate root causes of conflict. This leads to component C of the diagram: populations' stability and the prevention of conflict. In turn, stability and peace provide space for component D: environmentally sustainable and conflict-sensitive economic development.
Added value

Conflict-sensitive development projects, particularly those involving water, can have an impact that goes further than their immediate effects. This “added value” stems from the role that development plays in preventing conflict, and the particular importance of the availability of water.

Deciphering the intricacies of the relationship between conflict, resources and development has become somewhat of a cottage industry in the past decade, and has produced intense debate. Most scholars would, however, probably now agree on a few general points: there is a link between resources and conflict, and this can put stress on already precarious tensions between ethnic or political groups; previous conflict is a cause of further conflict; unemployment makes recruiting combatants easier, and thus makes violence more likely; and conflict has a disastrous toll on development.

Together, these factors produce a cycle of conflict: violence destroys infrastructure, disrupts economic activity and education, and can have devastating effects on the environment. This, in turn, leads to more violence. On the one hand, this means that a lapse in one area can have negative consequences that go far beyond the immediate effects. On the other hand, it means that positive effects can carry over as well.

It is simultaneously satisfying water-development needs and helping ex-combatants to reintegrate. When we view conflict, development and poverty as a cycle, making such an impact in these areas at once can have an overall effect that is greater than the sum of its parts by slowing the momentum of the conflict cycle; conflict-sensitive development reduces the chances of conflict, which makes further development possible.

Improving access to water is particularly effective and carries additional added value. Investing in water projects can increase human capital. The productivity of workers in developing countries is greatly reduced by frequent ailments, many of which can be prevented by better access to clean water. The Stockholm International Water Initiative points out the similar losses of human capital accrue from trachoma and schistosomiasis, both of which are spread through poor sanitation.

Lower levels of education lead to lower growth. Especially relevant for post-conflict countries, this can lead to poor rates of political participation and further disenfranchisement and discontent. In other words, while access to water is in and of itself a measure of development and increasing access to clean water is in and of itself productive, increasing access to clean water brings external benefits as well. It improves human capital and leads to more development in the long run. The value of a water development project, is therefore not limited to the immediate effects it brings, but has a more far-reaching and long-lasting impact on economic growth. And, economic growth and human development can help prevent conflict, and so on…
An additional potential benefit that the GWI approach is an added value in reintegration efforts as former combatants are seen by communities to be giving back. If this is case, water-development programs that employ former combatants can have a positive impact not only by creating jobs, but providing a new role in the community for individuals who may have problems being accepted by their communities.

**Is the GWI Concept Feasible?**

While this approach takes into account current attitudes and research towards conflict and conflict-sensitive development, making an actual impact requires feasibility in implementation as well as theoretical support. The main question here is whether the proposed IMB could have enough of an impact to bring realize these benefits. The IMB would influence policy at the national level by sharing best practices and emphasizing the importance of including water development and reintegration issues in national planning agendas. The extent to which it would be successful—and the extent to which the added value of the GWI approach would be realized—depends on the extent and effectiveness of the resulting policy and programs.

This having been said, even small-scale water-development projects have shown rather large results in the past with relatively little spending. Small-scale irrigation projects in South Asia, for example, have led to sizeable increases in the productivity of agriculture and decreases in poverty. As mentioned, most available water in Africa is groundwater, and drilling wells and bore holes is a relatively cheap and fast way of increasing access to water. The employment opportunities that are provided by water programs have a similar advantage of fast implementation. According to Joanna Spear, “amongst the more general development initiatives that can assist the reintegration process are ‘quick impact projects’ (QUIPS) that are designed to provide employment opportunities and solve community problems through restoring services.” Programs that are initiated as a result of GWI added value can support such projects. Spear notes that most QUIPS do not, however, directly affect ex-combatants, who generally face discrimination in the labor market. By directly employing former combatants, GWI programs can have a quick impact in terms of development, human security and reintegration.

The main drawback to this approach relates to this last point. There is a stigma attached to former combatants in many countries. This is part of the problem of reintegration and must be overcome if the process is to be successful. However, jobs are typically scarce in post-conflict countries for everyone. By paying special attention to former combatants and targeting employment schemes at this population, there may be perceptions of unfairness. There may generally be a feeling that combatants have not been held accountable for the violence in which they have participated in, and special treatment may engender further resentment and a potential backlash against them. Of course, this runs counter to the long-term goal of peace-building and reintegration and must be taken into account when implementing such programs. For this reason, identifying best practices and understanding the effects of post-conflict employment and development projects is essential. The proposed IMB would provide the perfect
opportunity to learn more about the benefits of water-development projects and providing employment for ex-combatants.

III. Why should the reintegration of demobilized forces be a priority on the National Planning Agenda in post-conflict countries?

Violent conflict can be seen as the ultimate breakdown of the peaceful political process, and preventing violence is a prerequisite for rebuilding political, economic and social institutions that are damaged or destroyed during wars. The top priorities for post-conflict governments should therefore be providing the security and stability these instructions need to develop.

In the short-term, providing security includes reducing and ultimately eliminating peace-spoiling activities, for which ex-combatants are often responsible. The solution includes initiating reintegration programs to address this problem. By minimizing the level of violence, a space for development is created.

In the long-term, post-conflict development should constitute more than a return to normality: the strategy adopted should go further and deal with the root causes that led to violent conflict in the first place. For ex-combatants, this means concentrating not only on immediate concerns, like disarmament, but on creating viable long-term livelihoods and facilitating social reintegration as well. It means creating avenues other than violence to express grievances and effect change so that future disputes can be addressed peacefully. Development goals should be pursued in a way that takes this into account and seeks to minimize the incentives and opportunities to engage in peace-spoiling activities such as joining or rejoining factions, banditry or rent-seeking.

Understanding why individuals choose to join military or rebel factions and why they may turn towards peace-spoiling activities after the cessation of hostilities is difficult. The “greed vs. grievance” debate that has taken place over the past decade has produced solid arguments on both sides, and the most reasonable conclusion at this point is that violent conflicts and civil war have multiple causes. Ethnic tensions may be pushed to the brink of violence by perceptions of unfair distribution of natural resources. Individuals may join up with rebel groups for a variety of similarly inter-related reasons. The decision to join may be simultaneously motivated by ethnic ties, ideological beliefs and financial issues.

The same logic applies to decisions after a conflict: whether an individual will rejoin factions or to engage in other peace-spoiling activities such as banditry. These risks may be a reflection of former combatants overall dissatisfaction with the direction and progress of the country. However, there is a growing amount of evidence that these
decisions reflect an inability to reintegrate successfully and lack of other means of financial support.
There is no single best method of preventing the resurgence of conflict and the successful reintegration of former combatants.

The understanding of how violent groups form and why individuals choose to join them has increased greatly, and policies have been designed to take advantage of these insights. However, measuring the effectiveness of such programs has often proven extremely difficult. Post-conflict countries often face low levels of development and high unemployment rates, and relatively small-scale programs targeted at former combatants are often an uphill battle. That having been said, there are some approaches that have proven effective.

The standard practice for dealing with the issue of former combatants in peace-keeping settings has become integrated demobilization, disarmament and reintegration (DDR). The United Nations now includes this as a component of its peacekeeping missions, and since 1989 DDR has been implemented in sixteen countries. The programs typically begin with the demobilization of military and paramilitary factions. Next, individuals can register for the DDR program, which usually involves turning in a weapon – exceptions typically being made for child soldiers and women. The demobilized, disarmed soldiers are then eligible to receive cash benefits and register for job training programs.

Testing how effective these programs have been has been challenging, as data collection is difficult in such settings, and it is hard to separate the effects of the program from other changes taking place. One study by Jorge Restrepo and Robert Muggah in Columbia demonstrated that demobilization and disarmament had a real, tangible effect on the number of violent incidents in areas in which the program was active. Anecdotally, this seems to be the case in other countries in which DDR has been implemented: violence has not recurred.

Although the ultimate goal is, in fact, reducing the occurrence of violence, the other components of DDR programs have had mixed results. The few studies that have been conducted on reintegration outcomes – social, economic and political – have shown gaps between what the programs have promised and what they have delivered. One problem is that job training programs do not bring results if the type of training does not match the type of employment available. For example, most participants of DDR program Liberia chose to enroll in vocational training programs. Upon completing the training, however, there were few employment opportunities. The short-term success of the transition programs – as measured by a lack of violence – may eventually prove misleading if frustration grows as a result of unmet expectations.

An alternative approach is to directly provide former combatants with employment through work programs. Development projects in post-conflict countries can concentrate
on hiring ex-combatants. This addresses the short-term, “idle hands” explanation for the decision to engage in violent activity: simply providing a livelihood and keeping potential combatants busy reduces the potential recruitment pool for groups that engage in violence.

The jobs provided by programs envisioned by GWI would fit into this category and have a potential to decrease violence in this way and directly creating job opportunities, rather than offering training programs, may prove to be a more effective approach.

Providing training programs and job opportunities for former combatants can have effects that go beyond these short-term factors previously described. Many authors have suggested that the reintegration process be viewed holistically, in that social, economic and social dimensions are interrelated. Economic integration can help an individual to reintegrate socially and politically as well.

Juan Linz and Alfred Stepan define democratic transition as being complete when there is “no other game in town.” In other words, when there are no significant segments of society that attempt to effect change through undemocratic means. While preventing violent conflict and democratic transition are not synonymous, the same logic applies. If an individual feels that legitimate and peaceful use of the political process is the most effective—and only legitimate—way of making their voice heard, this dramatically decreases the likelihood that such individuals will join violent movements or engage in peace-spoiling activities.

Policy should therefore seek to create an environment in which this sort of political and social integration is possible. DDR and employment programs can certainly be a part of this process. Reinsertion benefits, for example, can help former combatants return home or settle in a different area and set up new lives. Employment provides not only a means to provide for oneself, but develops social and political links that constitute a deeper level of reintegration into society.

This broader measure of reintegration requires that non-combatants and members of opposing factions accept demobilize forces into the community. While programs that focus on former combatants may aid in this process, there is a danger that the distribution of resources for these purposes will, in and of itself, become a source of animosity. Again, post-conflict countries often face serious economic problems, and there may be problems in giving the “squeaky wheel the oil.”

Government should seek to provide equitable solutions to society’s ills, however, especially in post-conflict settings, what is fair is not always what is best for a country, and this may be the case when it comes to providing more assistance and opportunities for ex-combatants than the general population. Economic policy should be designed to reduce the chances of conflict by reducing tensions between stakeholders and reducing the opportunity and incentive for peace-spoiling activities.
In designing and implementing post-conflict development plans, there is a universal lack of funding. Governments, international organization and NGO’s simply do not have enough to go around, and this means that there may be tradeoffs between general development projects and those specifically targeting ex-combatants. The biggest threat, however, to development is violent conflict. Civil wars destroy wealth and social trust, deplete natural resources and can have a devastating toll on human capital. This means that a long-term strategy for development should be first and foremost concentrated on preventing conflict, and this necessitates aiding the reintegration of ex-combatants. The implementation of RDWM programs coordinated by the proposed IMB, as advocated by GWI, would be an effective way of addressing this issue, while at the same time contributing to water security.

**IV. Is water an issue in African Post-Conflict Countries?**

Although water is an issue virtually everywhere in the world, several factors make the situation in Africa more acute – especially in post conflict countries. This includes geographic, economic and geopolitical influences that, when taken together, put the continent at considerable higher risk. As is true with other development issues, civil war can be both a cause and effect of water-security issues. This section takes a look at these issues in the context of GWI’s proposed strategy to implement RDWM programs.

**Water scarcity and development**

Firstly, it is necessary to point out that there are two types of water scarcity: physical and economic. The former occurs when there is not enough fresh water in a given area to support the water needs of the people living there, including water for sanitation and food production as well as safe drinking water. This is a problem faced by developed nations and developing nations alike: Israel, for example faces a physical water shortage. Although the presence of physical water can be affected by humans, like global warming for instance, it is generally something that must be taken as a given – although smart resource management and sustainable practices increase the long-term viability of physical water supplies. Countries can overcome physical shortages by developing economies based around other resources and import enough food to meet needs. Economic water scarcity, on the other hand, occurs when a country is unable to meet water needs on account of a flawed infrastructure for exploiting water resources and financial inability to import what is needed.15
Many countries in Africa face both types of scarcities. Droughts in the horn of Africa (physical scarcity) have resulted in severe economic scarcity. Other countries have enough physical water, but are unable to support the water needs of the population due to insufficient infrastructure. Most African countries fall into this category.

While countries in the Great Lakes region, for example, have abundant supplies of available fresh water, they face water shortages. The water poverty index (WPI), which is calculated by the Centre for Ecology & Hydrology, rates water poverty for most countries on the African continent as either “severe” or “high” (figure 2). When contrasted with findings from the UN’s Second World Water Assessment Report, which analyzes regional sustainability in water use (figure 3), it becomes clear that many countries suffering from economic scarcity in fact do have enough water physically present.

All water is not, however, equivalent when it comes to meeting development and agricultural needs. Africa relies more heavily on water drawn from underground aquifers and rainfall, which is erratic. A lack of natural sources for irrigation makes farming in Africa more difficult than in other parts of the world. Despite this, Africans generally engage in water-intensive farming. High-yield crops that fueled the “green revolution” in Southeast Asia have not been designed for Africa, and thus a comparatively greater amount of water is required for the same unit of food that is grown in other parts of the world.

Economic scarcity of water can have adverse consequences beyond the immediate food and water needs of the local population. A lack of clean water leads to the spread of infectious diseases. Poor farming habits can lead to long-term environmental degradation. Water scarcity can be both a cause and effect of low development, just as conflict can. Similarly, water scarcity can be both a cause and effect of conflict.

**Water and Conflict**
Picking apart the relationship between water in development presents a similar dilemma as the causal effect of development and mineral resources on conflict: there is evidence that both cause each other. As discussed in the first section, there is a link that has been theorized and empirically tested between development and conflict. Water has an impact on human capital and a lack of clean water can have a devastating effect on education, political participation and safety. This leads to a further lapse in development.
African post-conflict countries face the same development challenges that most countries in the region generally share. Some concerns arise, however, specific to post-conflict countries. Firstly, infrastructure may suffer extensive damage as governments are do not have the resources or ability to properly maintain it during the period of conflict, or possibly cannot access certain areas to repair broken installations. Beyond this, there may be intentional damage to infrastructure as a direct result of fighting: in Liberia, fighters actually tore up water pipes for scrap metal. Other damage during conflict can include chemicals seeping into water ways, damage to irrigation systems and deforestation. Additionally land use patterns can change if people are afraid to travel, which puts extra stress on water sources and infrastructure close to home and can lead to unsustainable agricultural practices.

All of this puts water at the forefront of problems facing post-conflict countries in Africa. The importance of increasing access to water is essential for allowing further development to take place besides being an important development goal in and of itself.

**Water Development Projects as Peacebuilding**

Water plays a role in the reconciliation and rebuilding process. If one considers water to be a human right, as the UN general assembly acknowledged in July 2010, then the process of increasing access to clean water in post-conflict setting can be thought of as part of a broader process of restoring safety and rights to individuals after a conflict has ended. Conversely, ignoring access to water can greatly decrease faith in post-conflict public institutions. A parallel can be drawn between access to water and other human rights that are routinely infringed upon during conflict. The task of a post-conflict government is to rebuild trust and support new institutions that respect individuals’ rights, and this should include the right to water.

In restoring other human rights after conflict, the paradigm of “restorative justice” has been used to describe a process that aims to facilitate reconciliation and build trust in new institutions rather than punish. By grouping water together with other human rights, one can include restoring access to clean water as part of this restorative process. By restoring access to water, the people can begin to trust the new government and its institutions.

Water is in some cases a cause of conflict. Disparities between social groups’ access to water may cause or exacerbate tensions that may ultimately lead to violent conflict. By alleviating these issues, RDWM programs might actually decrease the chances that conflict will occur in the future.

Of course, these outcomes are more difficult to quantify and measure than the more tangible development benefits that are immediately visible. However, the IMB could help coordinate such programs in a conflict sensitive manner by collecting and sharing best practices from throughout Africa. Doing so would increase general understanding of the role that water plays in conflict and post-conflict restoration.

If water development programs employ ex-combatants, there are additional peace-building dividends, as providing jobs for ex-combatants improves security prospects—as is discussed in more detail in the following section.
V. Should the lack of jobs for ex-combatants be considered a threat to environmental security?

GWI's approach to linking human and environmental security efforts is supported by evidence of a strong correlation between environmental degradation and conflict.23 Out-right conflict can have disastrous effects on the environment, and there is ample evidence to suggest that unemployment makes it easier for rebel factions to recruit.24 Short of resurgence of full-on warfare, unemployed, discontent and poorly reintegrated ex-combatants can still pose serious risks to environmental security for local populations. Unemployed ex-combatants can continue exploiting natural resources, or they may turn towards banditry or rent-seeking behavior. These latter two activities can have indirect negative effects on the environmental security by restricting access to natural resources and changing use patterns in a way that threatens the environment. The RDWM programs for which GWI is an advocate partially alleviate this threat.

**Direct Effects: conflict and resources.**

As has been noted in numerous academic works, rebel movements often find financing through the exploitation of natural resources. Resource extraction conducted in this manner can have disastrous consequences for the environment. For example, timber which is cut for quick and easy money is rarely done in an environmentally sustainable manner. Similarly, mineral resources that have been associated with conflict—diamonds, bauxite and gold for example—may cause environmental degradation if extraction is carried out in a haphazard way.

A lack of employment opportunities reduces the opportunity costs of fighting. This both makes recruitment into rebel factions easier and makes it more difficult to convince factions to demobilize and disarm. Combatants often see weapons as a money-making asset, and in the absence of real economic alternatives can be very reluctant to give them up. This can lead to a continuation of the “war economy” in which violence is used to procure finances, which are used to sustain military campaigns, and so on.

There has been debate over whether there is a “resource curse”25 and how it may be overcome. Even Paul Collier, who was among the first to point out that an abundance of easily extractable, high-value commodities can lead to or exacerbate conflict, has said that many countries have little other real options rather than exploiting these resources.26 The task for post-conflict countries is to develop a sustainable plan for exploiting resources in an environmentally sustainable and conflict-sensitive way. This means that resource extraction should be regulated in a transparent way and revenues used for sustainable development goals. This is made more difficult if there are continued security problems or continued violence, and thus mitigating these risks by providing jobs for ex-combatants can be part of a responsible strategy for resource extraction.

**Indirect effects: banditry and rent-seeking**

One most common ways in which unemployed combatants spoil peace-keeping arrangements is through engaging in criminal behavior. In rural settings, banditry is a particular concern. Demobilized combatants who still possess arms often see these weapons as their only economic asset. Joanna Spear describes this process in Liberia, in which ex-combatants reviewed the job
prospects of those who had completed the DDRR program and compared it to the income stream that could be gained by engaging in criminal activities, such as banditry.\textsuperscript{27} The relationship here is fairly simple: the better job prospects are, the more likely combatants are to disarm and demobilize, and the less likely they are to engage in criminal activities.

The potential effect that this has on environmental security is not direct, as banditry in and of itself does not harm the environment. However, by making it more costly and more dangerous to travel, the local population is restricted in its ability to access resources. In many African countries, the majority of the rural population must travel great distances every day to collect clean water. The UN’s Second World Water Assessment Report, specifically referring to Uganda, noted that this task usually falls to more vulnerable segments of society, typically women and children.\textsuperscript{28} Especially in the dry season, unsafe conditions may greatly reduce access to clean water and force rural populations to settle for unsafe alternatives. This effect also promotes unsustainable patterns of resource use.

Pastoral activities and biomass fuel collection can also be affected by unsafe conditions that result from wide-spread banditry. This can lead to over-grazing in safer areas and the over collection of biomass fuels for cooking and heating. The adverse effects of these behaviors can have lasting effects on the environment and lead to long-term environmental security problems. Conversely, improving security conditions by employing ex-combatants can likewise reduce the threats to environmental security.

\textit{Politics and Rent-seeking}

One of the most difficult issues facing countries after a period of conflict is how to reintegrate the opposing factions after the fighting has ended. So far, this report has considered the problem in relation to lower-ranking combatants who return to civilian life. As part of peace settlements, leaders from non-government factions may demand leadership positions in the new army or in civilian government positions.\textsuperscript{29}

Government military personnel may behave similarly, and it may be difficult to demobilize government forces that are no longer needed. Officers who are involved in negotiating the terms of a peace agreement need to “sell” the plan to their subordinates, and lack of jobs in the civilian sector can make this a difficult task. This problem can manifest itself in a couple of different ways that have adverse effects on environmental security for the population and long-term negative effects on the country’s natural resources.

Phillipe Le Billon describes a need to avoid a “post-conflict rush” on resource extraction.\textsuperscript{30} This entails the exploitation of natural resources in a short-sighted manner that serves the interests of a few officials and local businesses, but not the country as a whole. Often, it can involve illegal kickbacks to bureaucrats who authorize unsustainable projects. Le Billon emphasizes the need for transparency in the bidding process and afterwards as a solution. If government officials are unwilling (or unable) to enforce environmental regulations, resource extraction can have disastrous effects on the environment.

Strip mining operations, for example, can pollute local water sources, limiting access to clean drinking water and impeding agriculture. In the worst case scenario, unregulated and short-sighted post-conflict resource exploitation can affect environmental security just as severely—or worse—as during a conflict.
At a lower level, there can be similar problems with government soldiers who are not willing to give up power, or who want to use their position to enrich themselves in the absence of decent economic options in the civilian sector. Just as groups of former combatants may turn to banditry and other criminal activities, such as collecting “protection money” from locals, government forces who face poor economic circumstances can turn to rent-seeking behavior, collecting unofficial “taxes” and fees for passing through check points or demanding bribes for routine activities. An under-funded government army that is reluctant to disarm and demobilize due to poor job prospects in the civilian sector can be extremely dangerous.

Rent-seeking and demanding bribes can exert the same pressure on the local population as can the threat of violence from criminal groups. When traveling becomes dangerous or costly, people use up resources closer to home at a faster rate. This may mean settling for smaller amounts of dirtier water, over-grazing pastoral land close to home, or depleting forests for biomass fuel. Improving security, a task that necessarily involves reintegration efforts including programs that create jobs, alleviates these concerns.

**Environmental Security, Conflict and Water**

The relationship between environmental security and conflict can be difficult to understand because both are correlated with low income and a lack of development. Moreover, resources can be both the cause of a conflict, and conflict can conversely devastate the environment. Grievances over lack of access to natural resources can entice individuals to join a conflict. Similarly, livelihoods can be lost due to resource scarcity, which can drive individuals to join military or rebel factions out of economic expediency. Revenues to fund the conflict might be raised through the unsustainable exploitation of mineral resources or timber. Safety concerns can lead to unsustainable patterns of resource use and limit the access of life-sustaining natural resources for the local population. In other words, it is a vicious circle, and one that unemployed former combatants can continue to propagate after a conflict has formally ended.

**VI. Could the Implementation Monitoring Bureau be a solution to the problem of environmental security? What advantages would it hold for post-conflict issues across Africa?**

The Implementation and Monitoring Bureau (IMB) has been proposed by GWI as an African Union (AU) office responsible for coordinating RDWM projects across the AU. The office would shape domestic policy by conducting policy reviews and advising national governments. It would serve as a platform for governments across Africa to communicate and share best practices in RDWM. It would coordinate the implementation of water projects between nations, which is extremely important given the trans-national nature of water resources. While there is of course no single solution to these problems, such an office, with the support of the AU and other international organizations and NGOs, could have a positive impact on environmental security and reintegration in Africa. It would serve as an effective means of putting the concept of integrated reintegration of ex-combatants and water management outlined in this report. This section outlines some of the benefits that the IMB could bring to RDWM in Africa.
Firstly, the advocacy role envisioned for the IMB would bring attention to the integrated nature of environmental security, conflict-sensitive development and the reintegration of ex-combatants to international donors. The IMB would have an explicit goal of mobilizing funds from both international and regional agencies for RDWM programs. For post-conflict countries, this is of obvious and critical importance as funding for development projects is nearly always in short supply.

Along with channeling these funds comes the task of ensuring that money is properly spent. In general, many development economists have bemoaned the fact that it is hard to measure the effect of aid, and that a great deal of funds are wasted on inefficient projects. Post-conflict reintegration and development programs are of special concern, as reliable information from these countries is often hard to come, due to underfunded and chaotic government ministries and difficult environments for collecting data. The IMB could further study in this area by organizing funding and making data more accessible.

In addition, IMB would provide a platform for identifying “best practices” for RDWP, allowing African countries to learn from each other’s past experience. The process of identifying and employing best practices has been useful for international organizations and agencies to improve the efficiency of development aid.

Along with results-based accountability, the IMB could promote transparency to avoid misappropriation of development funds through government waste and corruption. International organizations and scholars have emphasized the importance of reporting revenues in resource-extraction efforts that take place in post-conflict settings. The same logic applies to the allocation of funds and resources in water-related projects. Transparency can prevent development projects from becoming sources of tension between segments of the population, whether it is based on regional, ethnic or political divides. Similarly, there is a danger that a particular group of ex-combatants—typically those with connections to the ruling party—can receive better treatment than others. Making the process of allocating funding more transparent at minimum forces leaders to provide reasoning behind their decisions or face political consequences.

Together, transparency and shared empirical results can help nations to “sell” the population and other stakeholders on RDWP programs. Doing so is not only beneficial in the short-term, but more broadly helps establish good democratic practices.

On a related note, the IMB would seek to involve civil society and the private sector in RDWM programs. This is advantageous on several levels. Coordinating efforts between stakeholders can make the overall effort more effective, and in the broader sense, help post-conflict development by increasing communication channels and building better relationships between the civil, private and government sectors.

Involvement of the AU in the IMB and international character of the proposed bureau is a huge plus for similar reasons. Water and unemployment among ex-combatants can be a source of conflict domestically, but civil wars in Africa have often been inter-related—or example conflicts in recent years in the Democratic Republic of Congo, Uganda and Rwanda. Although there is much more intrastate conflict in Africa and around the world today than interstate conflict, water security can certainly lead to traditional military and diplomatic conflict between states as well.
Even if the IMB does not explicitly deal with a pan-African integrated strategy for dealing with water-security issues, it could at a minimum inform countries of situations that neighboring nations are facing. The 2007-2008 UN Human Development Report, which focused on the effect of climate change on human development, identified sub-Saharan Africa as a region at particular risk. Any progress made on regional water management should mitigate this risk.

Just as water security does not stop at national borders, neither do problems resulting from civil war. Civil wars in Africa have spread to neighboring countries, and arbitrary colonial borders mean that ethnic groups are spread out and divided among several states. The Liberian civil war spread to neighboring countries, the Rwandan genocide created a refugee crisis in Uganda, which has also been affected by conflict in Congo (and vice versa). The Lord’s Resistance Army is based in Uganda but has operated in the Congo, Sudan and the Central African Republic. In other words, intrastate conflict is rarely purely intrastate.

It makes sense to take this into account when designing reintegration programs for former combatants. Poor employment options in one post-conflict country might have a direct effect on an ongoing conflict in a neighboring state as combatants migrate to fight. Cooperation at the regional level, which could be facilitated by the IMB, has the potential to greatly reduce these effects through exchange of information and coordination.

Donor governments, NGOs and International organizations from outside of Africa could also benefit from a region-wide IMB that coordinated RDWM projects. The lack of coordination between donor governments and agencies has been a point of criticism. An AU-backed IMB could provide international actors with both information and a platform to communicate, coordinate and collaborate on RDWM projects and in granting aid to post-conflict countries.

The AU is, on the whole, relatively new and untested as far as international organizations go. Even the "gold standard" of regional transnational bodies, the European Union, faces difficulties in coordinating development projects within its borders. Given this, expectations must be realistic. However, there is a potential for the IMB to improve environmental security throughout Africa.

VII. Conclusion

The numerous water development and reintegration challenges that face numerous countries in Africa have no easy solutions, and it is unrealistic to expect any strategy to be completely successful. Moreover, the resources needed to solve problems relating to water security and post-conflict reconstruction are vast, and at present simply not available in many settings. The approach taken by GWI has several advantages given these limitations. It makes the most out of these resources by affecting both the labor market and water development simultaneously. By doing so, the projects that would be carried out as a result of GWI’s advocacy and the proposed IMB would have an effect not only on short-term levels of development, but also reconciliation.

The role that water plays in development goes far beyond the immediate effects as human capital is influenced by childhood disease rates and time spent traveling to and from water sources.
Access to clean water may even be a cause of conflict, and increasing the number of people who have access to it may decrease the chances of future violence.

Similarly, there are both long and short term effects to providing jobs to former combatants. Shortly after conflict, there is a danger that unemployed soldiers may turn towards peace-spoiling activities. In the long term, these individuals may continue to feel disenfranchised from the political process and join rebel factions in the future.

The long-term goal should be for states and communities to eventually become self-sufficient. While this is not necessarily incompatible with GWI’s approach to RDWM, it is an important component to sustainable practices along with environmental sustainability and conflict-sensitive development.

Generally, there is a great deal of theoretical and empirical support for the GWI concepts that are covered in this report. By approaching the issues discussed concurrently, there is an added-value, in that the “conflict cycle” is slowed down, if not altogether stopped.

Ian Levely is a post-graduate student at the Institute of Economic Studies at Charles University in Prague. He contributes to GWI as policy consultant.

Contact: ilevely@gwi.org

The Global Water Institute (GWI) assists demobilized populations, by advocating for water-related programs that target the reintegration of ex-combatants. GWI is based in Brussels and focuses primarily on post-conflict countries in Africa.

www.GWIwater.org
Endnotes

5 Stockholm International Water Institute Making Water a Part of Economic Development: The Economic Benefits of Improved Water Management and Services, a report commissioned by the Governments of Norway and Sween as input to the Commission on sustainable Development and its 2004-2005 focus on water, sanitation and related issues.
9 United Nations Disarmament, Demobilization and Reintegration Centre, http://www.unndr.org/iddrs/02/
13 See Muggah, 2009.
19 Sachs, pp.132-133.
21 Second UN Water Assessment Report, p.10.
Global Water Institute: Concepts and Context

28 Spear, Joanna “Creating a Political Economy of Peacebuilding: Effective Disarmament, Demobilization and Reintegation Strategies Where Resources are Accessible, Plentiful and Lootable,”
30 Martin, Adrian; Blowers, Andy and Boersema, Jan “Is Environmental Scarcity a Cause of Civil War,” Journal of Integrative Environmental Sciences,” 3(1), March 2006, pp.1-4.
32 DDR programs, for example have been subject to few methodological studies that empirically measured the effects of spending, and some of the analysis that has been conducted has been less than favorable.
33 For example, the Extractive Industries Transparency Initiative advocates and advises on transparency in for mineral extraction in developing countries.
35 For example, Humphreys and Weinstein speculate that individuals who faced the most difficult reintegration in Sierra Leone had most likely left the country to continue fighting, Humphreys, Macartan and Weinstein Jeremy “Demobilization and Reintegration,” Journal of Conflict Resolution, Vol 51(4), August 2007, pp.531-567.