Environmental Destruction in Ethiopia: A Leading Factor in Oromo Migration

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Abstract

This paper demonstrates that the Oromo population of Ethiopia, who live on the largest and most resource-rich land area, are denied key environmental protections in their homelands. Drawing together data from research conducted in a number of Oromo areas, the paper explores how massive state and corporate projects intent on accessing valuable resources cause environmental destruction, which results in involuntary forced displacement of the Oromo population.

I compile significant evidence of environment destruction to argue that it is a major cause of ongoing forced displacement. These data have not previously been brought together coherently. Actions covered include massive forest fires set by newly-arrived settlers, bodies of water in Oromia polluted by state-sponsored industrial development, ecological destruction and displacement due to state reallocation of land to private businesses, and seed and fertilizer manipulation schemes which make farming untenable for peoples who treasure the land. The combined impact forces massive displacement of Oromo. Donor nations have demonstrated little awareness of the scale of the displacement, showing a slow response to environmental issues. Based on the findings, the study attempts to establish the scale of the forced displacement, then provides some policy recommendations to address the reoccurring issue.
Introduction

The Ethiopian Government has, on paper, legislation to protect the environment. Article 44 declares that “everyone has the right to a clean and healthy environment.” In 1994, the Ethiopian Government established Ethiopia’s Environmental Protection Agency. It is also noteworthy to point out that Ethiopian Government is a recipient of significant foreign aid money for human development, including human rights and environmental protection.

Although, these measures are in place, the lack of implementation of environmental protection policy particularly in the Oromo region, Oromia, Indicate that the environment is not a priority for the Ethiopian Government. This assessment is re-enforced by comments made by the former Ethiopian Director General of Environmental Protection Agency, Dr Tewolde Berhan Gebre Egziabher regarding criticism of Gibe III dam construction in the Omo Valley. In an interview with Peter Greste, BBC East African Correspondent, Dr Tewolde suggested that the Ethiopian Government considers the impact to the Omo people as a small price to pay for the sake of development (BBC, 2009)\(^1\). During the interview, Dr Tewolde compared residents of the Omo valley to creatures as insignificant as insects under the boot of progress by making the following statement:

“there is no human impact that is not felt by other species or by other people. Even when you walk, you kill other insects.”

Dr Tewolde is now an advisor to Belete Tesfe, the Minister of Environmental Protection and Forestry.

At the root of the lack of commitment lay strategies employed by each successive regime (culminating in what appears to be a “Grand Ethiopian plan”). The strategy is to control occupied people in the Southern and Central regions. A common thread for the regimes is continued exploitation of formerly conquered and colonized peoples and their land through means that abuse basic human rights. Social and population displacement programs such as Villagization were tools commonly used to execute a Grand Ethiopian plan of altering the demographic singularity of Oromia. Today, there are a significant number of Oromo, particularly professionals and the intelligentsia aware of the impact of these policies, such as engineers, who have been killed or sent to languish in Ethiopian prisons. A severe consequence of targeting generations of Oromo professionals is loss in capacity of institutions to solve social and environmental issues.

Oromo who do manage to escape Ethiopia are further discouraged to work on development projects with each restrictive policy implemented by the Government of Ethiopia. Policies such as the 2009 Proclamation to Provide for the Registration and Regulation of Charities and Societies (CSP), restrict NGOs from operating on human rights and advocacy activities if receiving more than 10% funding from outside of Ethiopia (ICNPL, 2013)\(^2\). Such restrictive methods of successive regimes have contributed to the fragile state of Ethiopia.

Background

Despite restrictive legislation and International aid since 1991, Ethiopia remains among the lowest on the Human Development Index (HDI) with a rank of 173 out of 187 countries (UNDP, 2013)\(^3\). The 2012 HDI value for Ethiopia is 0.396, well below the average for a low HDI of 0.466 (Table 1 HDI comparison). It my position that significant contributor to Ethiopia’s fragile state is structural, linked to
the formation of the Ethiopian Empire, and subsequent authoritarian rule by minority ethnic groups, who continue to function as Abyssinian colonizers.

<table>
<thead>
<tr>
<th></th>
<th>value</th>
<th>HDI rank</th>
<th>Life expectancy at birth</th>
<th>Expected years of schooling</th>
<th>Mean years of schooling</th>
<th>GNI per capita (PPP US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>0.396</td>
<td>173</td>
<td>59.7</td>
<td>8.7</td>
<td>2.2</td>
<td>1,017</td>
</tr>
<tr>
<td>Rwanda</td>
<td>0.434</td>
<td>167</td>
<td>55.7</td>
<td>10.9</td>
<td>3.3</td>
<td>1,147</td>
</tr>
<tr>
<td>Uganda</td>
<td>0.456</td>
<td>161</td>
<td>54.5</td>
<td>11.1</td>
<td>4.7</td>
<td>1,168</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>0.475</td>
<td>—</td>
<td>54.9</td>
<td>9.3</td>
<td>4.7</td>
<td>2,010</td>
</tr>
<tr>
<td>Average for Low HDI</td>
<td>0.466</td>
<td>—</td>
<td>59.1</td>
<td>8.5</td>
<td>4.2</td>
<td>1,633</td>
</tr>
</tbody>
</table>

Table 1: 2012 Ethiopia HDI indicator and regional comparison (UNDP, 2013).

The Abyssinians colonized the Southern and central nations, and then instituted Apartheid-type governance over the people within the territory of Ethiopia. Authoritarian rule included rule by a monarchy from the period of colonization (late 1880s) through 1974. After a people’s revolt, military coup installed a communist totalitarian dictatorship, which reigned over Ethiopia until 1991. The communist totalitarian rule was replaced by the current ethnic based authoritarian regime.

The Apartheid-like rule involved subjecting the colonized nations to social and economic displacement. The colonized nations—including Oromo, Ogaden, Sidama, Afar, Anuak, nations of Omo valley—were subjected to policies that displaced populations, attempted to replace local language, cultures and indigenous institutions with those imposed by the ruling group. In the case of the Oromo, the Oromo language was banned from use until 1991. After 1991, the language was used only in regional administration although native speakers constitute more the 40% of Ethiopian population. Subsequent Ethiopian regimes maintained policies of population displacement through armed settlers (Villigazation), and attempted elimination of indigenous institutions. These policies caused excessive human rights violations, reducing the capacity of the Oromo to improve own social and environmental conditions.

Villagization programs involved displacing Oromo residents by armed ethnic Amhara settlers, naftagna, to the Southern regions. These programs were implemented during successive Ethiopian rule. In 1987, the Christian Science Monitor reported on the Communist Totalitarian regimes version of Villagization in stating that:

“many Western and Ethiopian observers see the real vision behind villagization as the Governments desire for firmer control over the rural population. Villagers are often required to attend frequent political meetings to hear the latest Government agitation.”

As part of the Villagization programs, indigenous institutions such as Gada were targeted and replaced with local Kebele administration. Despite the pressure from each successive Ethiopian regime, the Oromo in regions, such as Borana and Guji, retained the Gada system, a socio-political and economic
self-governing system at the heart of classic Oromo civilization (Oromo Press, 2011). Under the current Ethiopian regime, Oromo students demanded the restoration of the Gada system. Under pressure, the Ethiopian Government allowed limited aspects of the Gada system, while simultaneously subjecting Oromo students and farmers to brutality.

The current regime’s form of Villagization implores installing Tigrayan control over all aspects of business, social and regional administration. Under the Tigrayan model, land in the colonized regions of the South continued to remain the property of state, facilitating many of the forced displacement programs instituted since 1991 (Table 2: Land Tenure comparison between Ethiopian regimes).

In order to implement the current strategy, the Ethiopian Government accelerated Development projects that expel local residents, often creating conditions for outsiders to replace them. In many cases, local residents end up as refugees in neighboring regional states and or countries.

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Land tenures</td>
<td>• Communal (Rist) in North</td>
<td>State tenure regime both in North and South</td>
<td>• Communal (Public) in North</td>
</tr>
<tr>
<td></td>
<td>• Colonial (Gebar) in South with establishment of state, private, &amp; church tenures</td>
<td></td>
<td>• Colonial (Investment) tenure in South</td>
</tr>
<tr>
<td>Policies</td>
<td>• Peasants of South suffered from burdensome tributes &amp; services</td>
<td>• Agrarian reform program @ revolutionary policy</td>
<td>• Announcement of the continuation of the land use policy of the military regime</td>
</tr>
<tr>
<td></td>
<td>• Sharecropping: harsh oppressive system was implemented in South</td>
<td>• Announcement of state ownership of rural lands (Proclamation 31/1975)</td>
<td>• Confirmation of the state ownership of land</td>
</tr>
<tr>
<td></td>
<td>• Tenants were forced to deliver up to 50% of the produce to landlord to maintain</td>
<td>• Size of land per family was restricted to a maximum of 10 hectares (Article 5)</td>
<td>• The 1995 constitution &amp; proclamation in 1997 provide the necessity for</td>
</tr>
<tr>
<td></td>
<td>the right to use land for subsistence production</td>
<td>• The use of hired agricultural labor was prohibited (Article 5)</td>
<td>rural land and labor markets to emerge</td>
</tr>
<tr>
<td></td>
<td>• The tenant was also subjected to arbitrary demands for gifts and labor services</td>
<td>• Rist and Gebar systems effectively abolished</td>
<td>• Use rights can be terminated, if peasants fail to use land (Article 3.5):</td>
</tr>
<tr>
<td></td>
<td>• Landlords were tribute collectors of the emperor</td>
<td>• Power of controlling land distribution &amp; access via peasant associations (PAs);</td>
<td>confiscation of uncultivated rain-fed land after 3 years and irrigated land after 2 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Committee of the PAs were tribute collectors of the military regime</td>
<td>(Article 22.1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Expropriation right to the regime if the land is required for public uses (Article 6.4)</td>
</tr>
</tbody>
</table>

Reference

Donham (1986); Aberra (2000); Jemma (2004); and Crewett et al. (2008)
Pausewang (1983) and Crewett et al. (2008)
Transitional government of Ethiopia (1991) ; FDRE (1995); RGO (2002); and Tom Lavers (2011)

Table 2: Land Tenure in colonized regions of Ethiopia (source: Jaatee and Mulataa, 2012)

In addition to villagization, the Ethiopian Government utilizes forced conscription into the ruling parties’ political arm as a secondary means of controlling the Oromo population. Those that do not become ruling party members are subjected to negative incentives which amount to human rights abuses, undermining the capacity of the population to protect the environment.
A 1998 Organization for Social Sciences Research in Eastern and Southern Africa (OSSREA) published a report on the state of environmental “mismanagement” in Ethiopia. In the report, OSSREA stated the following important factors of mismanagement (OSSREA, 1998)⁶:

- “The impact of colonization
- Unfair international trade practices
- Centralized system of government which have also frequently been dictatorial and undemocratic
- Ideological competition
- Inadequate technological development and disruption of existing indigenous systems, knowledge and technology
- Disruption of indigenous intuitions and
- Problems in the system of resource tenure and lack of access to land and other natural resources.”

The following are contributing factors to environmental mismanagement through human rights abuses:

- restriction on farmer feedstock,
- restricted from accessing international food aide,
- expulsion of students from primary and higher education system, and severe repression (HRLHA, 2011)⁷.
- intimidation and harassment and,
- extrajudicial disappearances and or death.

Environmental Destruction

Fires

Although fires are not new to the Bale Mountains, at least two incidents have Environmental Scientists concerned particularly the scale of damage. One incident was in 2008, where massive fires destroyed over 12,825 ha of land mostly in the Oromia Region. The 2008 fire was second to the largest in the Oromo region, which according to Oromo Support Group⁸ was started January 30, 2000. During the January 2000 fires, more than 600,000 ha of natural forest was charred in the Oromia region alone, and the fires destroyed many villages, farms and beehives. A study from the International Journal of Environmental Sciences (Anteneh et. Al)⁹ compared the two massive fires against smaller scale fires. Typical fires were a small fraction on the order of 200 ha per incident (see Table 3).
The Ethiopian government (GOE) claimed the 2000 fires were started by honey processors and farmers. The government’s claim raises a serious question about how these large-scale fires could have been started in at least three different geographically afar places in Oromia if it were not centrally planned as a way of destroying potential rebel hideouts. Although the GOE knew that fires were raging from weeks to months, it never responded to put them out, prompting volunteer, but untrained university student “firefighters” to intervene. Oromo Support Group informants further challenges the GOE claims, suggesting instead that the Government were involved as part of a campaign to target opposition, students and resistance groups.

Factors

Numerous studies suggest the increased population growth, particularly outsiders to Oromia region, or non-indigenous people as a major factor of the massive fires. One major contributor to the rapid population expansion was successive villagization programs by the Ethiopian government. During the villagization programs, Amharic-speaking settlers were sent to the garrison towns such as Goba in Bale. According to residents, the armed settlers overran many of the Oromo residents, who fled to nearby towns of Roba.

A 2011 article, International Journal of Environmental Sciences, supports the statements by local resident regarding outside settlers. The study states (Anteneh et. Al):

“It is fairly sure that there has never been any historical permanent settlement with solid houses in the Bale Mountains, as there are no remains of the latter, and other traces of Oromo culture have not been found either, suggesting that all settlement are new to the ecosystem.”

It was also reported that new settlers to the region attempted to disrupt student and local efforts in putting out fires. The same study provided the following report on new settlers:

“It is also interesting to note that researchers findings on new settlers to the Bale region, who were not Oromo the local settlers were not willing for participation in the campaign, rather they were aggravating the fire by inducing fire everywhere to increase the dimension.”

Oromo Support Group reported that the GOE did not plan on taking action to put out the 2000 fires until after April, the rainy season. Pressure from Oromo students at Addis Ababa University and media forced the GOE to allow 350 AAU students to help extinguish the fires (OSG, 2001). However, students from other Universities were banned from assisting on-site.

<table>
<thead>
<tr>
<th>Year</th>
<th>Locality</th>
<th>Burned Land</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>Darkena, Morabawa and Wrgona</td>
<td>535 ha</td>
<td>January/February/</td>
</tr>
<tr>
<td>1984</td>
<td>Multiple</td>
<td>195 km2</td>
<td>December/March</td>
</tr>
<tr>
<td>1991</td>
<td>NW escarpment</td>
<td>210 ha</td>
<td>December/January</td>
</tr>
<tr>
<td>2007</td>
<td>Multiple</td>
<td>5.6 km2</td>
<td>January/February</td>
</tr>
</tbody>
</table>

Table 3: History of fires in Bale Mountain and typical scale (source: Anteneh et. Al)
Eye witness reports\textsuperscript{10} corroborate studies suggesting Ethiopian Government involvement. Students during 2000-2001 reported observing helicopter drops, which were supposed to be fire suppressant material, but in reality were incendiary material causing upsurge in fire intensity. Local residents reported rapid fire increase after the drops. Further compounding the issues were outsiders, such as those that lived in Goba, were blocking Oromo students from entering the fire zone to help put out the fires. Eye witness reported armed groups, Amharic-speaking and not indigenous to Oromia region, using vehicles to block entry through the town of Dello Mena, access point to the fire.

Lack of action to put out the fires, attempts to block students from extinguishing the fires, and subsequent killings of Oromo students were noted as serious concern of the GOE actions by human rights and environmental activists. The leadership of Macha Tulama Self Help Association, established in 1963 to improve the conditions of Oromo people, reported students were harassed and intimidated when calling for action by the government. It was also reported that, students returning were subjected to harassment and expelled from University.

A letter by the Oromo Communities of North America Organization Committee criticized the GOE’s slow response, and attempts to disrupt efforts to put down the fires. The letter stated:

“The Government of Meles Zenawi not only downplayed and ignored the fires but also either discouraged or prevented Oromo students, environmentalists and civic societies from mobilizing to put out the fires.”\textsuperscript{11}

\textit{Primary Impact}

In addition to the loss of villages, farms and beehives, the 2008 Bale fire caused severe destruction to the environment including death of mammals and birds. The fire burned extensive Erica shrub coverage and up to 15 cm depth soil. Significant reduction in vegetation can lead to increase runoff and lessens water percolation. Water percolation can lead to decrease water levels in lakes and waterways. Elders in Goba reported decreases each year of Togona river water level.\textsuperscript{9}

One study correlated degradation of soil and forest vegetation with poverty and hunger of the of the people around Bale Mountains. In addition to soil degradation, the environment is vulnerable to land slides and flooding due to fires in Bale, as well as loss of indigenous plant and wildlife (Getahun, 2009).\textsuperscript{12}

A second study provides details on post fire effects on soil. One of which is increase of soil temperature due to radiation (solar) from reduction in vegetation cover and burned soil surface. High soil temperature can impact seed survival and nutrient enrichment below ground (Johansson, 2013).\textsuperscript{13}

The study also suggests that blackened soil changes water balance. A consequence is soil erosion, which can result from reduction in transpiration and interception. It is believed that:

“...many long-term effects on the soil stem from the altered above- and below-ground community composition, mainly depending on canopy mortality, depth of burn and different abilities of species to re-colonize.”\textsuperscript{13}
During the fires, student demonstrated to oppose GOE slow response. As a result, many Oromo high school and University students were killed by GOE security across Oromo region (OSG, 2001)\(^8\). According to Oromo Support Group, four Oromo students were killed by GOE police in Ambo March 9, 2000 at the onset of demonstrations. Among the youth killed by Ethiopian Police was Getu Diriba, a 12\(\text{th}\) grade high school student.

Among the 350 students who were allowed to assist at least one disappeared, Terefe Ejere. Others were restricted from going on AAU campus after returning from Bale Mountains. Oromo Support Group reported that Terefe was taken from his dormitory on May 2 and went missing for several weeks (OSG, 2001)\(^8\).

**Pollution**

**Air, Soil and Drinking Water**

**Industrial Pollution**

Numerous waterways, streams and lakes were found to have industrial pollution. Allegations of environmental mismanagement have been directed towards such industries as Sugar producers, mining industry, flower producers and leather tanneries. In most cases, pollutants are found in waterways and streams that are known byproduct of their industries.

**Sugar Industry**

A 2004 United Nations Economics and Social Council report documented under case number 2004/78 alleged pollution by a sugar company in Wonji, Shoa and Metahara in Oromia region in Ethiopia (UN, 2003)\(^{14}\). The company was Dutch-owned HVA International that operated from 1954 until 1974-1975. Communities in the surrounding Industrial plants reported on pollution from air and water, high fluoride contamination. Air pollution was attributed to dust, particularly asbestos from the manufacturing plant.

Research conducted by CABI – Biosciences and International Environmentalist such as World Wild Life Fund (WWF) provides information on common pollution associated with Sugar Industries (WWF, 2005)\(^{15}\). Typically, Sugar industries with little or non-existent Environmental managements systems contribute to Air, Soil and Water pollution.

In addition to reported pollution by Sugar Producers previously owned by HVA Industries, pre harvest burning in preparation for cane fields were attributed to air pollution and soil degradation. The results are high Carbon Monoxide and Ozone in the atmosphere, particularly with the large farms. Soil degradation was linked to Nitrogen removal from harvest burning.

HVA International wrote a letter back to UN regarding alleged contamination. In the letter, HVA responded that sugar industry was nationalized by the Ethiopian government in 1975. During Nationalization of Industries, the Ethiopian government reportedly claimed a significant amount for compensation for fluoride contamination. It is not clear if residents received compensation for the claims.
Mining

MIDROC, a Gold producer was alleged to have polluted in the Shakiso Oromo region. Local population reported on December 2009 with follow up demonstrations regarding the pollution by Laga Dembi Mine. Ethiopian security responded with extrajudicial disappearances. Students who protested against the pollution were taken by authorities, including Nagga Gezaw, Dhaba Girre and Jatani Wario (International Rivers, 2010). Nagga Gezaw was a 2nd year civil engineer. Ms Jatani Wario and Mr Dhaba Girre were 2nd year co-operative and 3rd year management, respectively. The three students disappeared January 5th and 6th, 2010. It was later reported they were held at Maikelawi Central Investigation (OSG, 2010).

Flower Producers

According to Addis Fortune, a weekly newspaper in Ethiopia, Top Flower Company filed a lawsuit against individuals within FLODAC B.V, a Dutch Horticulture consulting company after failed production. The suit alleged that FLODAC B.V provided improper advice on fertilizer type and amount for an 8 hectare flower farm in Holleta, Oromia (Gadaa,2009). Now the soil is contaminated with fertilizer, rendering the 8 hectare plot of land unusable for farming.

Rivers and Lakes

In Oromia and Ethiopia, one major water source (Lake Koka), 50 miles south of Addis Abeba, is very dangerously polluted. This has rendered the water unusable for the many residence of Akaki (population estimated at 17,000) who depend on the lake for daily living. Neighboring regions also rely on Lake Koka, as it is not uncommon for people to walk 15 to 30 miles for water (population estimated at up to 332,300).

The pollution in Oromia region in particular is not isolated to Lake Koka. Studies have reported that Akaki and Modjo River pollution has high contamination from industrial and municipal waste water. Action Professionals Association for People or APAP (NGO in Ethiopia) conducted a study January and February 2006 on Akaki and Modjo River pollution. According to the APAP report in conjunction with consultants:

“... the scale and rate of pollution in the little and the great Akaki rivers and their tributaries as well the as Modjo river is extremely severe with immeasurable high negative social and economic consequences.”

Factors

Lake Koka

The environmental contamination at Lake Koka is directly attributed to the construction of Awash Dam in 1957, and subsequent construction of industrial manufacturing facilities upstream of the
lake. The Awash dam caused stagnation of the water allowing accumulation of Nitrates and Phosphates. In scientific studies conducted in 2003, researchers found extremely high levels of toxic green algae. Further compounding the issues were the lack of enforcement of environmental protection laws resulting in industrial companies releasing untreated effluent waste upstream of Lake Koka (Zinabu and Pearce, 2003)\(^2\). A consequence of untreated industrial effluent waste treatment results in high Nitrates and Phosphates contamination, producing toxic green algae, Microsystsis Aeruginosa.

The industrial waste has caused significantly high levels of heavy metal. Scientific studies from 2003 documented these levels in watermelons grown in the area (Zinabu and Pearce, 2003)\(^2\).

<table>
<thead>
<tr>
<th>Measured Levels(^1)</th>
<th>Chromium (µgL-1)</th>
<th>Iron (µgL-1)</th>
<th>Nickel (µgL-1)</th>
<th>Lead (µgL-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US EPA Max Conc Levels</td>
<td>100</td>
<td>300</td>
<td>100</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 3: Lake Koka levels compared to USA EPA Maximum Concentration Levels for primary drinking water (source: Zinabu and Pearce, 2003)\(^2\)

**Akaki and Modjo River**

The study conducted by APAP\(^1\) found high levels of contamination near dense populations and industry, particularly Finfinne (Addis Ababa) and Modjo. Sources of the pollutions were identified as:

- Manufacturing plants
- Municipal
- Irrigation drainage
- Construction runoff
- Other liquid waste

Researchers also found that poorly maintained septic tank systems severely impacting water quality.

**Primary Impact**

According to a 2003 analysis by Environmental Research Center at the University of Durham, Lake Koka’s green algae are some of the most toxic form. Consequently, the residence that depend on Lake Koka for water are suffering from gastroenterological disease, liver disease, liver cancer as well as malaria, cholera and other water born diseases. A December 2004 UNESCO report on Ethiopia stated the mortality rate to be 100 per 1000 of which 44.2% relates to disease. District Health workers estimate that Akaki (Ammudde) residences have 2/3 higher rate of illness and death compared to neighboring regions. Based on the higher frequency, estimated mortality rate increases to 73.7 per 1000 (up from 44.2). One resident, Aadee Amina, lost 6 of her children and her husband. Many others in Akaki have suffered the same fate.

APAP concluded from their 2006 study that Akaki and Modjo rivers were some of the most polluted waterways. At that time, APAP documented that the rivers continued to receive untreated
effluent streams from Industrial and municipal waste. As a result, many uses of the water were problematic and posed severe health risks to the residents and their livestock near the rivers.

Since the contamination contained pathogens and toxic metals, the use of the water was a health risk for irrigation and horticulture as it also contained caliform bacteria. APAP sited that skin contact was a severe risk to the irrigators. One noted risk is the water would enter into the ground water, contamination drinking water supply. The contaminated water can potentially cause disease outbreaks from.

The immediate impacts of worsening water quality includes:
- Drinking water shortage due to rapidly deteriorating water quality
- Human health risks and corresponding quality of life issues
- Animal health issues
- Negative impact on education resulting from illness facing youth.

In each case, the Government of Ethiopia’s commitment to enforcing Environmental Protection measures is lacking particularly when it impacts Industrial development goals.

Pollution impact on Soil

Air and water pollution from Industry further contaminate soil, contributing heavily to the regions soil degradation. Soil degradation is accepted widely as a serious problem for human development as it impacts the ability to grow crop and raise livestock. In order to quantify the extent of soil degradation, experts characterize as:

- Water erosion
- Wind erosion
- Chemical degradation
- Physical degradation

Water erosion or surface wash is attributed to large scale farming practices with irrigation schemes which displace fertile topsoil (Oldeman, 1991) 19. As a consequence of loss of top soil, farmers introduce more fertilizers to compensate for lack of fertile topsoil.

Wind erosion is typically a result of decreased vegetation from removal for industrial purposes and, overgrazing. In many instances, clearing vegetation by fire is a significant contributor to allow wind erosion.

Chemical degradation has a number of contributing factors. These factors include:

- Loss of nutrients associated with inadequate soil preparation, including lack of adequate manure.
- Changes in salinity of soil caused by poorly managed irrigation.
- Acidifying fertilizers can cause acidification, including from air pollution
- Pollution from industrial and municipal waste
Physical Degradation is associated with compacting from heavy machinery, water logging from flooding, and or oxidation of organic soils.\textsuperscript{19} Typically, operation of heavy machinery for land lease projects can cause physical degradation.

**Oromo Forced displacement;**

The scale of Oromo forced displacement is often overlooked particularly when misclassified as “Ethiopian economic migrants.” Although some Oromo may leave Ethiopia seeking jobs, studies conducted by the Oromo Support Group and Human Rights reports suggest the larger factor is deprivation of human rights, and or fear of persecution.

Root causes of Oromo human rights abuses through displacement are “development” driven pollution, land displacement and restriction on access to employment and education. Denying a segment of population access to clean water, food, land use, education and professions each constitutes deprivation of human rights. Neither are the rights protected of Oromo who report on abuses, such as pollution, or who voice concerns on land displacement. Instead, they become victims of extrajudicial abduction, torture and death by the Ethiopian Government (HRLHA, 2011).\textsuperscript{7}

**Refugee Reports**

Oromo Support Group report on South Africa provided statistics and details on the number of Oromo who fled Ethiopia due to persecution. Oromo Support Group interviewed 70 Oromo refugees, and found that 68 reported human rights abuses. Two refugees reported they left Ethiopia to seek work. (OSG, 2013).\textsuperscript{22}

Among the refugees interviewed by OSG was one 33 year old man who fled Ethiopia due to human rights abuses against his family. The Oromo refugee returned to Ethiopia after numerous Government sponsored initiatives to encourage diaspora investments. He returned to Ethiopia and purchased a $35,000 tractor. In 2009, the government detained him and confiscated his tractor prompting the Oromo man to flee to South Africa as a refugee.\textsuperscript{22} The Ethiopian Government violated his human right through depriving him of making a living in confiscating his investment. In addition, extrajudicial detention and harassment constitute human rights abuse.

A second interview by OSG was of a 55 year old Oromo man (Mill owner) whose brother and son were killed by the Ethiopian government. The Government confiscated the Oromo man’s Mill, depriving him of a way of life.\textsuperscript{22} Afterwards, the 55 year old Oromo man fled to South Africa as a refugee.

Oromo Support Group reports on Human Rights abuses are corroborated by numerous organizations such as Human Rights Watch, Human Rights League of the Horn of Africa, Amnesty International, and through US State Department Human rights reports. Individual interviews of Oromo refugees resettled from North Africa support research by Oromo Support Group. One Oromo farmer stated in an interview that although he was not tortured, knowledge of his friends’ being tortured in Ethiopian prison along with the corresponding insecurity led him to flee.\textsuperscript{23}

“Development” Driven
Development projects that require relocation and or severe industrial pollution that impact daily living can force many families to flee to other adjacent regional states and or countries. Typically, projects that impact daily living including construction of dams such as the Gibe III in the Omo valley. Dam construction diverts water from farmland, use for domestic animals and severely impacts communities that rely on fishing. In many cases, Government and industrial companies require specific land, which is currently inhabited by indigenous peoples. Local residents are forced to accept government demands, since opposition can result in direct human rights violation much like recent abuses committed against people of the Omo valley.

According to the Oakland Institute and human rights reports, the Ethiopian Government implemented Villagization program in order to forcibly remove indigenous people to lease the land for plantations (Oakland Institute, 2013). Land was leased to Indian, Italian, Malaysian companies as well as state run plantations. The plantations include sugarcane, grain, cotton and palm oil. The Villagization program involved coercion and intimidation. Informants reported to the Oakland Institute that GOE promised compensation and or relocation to better land, which did not happen. Residents who refused are exposed to human rights abuses including extrajudicial disappearances, torture and killing of residents. In March 2012, two local residents (Mursi men) met with USAID Mission Director and Deputy Director for Ethiopia. The men reported to USAID that they were prevented from farming on the Omo River. Grain stores and farmland were bull dozed, including the land of Bodi and Kwegu people. The men also reported that the Ethiopian military raped women in the villages. In some cases, residents become refugees in other regional states and or other countries.

Similarly, projects that end up confiscating homes in cities for the sake of building condominiums impact residents’ way of life. The Ethiopian government has embarked on soliciting diaspora funding for generating currency to pay for the Gibe III dam. Part of the funding is derived from the condominiums sales to diaspora. In many cases, residents of homes on target property are forced to leave, and with high unemployment in Ethiopia, end up as refugees in other regional states and or countries.

Land Rendered Unusable

Environmental destruction from fires, pollution, and land clearing for Industry can cause soil degradation weakening crop yield. The direct impact is loss of topsoil, leading to reduction in infiltration capacity of the soil. In some cases, the soil becomes unusable for farming. A major impact to indigenous farmers is a loss of self sustainability, further deteriorating existing institutions for resource management. A loss of crop field forces farmers to either seek employment from an industry, or force families to move to other farmland. In cases where both options fail, the farmers end up as refugees as described in personal interviews in refugee advocacy reports.

Farmers report of Ethiopia’s practice of fertilizer and seed manipulation. One Oromo refugee in Yemen, from Jimma region of Oromia, reported to the Danish Refugee Council that the Ethiopian Government forced farmers to purchase fertilizer for crop from a government supplier (RMMS, 2012). Since the Government suppliers often charged well over the means of individual farmers, many are forced to leave the farmland. Danish Refugee Council reported that the Oromo refugees from Jimma
fled because: “The high prices and subsequent poor harvests meant that they had become indebted and so, to clear their debts, they had to look for work elsewhere.”

**Conclusion**

Overwhelming evidence suggests that Ethiopian regime has adopted repressive policies that contribute to human rights abuses and environmental destruction. Evidence also demonstrates that the two are closely related particularly when human rights abuses includes abuses against professionals, who are trained in the Natural Sciences, healthcare and engineering and Social Sciences deprising them of the capacity to solve the problems in the region.

Identifying the policies and practices which constitute massive human rights abuses by agents of the Ethiopian government is key to solving environmental catastrophes. In order to institute sustainable development, the Ethiopian Government must solve:

- Unemployment issues,
- Food shortages,
- Strengthen environmental protection,
- refugee forced displacement issues and corresponding human trafficking/smuggling crisis,
- Health issues in urban and rural settings,
- Educational challenges in primary schools and
- Shortages in professionals, including Medical Doctors.

The consequences of not taking action will continue to drive more Oromo refugees to flee Ethiopia. As a result, the number of refugees from the region of Oromia and elsewhere continue to grow significantly in neighboring countries and the Middle East. As Stateless people, these new refugees become exceedingly vulnerable targets of other forms of Human Right violations such as human traffickers and smugglers in North Africa and the Middle East.

The Regional Mixed Migration Secretariat reported the number of refugees and migrants from Ethiopia are steadily increasing\(^24\). Arrivals in 2011 were estimated at over 75,000, with the “largest and most vulnerable” being Oromo people from rural areas\(^25\).

**Recommendations**

**Refugees**

In order to reach the desired goals on poverty and development goals, the international community must end the practice of blanket classification of refugees as “economic migrants” particularly those who are Stateless, including the Oromo. Oromo classified as “Ethiopian migrants” excuses the United Nations High Commission for Refugees from its obligations to seek solutions for persecuted people groups, such as Oromo. Since the Ethiopian government does not protect the basic necessities of life for the Oromo, the Oromo in point of fact do not have a state; neither does the
government of Ethiopia nor neighboring countries have a vested interest in protecting stateless people. As UN organizations and NGOs dismiss the Oromo condition as non-existent, then attention is not placed on the catastrophe until a significant number of people die in one location.

*Environmental Disaster*

- The Ethiopian government’s implementation of existing recommendations on early warning systems is key to minimizing incidents of massive fires.
- The Federal Government of Ethiopia must also allocate resources and or seek international assistance to fight massive fires as a National disaster and not leave it to locals to put out the fires.
- The Federal Government of Ethiopia must protect Indigenous people and their rights to land use through utilizing expert research in defining boundaries. One study conducted by Jaatee, Dugo and Eisen recommended use of technology to create land ownership records (Jaatee, Dugo, and Eisen, 2013).

- The Federal Government of Ethiopia must also be required to implement the laws within the constitution to protect human rights of citizens. The action of any official that participates in intimidating and or harassing civilians when attempting to put out fires must be prosecuted as a crime.
- Ethiopian Government must support indigenous groups in resource management, particularly agricultural land preparation and rangeland management to protect the environment (Johansson, 2013). Termination of indigenous institutions does not lead to human development goals.

The International Community, who are aware (see Table 4 Appendix European Parliament comments), should pressure the government of Ethiopia to follow international guidelines on environmental protection and human rights. A key to doing so is for the International Community and NGOs to discontinue foreign aide money to the regime until destructive policies such as the 2009 Proclamation to Provide for the Registration and Regulation of Charities and Societies (CSP) are removed.
11. [Letter from the Oromo Communities in North America to H.E. Mr. Kofi Anan, Secretary-General of the United Nations]. Oromo Communities in North America Organizing Committee. 17 April 2000.


20. G. M. Zinabu1 and Nicholas J. G. Pearce2, Concentrations of heavy metals commonly known to impact the environment and other related trace elements were quantified in the water bodies of nine Ethiopian rift-valley lakes and their inflows, Hydrobiologia, submitted February 2003.


