

# CLIMATE CHANGE AND THE ENERGY-WATER- FOOD NEXUS:

*(Afro)Faith Responses  
to the Ethical Imperatives*

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## Introduction: Understanding the Water-Energy-Food Nexus and The Issues Arising

In his book “The End of Poverty,” economist Jeffrey Sachs names one of the most enduring ethical scandals of our time: massive loss of life due to extreme impoverishment, mostly in the global south, specifically Africa, where 15,000 Africans die daily from preventable causes and diseases.

Many of these deaths are linked to the multifaceted extreme poverty in the continent. Many die from lack of access to affordable *clean water* or from the impact of *chaotic water cycles*, alternating between drought and floods that are symptomatic of climate change. Many others die from hunger and starvation when such floods and droughts lead to crop failure.

Analysts have indicated that the climate change that leads to the erratic and extreme weather patterns is anthropogenic. It is intricately linked to the disproportionate emission of cfc (chlorofluorocarbons) particularly through the extraction and combustion of fossil fuels (oil and coal) for energy. Many in the global south, particularly Africa, also die from “energy poverty,” defined as a lack of access to affordable energy for lighting and cooking. While affordability of energy is necessary, it is not sufficient for energy security. This is because even where biomass energy such as firewood and charcoal is available (and increasingly this is not the case), combustion of firewood and charcoal can lead to ill health<sup>1</sup> and even death due to carbon monoxide poisoning and allied health issues. The use of kerosene lamps is not only costly because kerosene is expensive; it is also costly because the fumes pose a health hazard to users. For households to have energy security, then, it is imperative that they have access to affordable and clean energy (i.e. non-toxic) fuels such as biogas or electricity to meet their energy needs.

Now, while lack of access to water, food and clean energy (light and power) can each discretely result in massive loss of life, the three elements are interlinked in their potential impact. Lack of clean water can lead to death from waterborne diseases or hunger when droughts and floods destroy food crops or make the production and distribution of food physically

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<sup>1</sup> A recent UNICEF Report (30<sup>th</sup> October 2016) laments that 300 million children suffer from Breathing issues due to breathing toxic air. For details see [http://www.unicef.org/media/media\\_92979.html](http://www.unicef.org/media/media_92979.html)

impossible. Lack of fuel to cook the food has been many an African woman's nightmare while deforestation has a boomerang effect in producing climate change and extreme weather patterns that make food production difficult in many places. Moreover, not only does deforestation make it increasingly difficult to access fire wood, it simultaneously makes it difficult to grow food, due to soil degradation by runoff water where there is no forest cover.

**While lack of access to water, food and clean energy can each separately result in massive loss of life, the three elements are interlinked in their potential impact.**

Since forests absorb carbons, deforestation also reduces the planet's capacity to absorb cfc's, the disproportionate and rapid accumulation of which is cited as being instrumental to climate change. Disproportionate amounts of carbons are released into the atmosphere through the combustion of fossil fuels oil and coal. So both *deforestation and fossil energy use* exacerbate the climate change crisis. Water is necessary both for food production and the production of energy, including but not limited to, hydro-electric energy. In turn, lack of adequate energy (say to pump water from a source and to ferry it to where it is needed or to treat it so it becomes drinkable can compromise water security. The symbiotic nexus between water and energy needs to be recognized in efforts to seek sustainable solutions locally and globally.

While deforestation adversely affects hydraulic cycles and thus makes growing of food difficult leading to food insecurity, this lack of food triggers other issues including migrations from rural to urban centers or across borders in search of greener pastures. Conflicts around decreasing resources such as water and land lead to *displacement of peoples*, with many ending up in refugee camps internally or across borders as is the case with Kakuma Camp and Daadab both in Kenya. The displacement of peoples has increasingly been exacerbated by climate change which causes extreme weather patterns. Droughts, floods, heat-waves and extreme cold all have

led to the emergence of the so called "climate refugees." The refugee camps themselves become congested and sites of highly compromised access to water, energy and food (leave alone access to other basic needs such as education, health, shelter and security of persons).<sup>2</sup> The camps themselves become hotbeds of insecurity on multiple levels. Harrowing stories of women being raped as they venture out of the camps in search of firewood or water are often cited. The camps have also been cited as reservoirs for recruitment and radicalization particularly of displaced, dispossessed and desperate youth. This seems to be the case for Daadab, allegedly a hotbed for al-Shabaab recruitment. The three sectors are indeed interlinked and, since the three form a nexus, lack of access to one cascades into lack of access the other.

This means that responding to the practical and ethical challenges implicit and explicit in these sectors demands that the responses *acknowledge the nexus and avoid piecemeal* solutions some of which solutions end up being "Trojan horses," camouflaging or exacerbating problems in other sectors.<sup>3</sup> Acknowledging the relationship of this nexus with climate change demands that integrating rather than piecemeal solutions be sought so that efforts to solve issues of energy poverty do not end up compromising food and water security<sup>4</sup> or vice versa.

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- 2 Recently, on October 26th 2016, one such congested refugee camp, Calais, a.k.a *the jungle* was closed in France. For details see <http://www.chicagotribune.com/news/nationworld/ct-france-migrant-camp-calais-20161024-story.html>
  - 3 One such seeming Trojan horse is described by Naomi Klein. In her book *This Changes Everything*, she discusses a scenario where an environmental protection agency, The Nature Conservancy bought land from an oil producing company, ostensibly to protect the breeding grounds for an endangered species of birds. Later however, the conservation agency itself began to drill for oil in the land it had purchase, in ways that still threatened the endangered bird. For details see Naomi Klein: chapter entitled: *Fruits Not Roots: The Disastrous Merger of Big Business and Big Green*: in, *This Changes Everything*: Simon and Schuster 2014:192-196.
  - 4 As I write this paragraph, protests are being staged against DAPL (Dakota Access Pipeline) by members of Standing Rock Sioux Native Americans and allies, who are protesting the building of thousands of miles of pipeline to ferry crude oil through several states. Their concern is that while the oil flow will lessen America's dependence on foreign oil, it will compromise the water in their reservation. Interestingly, the protest against the pipeline is also because according to the Native Americans, it will disturb sacred burial sites. Both the dignity of the living and the dead will therefore be compromised and this is morally unacceptable from a Native American Perspective.

## Naming and Responding to The Ethical Issues:

One of the important insights from Jeffrey Sachs's analysis of poverty as an ethical issue is that poverty is a complex reality and that failure adequately to recognize this complexity has led to simplistic responses that do little to ameliorate the problem. In many instances the "cures" prescribed to end poverty are worse than the "disease." For Sachs, some strategies of ending poverty are reminiscent of old methods of treating headaches that involved the use of leeches and which, instead of curing them, often led patients to bleed to death<sup>5</sup>. Recognizing the nexus between water, energy and food insecurity is a step in the direction of understanding the complexities and intersectionality of the ecological crises humanity faces today.

A second reason why efforts to end poverty in its multiple dimensions is elusive is that the solutions given are "*a one T-shirt fits all*." Often designed elsewhere, these do not adequately take into consideration the social, political, cultural and historical context where the "T-shirt" is to be worn.

Such an approach is at best ineffective and can also lead to deadly consequences as was the case with the "uniform T-shirt" of structural adjustments programs which were designed by World Bank and IMF and imposed on developing countries without regards to historical, cultural or social political circumstance. The results were catastrophic and even today, many countries in the global south are still reeling from the impact of the SAP-ED economies.

Instead of this simplistic "one T-shirt fits all" approach, Sachs proposes "Clinical Economics," an alternative model for dealing with poverty, and which borrows several strategies from the practice of medicine as follows:

- Economists must recognize that economic scenarios, just as the human body, are complex. They must recognize that just as failure in one part of the body (say, kidney failure) can cascade into failure of other parts of the body, so also, failure in one sector ( a drought or a flood for example) can cascade into disastrous consequences in regards to food access. The nexus

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5 This "leech" effect was best exemplified by the *Structural Adjustment Programs*, austerity measures in the 1980s-1990s imposed by IMF and World bank ostensibly to help nation-states in the global south, particularly Africa, get out of debt and therefore out of poverty.

approach to energy-water-food security recognizes this interlinkage and complexity and is therefore more conducive to sustainable solutions.

- Second, just as in medicine one needs to diagnose root causes instead of prescribing a cure purely on the basis of "symptoms," so also is it imperative to identify root causes of a crisis (specifically the climate change crisis) if sustainable solutions are to be found.
- Third, just as it is prudent to treat all medicine as "family medicine", where, instead of just treating the individual showing the symptoms, efforts are made to diagnose the possible root causes of the individual's ailment in family dynamics and relations, so also economists must probe for possible "root causes" of impoverishment of certain nation states in the actions of other nation states who are all members of the "global family portrait" of nations as Sachs describes it. They would probe, for example, how some nations' efforts to increase their food and water security by importing food grown in other countries or leasing land elsewhere to grow it affects the sending countries' own food and water security.<sup>6</sup>
- Fourth, good development practices demand constant monitoring and evaluation of proposed solutions. In some instances, today's solutions become tomorrow's problems. In other instances, the solutions may look good on paper and in policy making board-rooms but end up not working well on the ground.
- Finally, development analysts and practitioners must develop *a code of ethics* and as I have argued elsewhere referencing Sachs, they should take on their work with a sense of responsibility and accountability particularly to the chief clients ... the poor.<sup>7</sup>

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6 Consider for example the problematic of "virtual" water extraction and consumption, say by growing flowers and using Lake Naivasha waters to irrigate the said flowers and exotic food crops which are exclusively for export and which might compromise local food security while boosting that of the importing countries. For details of the problematic of "virtual" water extraction from Lake Naivasha in Kenya's Rift Valley, see Padraig Carmody: *The New Scramble for Africa*: Polity, 2012:143-146

7 For details of the notion of clinical economics and its relevance for diffusing the ethical challenge of radical impoverishment in Africa, see Hinga, T.M: *Becoming Better Samaritans: The Quest For New Models of Doing Social Justice in Africa*: In Linda Hogan, ed. *Applied Ethics in a World Church*. Orbis Books 2008:85-97. In the same essay, I proposed what I called a "Better Samaritan" approach to

## Responding to Ethical Challenges: Insights from “Clinical Economics”

“Clinical economics” analyses have yielded several clues as to why the crises arise and why they endure. Here I highlight several clues pertinent to the quest for sustainable solutions to issues of energy, water and food security as follows.

### ■ *Monocultures of the mind*<sup>8</sup> and “disappeared” Indigenous-local knowledge.

Probing the underlying causes of rapid loss of biodiversity at a global, even planetary scale, ecofeminist Vandana Shiva identifies as a root cause the disappearance of local knowledge systems and their approaches to nature. In their approach, they see nature (e.g. forests and rivers) as a partner in human’s quest for flourishing instead of seeing nature as a “resource “to exploit, or extract for commercial profits. Shiva observes that for Indigenous peoples, forests are not merely “factories” for timber; rather “forests provide food and livelihoods through critical inputs to agriculture, through soil and water conservation, through inputs of fodder and organic fertilizer”<sup>9</sup>. She further notes that indigenous *silvi-cultural*<sup>10</sup> practices are based on sustainable and renewable maximization of all diverse forms and functions of the forest and trees” and that “this knowledge is passed from generation to generation, through participation in the process of forest renewal and of drawing sustenance from the forest ecosystem.”

2004 Nobel Peace Laureate, the Late Prof. Wangari Maathai, herself also an ecofeminist, made a similar “clinical diagnosis” as she probed for root causes of ecological crises, specifically the food and energy crisis in Africa. She concluded that part of the problem is that Africans have accepted or been forced to accept the thesis that their cultural, ethical and spiritual knowledge base systems are inferior and unworthy. According to her, in accepting this thesis, it is as if Africans have boarded the “wrong bus” and are therefore failing to reach their intended destination, namely, *enhanced flourishing beyond mere survival*. Ecological disasters are partly linked to this failure to apply the indigenous knowledge systems which were more ecologically friendly. The cure, according to Wangari, is to replenish the earth by retrieving and applying what she calls “spiritual values for healing the earth and ourselves.”<sup>11</sup> Such values flow from Indigenous religion and spirituality, one of the three main faith traditions that Africa has inherited from history.<sup>12</sup>

Closely related to “monocultures of the mind” syndrome is the problem of *silo thinking*, i.e., the failure to recognize the interconnectedness of everything. Such “silo” thinking is apparent for example in efforts to address the energy crisis in the global north where, fearing the depletion of fossil fuels, “innovative” ways of extracting such oil now include hydraulic fracking. While this method of accessing oil mitigates against the anxiety of running short of fuel, fracking raises concerns about water pollution and displacement of those human and nonhuman animals, flora and fauna who happen to be in the path of such fracking.<sup>13</sup> Silo thinking, also shows up in the development of biofuels to reduce the carbon foot

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poverty, an approach which goes beyond charity to probe and address social injustices and systemic root- causes that impoverish millions in Africa and elsewhere, particularly in the global south

8 Shiva uses the phrase “monocultures of the mind “as a metaphor to describe single track thinking that privileges the “western “knowledge system as the only viable knowledge base for development. Such mono-cultural thinking thrives while diverse “local/indigenous knowledge systems” are disappeared ” through being ignored, demonized and even outright repressed by “dominant systems. Shiva argues that mono-cultural mindsets results in loss of biodiversity and subversion of ecosystems on the ground.

9 For details of this analysis, see Vandana Shiva: *Monocultures of the Mind: Perspectives on Biodiversity & Biotechnology*. Zed Books 1997 (3<sup>rd</sup> Printing) Chapter 1

10 silvi-culture is the art and science of establishing, growing and managing healthy and quality forests that meet the diverse needs and values of the communities. Shiva suggests that indigenous silvi- cultural practices were more sustainable and since they were more friendly to biodiversity and they do not commoditize the forests.

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11 She makes the case for retrieving and applying indigenous African ethical knowledge in her book: *Replenishing the Earth: Spiritual Values For Healing Ourselves and The World*: DoubleDay 2010

12 Ali Mazrui, refers to “Africa’s Triple Heritage” of Indigenous African Religions, Christianity and Islam. More recently, particularly under globalization, Africa has encountered other spiritual heritages (e.g. Hinduism and Confucianism) whose worldviews also yield moral wisdom which could complement the moral insights embedded in the Triple Heritage for an enhanced and even more viable ecological ethics and practice.

13 The Current Standoff about the Dakota Pipeline exemplifies both “*monocultural thinking*” that has led to the “disappearing “of Native American’s worldview and its more ecofriendly ethics as well as “*silo* “thinking which privileges access to fossil fuel while seemingly disregarding issues of water safety, not only for the current generation but also for future generations. From the Perspective of a Native American worldviews,the current generation did not inherit current resources from the past generations; rather we are borrowing them from the future generations!

prints. The use of food crops such as corn and palm oil to produce “food for cars” succeeds at the expense of creating food insecurity for humans and animals. Land that would be used to produce food crops is surrendered to the growing of biofuel crops including the controversial jatropha. Some trees and shrubs such as the controversial “Mathenge” in Kenya, originally planted for re-forestation turned out deadly for livestock but is now touted as a resource for biomass power generation<sup>14</sup>.

A third, (possibly tap) root cause of the crises we have at the nexus of energy food and water is consumerism and *greed, both individual and corporate*. The realization that Greed is a root cause of issues humanity is facing recently led some has led some activists convene a conference emphasizing the imperative to “get off the greed” so that others can get safely on the grid!<sup>15</sup> The same recognition led to an anthology published by Orbis books in which authors from various faith traditions reflected on how the moral wisdom from the traditions can be applied to “subvert greed”<sup>16</sup> considered a major cause of multiple crises particularly under globalization.

Finally, there is also impunity which seems to spring from confusing what *we can* do and what *we ought* do. Technological and scientific breakthroughs in recent times have placed enormous power in peoples’ hands in unprecedented ways. The power is sometimes used recklessly and with a sense of impunity. Issues of what we ought to do with the tremendous power that humanity has gained particularly recently becomes part of the problem as humanity seeks sustainable solutions to the various yet linked ecological crises. Many violent conflicts that are an ecological bane in Africa as elsewhere are often symptomatic of culpable “muscle flexing” and “chest thumping” by those who have political,

economic, military and technological clout and power.

Such “silo” thinking is apparent in the global north where, fearing the depletion of fossil fuels, “innovative” ways of extracting oil now include hydraulic fracking, which raises concerns about water pollution

So what is to be done about this challenges and by who?

It seems to me that at the very least, if sustainable solutions to the crises at the nexus of energy-water and food are to be achieved, strategies that transcend mono-cultural and silo thinking need to be designed.

Transcending monocultures of the mind entails humility in recognizing that diffusing the complex and urgent crises at the energy-water-food nexus in the age of climate change calls for *all hands on board*. No one person, people, or nation has the “master” key to these issues. Diversity of ideas, voices, talents are needed. A “multi-faith” approach (such as the one embraced by Green Faith or the Parliament Of World Religions) to nurturing “global responsibility” in the quest for energy- water- and food -ethics reflects a step in the right direction. An approach that acknowledges and nurtures *all peoples’ moral agency* and talents will yield a diversity of ideas that will complement one another and cumulatively make for better traction as humanity navigates the rather slippery road towards a sustainable and livable future. Ways of *subverting greed* as well as ways of leveraging our power to enhance rather than subvert human and other forms of flourishing also need to be found. Technological and scientific power, while a good to be celebrated, will not on its own diffuse the crises unless those who wield such power wield it with a sense of *moral duty to protect*, particularly those most vulnerable and hence “powerless.” Put more positively, the empowerment of those at the bottom of power pyramids (The Bottom Billion) will be a necessary ingredient in the quest for suitable solutions.

14 Efforts to address deforestation and lack of vegetation cover in dry regions in Northern Kenya led to the introduction of a shrub in the mesquite family. It ended up being detrimental to livestock causing goats that fed on it to lose their teeth ... The livestock owners took their concerns to court and the tree got a catchy name—Mathenge... “the goat (destroying) shrub.” Recently there has been a proposal to turn this controversial and invasive shrub into feedstock for biofuel. for details see: <http://www.reuters.com/article/kenya-energy-biomass-idUSL5N11L40H20150916>

15 This was the title of a conference organized in 2014 by IDEX (International Development Exchange)

16 See Paul Knitter et al: *Subverting Greed: Religious Perspectives on the Global Economy*.

*Solar Power* needs to be complemented by *People's "Power,"* a regaining of their sovereignty where this has been eroded by the many disempowering forces in the context of which they precariously live.

### **Towards Morally Viable Solutions: Tapping Into Afro "Theo-Ethics.**

For a Christian seeking to participate in the quest for morally viable responses to the ecological crises, Christian *Theo-ethics* based on Biblical teachings provide a major resource. The biblical mandate is clear: *Love of God and Love of neighbor* are key ingredients in the ethical tool kit. Perhaps in the age of globalization and climate change the question who is my neighbor is still valid and urgent. Asked to clarify who is the neighbor to be target of love, Jesus's answer some 2000 years ago suggested that the neighbor is not necessarily the one geographically close to you or with whom you have a relationship. Rather, the neighbor is anyone in need and vulnerable. Today, the neighbors Christians are mandated to love are probably ones they may never see or relate to personally since these may be people on the other side of the globe, who have suffered deadly disasters due to climate change as this was the case recently with hurricane Matthew which devastated Haiti, yet again. The Christian moral duty to respond to neighbors in need despite distance is clear.

Christians seeking to nurture and embrace ecological conscience and practice have a great resource both in the Bible, and what Pope Francis, in his encyclical *Laudato Si'* calls the "*Gospel of Creation,*" embedded in the first biblical account of creation which celebrates humans created in God's image and therefore having agency, the capacity to discern right from wrong and the duty and freedom to do the right thing. The Gospel of creation is also embedded in the second creation story (Genesis Chapter 2) in which humanity is gifted the earth with the mandate "*to till and to keep it.*" They may use it but are also expected to be responsible stewards of it. For Christians, greed and extreme materialism are discouraged, while thrift and sharing of resources particularly with the poor are exalted. Matthew Chapter 25 remains a guide for many seeking morally viable responses to the plight of the vulnerable: the hungry, the homeless, the imprisoned and the

displaced. Serving such vulnerable people, without considering "a reward" is tantamount to loving God.

For Catholics, the biblical mandates have been interpreted and amplified in *Catholic social teaching* often captured and summarized in Papal encyclicals. These become veritable "manuals for applied ethics" regarding certain issues of social concern. Such issues include the quest for peace, which is the subject matter of the encyclical *Pacem in Terris* while the Rights of the Worker are dealt with in *Rerum Noverum*. The whole question of economic development is tackled in *Populorum Progressio*. Most recently, building on prior social teaching on various issues, Pope Francis issued an encyclical in which he persuasively and passionately argued the case for "integral ecology," a morally viable approach to ecological ethics and practice. He proposes an approach which overcomes "silo" thinking and which respects and engages the agency and input even of the most vulnerable. *Laudato Si'* has become a major resource for Catholics seeking viable solutions to the complexities of the ecological crisis exacerbated by climate change.

For the *African Christian*, however, a second resource reinforces and complements the biblical mandates and Church social teachings. This is in the form of *African indigenous ethics* which flow from the *indigenous African world view*. While monoculture thinking has historically relegated African Indigenous knowledge systems, including ethical knowledge systems, to the periphery, it is increasingly recognized that part of the reason why multiple and intersecting crises haunt the continent is the failure to embrace and follow through with the ethics flowing from the African world view. Several concerned African scholars and ethicists including Wangari Maathai cited above, have persuasively made the case for a *retrieval and application* of Afro-indigenous ethics.

Sambuli Masha, another key African scholar, passionately makes a similar case for retrieval of indigenous ethics in his book *Heart Beat of Indigenous Africa*.<sup>17</sup> In the book, Masha outlines key features of the African worldview, a veritable African "creedal statement": namely, i) Belief in God ii) Belief in the intrinsic unity between the individual and community iii) Belief that

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<sup>17</sup> For details see: Sambuli Masha: *Heartbeat of Indigenous Africa: A Study Of Chagga Education System*: Garland Publishers 2000:pp7-15 (here he outlines the four aspects of the African worldview and proceeds in chapter 3&4 to discuss the virtues of Ubuntu that flow from it.

the universe is a living, interdependent and interconnected whole, iv) and belief that the universe and humanity is in constant process of formation and transformation.

According to Mosha, from this worldview flows a viable ethical system and “cardinal virtues” which constitute a moral heartbeat and compass for Africans seeking *true Ubuntu* or authentic humanity and human flourishing. These 6 virtues are: Reverence, Self Control and Silence,<sup>18</sup> Diligence, Courage and Communality. The latter, Mosha argues, is the “master virtue” since it builds community, the platform in and through which other “virtues” are applied and lived. Applying the ethics flowing from the African worldview becomes a strong resource for Africans forming their conscience regarding matters of ecological ethical concern. Belief in the interconnectedness and interdependence of everything and the moral mandate for reverence for all, would support integral ecology as Pope Francis teaches. The notion that the individual is a unity with the community and that a *person is a person through others* subverts the radical individualism that has been a bane in the quest for viable solutions. Courage to name and shame structures of injustice and problematic power dynamics is supported both by the African ethics as well as the traditions of prophets of social justice in the Bible, including Jesus himself who modelled prophetic courage even to the point of martyrdom.

### **Conclusion: Some Practical Considerations, A Modest Proposal and Call to Action**

I close this essay by recalling a recent article in which I analyzed the issue of food security (or more accurately lack of it) in the African context. I made the case for the development of what I called a “(Social) Ministry of the Granary,” a faith-based platform through to seek sustainable solutions towards energy, water and food security and sovereignty. Such a ministry

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<sup>18</sup> This refers to voluntary silence that precedes authentic speech and which allows one to listen and hear the other in true dialogue.. it is the silence that precludes hate speech because it allows one to think through what they say and only speak to build not to subvert the dignity of the other in contexts of dialogue. It is the silence that keeps confidentiality but which is does not hesitate to speak the truth on the basis of “facts” gained through careful listening. It is in this context that theologians in Africa have called for a listening and hearing church, a “church with long ears...”(see for example Elochukwu Uzukwu’s book: *A Listening Church*: Orbis 1996)

would need to commit to locate and respond to “root causes of the crisis of hunger, water insecurity and energy poverty.” While the specific “incarnations” of the ministry of the granary would vary to accommodate local contexts, histories and cultures, such a ministry would in my humble view have some key defining features which I restate here as follows:

- It will be a *prophetic ministry* in the in the footsteps of biblical prophets of old and socially engaged scientists and ethicists of the present like Wangari and Shiva who are determined to discern and name and ways in which “the harvest is stolen,” forests destroyed and granaries rendered empty and increasingly non-existent. In the context of climate change, such a ministry would name and challenge behavior (greed, denial, indifference and fear) that amplifies climate change and triggers instability and displacement of whole communities and massive loss of life.
- Such a ministry must play a role in *monitoring and evaluating proposed solutions* and demand solutions that acknowledge the nexus between energy, water and food security as discussed above. In its monitoring and evaluating role, the prophetic ministry of the granary would need to be articulate and vigilant on behalf of the most vulnerable, both currently vulnerable as well as future generations. It would be articulate in calling for the *moral duty to protect* those most vulnerable to the vagaries of climate change. It would be on the side of the most vulnerable as they demand *reparations* and *restitution* given the fact that those who have suffered most from the disasters occasioned by anthropogenic climate change are the least polluters of the atmosphere and have the smaller carbon foot prints.<sup>19</sup>
- The prophetic ministry of the granary would need to be *creative, resourceful and entrepreneurial by tapping the diverse resources in terms of knowledge systems available in Africa*, including but not limited to Western science and technology. However, such a ministry of the granary would be wary of the over emphasis on western scientific knowledge while ignoring or

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<sup>19</sup> For example, citizens of places like Kiribati and the Catlett Islands have a minimal carbon foot print, yet their very homelands are threatened by rising sea levels due to climate change.



demonizing Indigenous knowledge. Such ignoring and disdain for matters African has not only been demeaning to Africans, it has also robbed them of much needed resources in terms of practical context-oriented knowledge. Infusing systems of food, water and energy production with *Ubuntu ethics of solidarity and distributive justice* would enhance efforts to challenge *unethical systems* of food water and energy production and distribution fueled by greed. In other words: a ministry of the granary would be *innovative, creative, and entrepreneurial* by reclaiming, nurturing and applying pertinent knowledge and ethical systems conducive to just and sustainable solutions.

- *A ministry of the granary* would nurture a prophylactic ethic responding in a proactive rather than simply reactive manners to multiple “inconvenient truths” in our midst. It will raise questions about unfair distribution of *benefits and burdens* that result from anthropogenic climate change. Since people can be manipulated through food scarcity and since famines and water scarcity can be manipulated for profit or other ambiguous goals such as proselytization or for votes, the ministry of the granary will go beyond bringing relief to victims of hunger. It will also ask hard questions about long term root causes and investigate who benefits and who gains from hunger and famine. Given the subtle causes and systems that exacerbate hunger, a ministry of the granary would proactively devise strategies for grappling with the complex structures of power and privilege in the age of globalization.
- Finally, the ministry of the granary would function as a platform for *awakening empowering and mobilizing the genius of people in the pew*. The global church including the church in Africa has plenty of talent in the pew and a great diversity of professionals: lawyers, scientists, engineers and ethicists and theologians and ethicists are to be found among the laity. Such talent would be mobilized through the ministry of the granary. This approach would also facilitate the reclamation of sovereignty and a sense of ownership on matters of food, water and energy security

I conclude by reiterating that navigating the energy-food-water nexus sustainably in the age of climate change requires *all hands on board*. The

problem of water, food and energy poverty cannot be solved exclusively from boardrooms, conferences and halls of power. Neither is there a technological magic bullet. Rather, profound insight and success can be achieved *in partnership* with the laity and ordinary people who regain much needed sovereignty by becoming advocates and ministers of the granary on their own behalf and on behalf of the most vulnerable including non-human animals and indeed plant life not only vulnerable but threatened by extinction.

**Transcending monocultures of the mind entails humility, and calls for all hands on board.**

### **Walking the Talk: Opportunities For Faith In Action To Replenish and Heal The Earth and Ourselves:**

The Paris Agreement of December 2015 which coincidentally came into force today (4th November 2016) is a document designed to facilitate action that will mitigate and / or help humanity adapt and develop resilience in the face of climate change. The agreement makes certain observations and acknowledges and takes into consideration certain realities which will shape and inform the action taken so that mitigation does occur, and resilience is enhanced for all but particularly the most vulnerable, mainly in the developing world including Africa. Here I highlight several of these observations and acknowledgements and explore how these can become opportunities for sustainable faith-based action in search of security and sustainability at the nexus of energy, water and food.

1. The agreement recognizes the need for “an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge.”

The agreement also expects each party (country) “to prepare, communicate and maintain successive “Nationally Determined Contributions” that they intend to achieve. Considering the point I made earlier that the Church (and one would add Mosque and Temple)

has members with tremendous knowledge, skills and talent in all spheres including scientific knowledge, one action would be to *identify and mobilize* the talent in the pews and perhaps, in partnership with universities and other institutions of higher learning and research, ensure that the best scientific knowledge is available so that actions taken are evidence based and scientifically sound and therefore more likely to succeed. Church members who have pertinent expertise could also be mobilized and supported (morally and financially) as needed to help in the preparation of viable, accurate, consistent, transparent NDC's as a matter of urgency. Here, as Jeffrey Sachs recommends, a keen sense of ethical accountability by all, including ethical accountability in research that would inform policy, would be enhanced by a tapping of the applied ethics in the various religious traditions.<sup>20</sup>

## Part of the reason why multiple and intersecting crises haunt the continent is a failure to embrace the ethics flowing from the African world view.

2. The Agreement recognizes “the importance of education, training, public awareness and right to information and cooperation at all levels.” This is a clear window of opportunity for churches, mosques, and temples to play their role in process of formation and conscientization. There are in churches examples of ready made platforms in and through which conscientization, awareness-building and the making of *transformative leaders* in the area of climate change can happen. These include the many groupings focused on one or other “apostolate” in the Catholic church (e.g. those focused on the rights of the worker or on peace ( e.g. Pax Christi). The *Small Christian Communities* (Mwaki in the Gikuyu context)

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<sup>20</sup> This tapping into *faith based applied ethics* is already happening for example in the quest for viable “healthcare ethics” in which the morality of various actions and options(e-g using feeding tubes for the “brain dead” and is ns is measured against the ethical ideals and moral imperatives of faith.

comprise the church at its most grassroots level. Through this platform, parishioners have been active on their own behalf, cushioning and supporting each other particularly when tragedy happens to individual members or to the community. Various prayer and welfare groups in the church including, for example CWA (*Catholic Women Associations*) chapters of which are to be found all over the African continent, can be an avenue through which to operationalize the role of educating, conscientization and mobilization of the laity, i.e the ordinary people, particularly women. There has in fact been a precedent in the way grassroots conscientization and mobilization through the church has worked well in the case of HIV/AIDS Crisis.<sup>21</sup>

3. The Agreement recognizes “the importance of integrated, holistic and balanced non-market approaches to assist in the achievement of the NDC's in the context of sustainable development and poverty eradication.” This is yet another opportunity for faith based action. Churches, mosques, and temples are well placed to support the development of non-market based alternatives to the often problematic mainly for-profit “solutions.” Such non-market, non-profit solutions can be developed and or supported through already existing faith-based humanitarian and social action initiatives such as CRS (Catholic Relief Services) which operates transnationally and which can help in the coordination of interventions that mitigate against the impact of climate change and enhance resilience in an integrated holistic *glo-cal* manner.
4. Article 9 of the agreement calls on developed countries to provide financial resources towards adaptation and mitigation and specifically calls for support for developing countries’ adaptation and mitigation efforts. Since the church operates “Glo-cally”, and since it does mobilize and manage financial flows within itself to serve certain ends as the church determines, here is an opportunity for the faith groups in the global north to participate in the mobilization of its own financial resources in support of the faith

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<sup>21</sup> Consider here the rather successful story of EHAIA Ecumenical HIV AIDS Initiative of the World Council of Churches. For details of this initiative see <https://www.oikoumene.org/en/what-we-do/ehaia>

groups in the global south and its efforts to participate in local or national climate change mitigation and adaptation efforts. These groups can also play a “prophetic” role in reminding the global north states of their obligations and promises in this regards as per the Paris Agreement.

5. Article 7 invokes a global goal to enhance “adaptive capacity, strengthen resilience and reduce vulnerability while also calling for recognition of adaptation efforts in developing countries (eg efforts in reforestation or reviving sustainable agro-forestry as is the reported in Malawi). The article specifically recommends that adaptation action should be “country driven, gender responsive, participatory and transparent.” Such action should “take into account vulnerable groups and community eco-systems.” It should be based on the best available science, including the science embedded in traditional knowledge systems of indigenous people. Here is an opportunity for the church to shift gears in terms of its attitude to local peoples, their culture and knowledge systems. Instead of viewing these with suspicion, the Church should create a mechanism for mapping and identifying pertinent cultural and practical insights from the local indigenous communities. Such insights could complement western science and technology in enhancing adaptation and resilience. Examples of indigenous knowledge include traditional methods of food preservation, methods of agriculture that conserve soil fertility and biodiversity or methods of land-use and distribution that ensure access to water and land by all on the basis of need rather than commoditizing it.
6. In Article 8, the agreement speaks of the importance of “averting, minimizing and addressing loss and damage associated with the adverse effects of climate change. “It speaks of loss and damage in the wake of climate change and the role of sustainable development in reducing the risk. This is an opportunity for creating or scaling faith-based initiatives toward sustainable risk reducing strategies. This would mean, for example, establishing early warning systems at the local level so that people have time to move out of danger’s way or to strategize on how to survive the disasters. Such early warning systems can be developed in a way that allows communication of the warning even in remote areas. Whatever

resources available through the church infrastructure can be mobilized in this direction. The reference to risk and damage also becomes an opportunity for creating a platform through which to take stock of the damage and risks and to speak and act on behalf of the vulnerable as they try to recover from the damage or to flee from the path of disaster in good time. Hard questions regarding reparation and restitution for those unfairly hit by the impact of climate need at least to be raised even though difficult to answer. “A Climate Watch Platform” concerned about the ethics of climate change action, inaction or indifference would be an appropriate place to raise those questions.

### Food security in the African context calls for the development of a “Social Ministry of the Granary.”

7. Article 10 recognizes the importance of technology and calls for “accelerating, encouraging and enabling innovation.” It encourages deployment and dissemination of available innovations and the support of developing nations to enable them adopt appropriate existing technologies (e.g. solar and wind energy innovations). Further, it encourages innovation by citizens of developing countries who have talent too. Many developing countries have embraced technology as part of the solution and have used it with remarkable success in some cases.<sup>22</sup> The challenge for the church is how to help access and affordability of the technology. In some cases, simple technology such the use of bio digesters to generate biogas has been adopted on a small scale even by enterprising peasants. Finding ways within and without the church to help scale the accessibility and affordability of clean energy by leveraging, accelerating and encouraging the use of innovations such as solar and wind energy becomes yet another opportunity for faith communities to

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<sup>22</sup> Consider for example the palpably successful use of Mpesa, Mobile Money technology to conduct business at all levels, particularly the grassroots levels in Kenya.

be in solidarity with the vulnerable communities seeking resilience through adoptive and mitigating technologies. Encouraging grassroots innovativeness would enhance the sense of “ownership” that is crucial for the success of any measures taken. Creative partnerships for global North and Global south church ‘going green together” would be consistent with the ethic of solidarity and communality that is central both to Christian African Theo-ethics.

8. Finally, the whole document calls for “transparency” in dissemination of information and in the determination and evaluation of actions to be taken so that the actions are equitable and consistent with sustainability and the flourishing of all, not just a privileged few. The question of transparency is fundamentally a moral one. Initiatives to inspire, incentivize, recognize and affirm transparency when it happens and to challenge lack of transparency need to be found. I submit that the Church is well placed to call on all people to act in good faith (as the Agreement insists) and in good conscience. Perhaps an interfaith “Climate Change Watch Mechanism which takes into consideration not only the mechanical, technological aspects of climate change action but also the ethical dimensions can be devised. In establishing such a climate watch system, the church, mosques and, or temples would be exercising their prophetic role. Needless to say, such a mechanism would only work if the congregation itself is consistent in modelling the transparency it requires from outside players and actors who are also working hard in search of a livable future in the age of climate change.

Through an interfaith “Climate Change Watch Mechanism,” the church, mosque or temple would be exercising their prophetic role.

Ultimately then, the intersecting crises occasioned or exacerbated by climate change become a Kairos for interfaith action. It is an opportunity

urgently to walk the talk and take bold, morally viable steps and action “to replenish the earth, our common home and to heal ourselves in the process, to quote the late Prof. Wangari Maathai, whose prophetic voice called for ecologically viable action by all, not just as a practical matter of survival but a matter of conscience. In thus walking the talk, communities and individuals of faith (or none) will be implementing Pope Francis’s call for all to become better stewards for Earth, our Common Home. For Pope Francis, such stewardship is not only a matter of practical concern, it is a moral obligation for all who share this common home!



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