

## SETTING SUSTAINABLE STANDARDS FOR BIOFUEL PRODUCTION: LEGAL AND INSTITUTIONAL IMPERATIVES

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### 1. INTRODUCTION

Due to the extensive warnings and scientific predictions on the potential and emerging impacts of global climate change on human life and survival, policy makers across the world are beginning to embrace renewable energy options as ways to reduce reliance on fossil fuels.<sup>1</sup> As the United States President noted:

But to truly transform our economy, protect our security, and save our planet from the ravages of climate change, we need to ultimately make clean, renewable energy the profitable kind of energy...We have known for decades that our survival depends on finding new sources of energy. Yet we import more oil today than ever before.<sup>2</sup>

One of such important option for diversifying energy sources is the production of biofuels. Biofuels include fuels produced and derived from plants, biomass, and other living organisms such as fats from animals and vegetable oil. Biofuels have been defined in Nigeria to include fuel ethanol, bio-diesel and other fuels made from biomass and primarily used for automotive, thermal and power generation, according to quality specifications stipulated by the Standards Organization of Nigeria (SON), Department of Petroleum Resources (DPR), and any other competent government agency.<sup>3</sup> Unlike fossil fuels that are explored from extensive and often expensive oil exploration activities, biofuels are derived from plants and nature. As such, biofuels have gained increased public attention as a

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<sup>1</sup> For a study of the impacts of climate change, see M Wallstrom, 'Meeting the Long Term Challenge of Global Warming: A European Perspective' in D Michel, (ed.) *Climate Policy for the 21st Century: Meeting the Long-term Challenge of Global Warming* (Center for Transatlantic Relations 2003) 17-25.; see also J Houghton, *Global Warming: The Complete Briefing*, (4th ed., CUP 2009).

<sup>2</sup> H Heat, *Obama Emphasizes Energy Policy in Budget Address* available at <<http://www.hillheat.com/articles/2009/02/25/obama-emphasizes-energy-policy-in-budget-address>> (accessed 10 March, 2012).

<sup>3</sup> Federal Republic of Nigeria, Official Gazette of the Nigerian Bio-fuel Policy and Incentives, <[http://www.sunbirdbioenergy.com/docs/Nigeria\\_E10\\_POLICY\\_GAZETTED.pdf](http://www.sunbirdbioenergy.com/docs/Nigeria_E10_POLICY_GAZETTED.pdf)>, accessed 12 October 2013.

transformative response to the negative impacts of oil exploration, particularly oil price hikes, energy insecurity and also environmental side effects such as oil spillage, gas flaring and the contributions to climate change. According to the National Non-Food Crops Centre, United Kingdom, biofuels reduce greenhouse gas emissions by around 90% when compared with fossil petroleum.<sup>4</sup>

The potentials for investments in biofuel projects are particularly high in Africa. Due to the availability of large arable lands for agriculture and the relatively low cost of farming activities in Africa, many developed countries have identified Africa as suitable locations for biofuel production in commercial quantities.<sup>5</sup> In Nigeria for example, with a land size of 924million hectares and a distinctively rich soil topography, the opportunities for large biofuel plantations are enormous. Nigeria is currently the largest exporter of cassava in the world. It is also a known source of *Jatropha Curcas*, sugarcane, soya, sweet sorghum, oil palm, and coconut.<sup>6</sup> Other promising African destinations for biofuel productions include Zimbabwe, Tanzania, Zambia, Mozambique, Ghana, Burkina Faso, Niger, Senegal and South Africa, which is already an emerging leader in the development and commercialization of *Jatropha* oil.

Despite the potentials for huge biofuel production in Africa, biofuel projects have often been hugely contested and viewed with skepticisms. Due to competing land tenure systems, traditional and cultural attachments of indigenes to land, many biofuel projects have been criticized for engendering land grabs. There are also human rights concerns such as the mass displacement of citizens from their homes to allow for biofuel plantations; citing and concentration of biofuel projects in poor and vulnerable communities; lack of governmental accountability on projects and the absence of judicial and quasi-judicial remedies for victims of these problems. These concerns are further compounded by the absence of legal guidelines and framework on biofuel production in many African countries. There is also the absence of institutional and intergovernmental coordination across federal, state and municipal levels- a situation that has led to the exclusion of stakeholders and indigenous communities in project planning and implementation.

This paper discusses the need to set uniform sustainability standards for biofuel production. It identifies the need to mainstream sustainability standards into emerging national plans and policies on biofuel production. Using Nigeria as a case study, this paper discusses and proposes the adoption of a five-part legal threshold that could serve as the minimum requirements that must be met before biofuel projects are approved. They are: project eligibility screen, human rights impacts assessment, stakeholder identification and consultation, information disclosure system and project review mechanism. This threshold emphasizes the importance of an integrated assessment to identify the human rights, social and environmental impacts and risks of biofuel projects; and the importance of effective community engagement and consultation with local communities.

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<sup>4</sup> National Non-Food Crops Centre, "GHG Benefits from Use of Vegetable Oils for Electricity, Heat, Transport and Industrial Purposes, available at < <http://www.nnfcc.co.uk/tools/ghg-benefits-from-use-of-vegetable-oils-for-electricity-heat-transport-and-industrial-purposes-nnfcc-10-016>> (accessed 23 September 2012).

<sup>5</sup> D. Carrington, 'Biofuels boom in Africa as British firms lead rush on land for plantations', available at <<http://www.guardian.co.uk/environment/2011/may/31/biofuel-plantations-africa-british-firms>> (accessed 12 September 2012).

<sup>6</sup> See A. Olaniyi, 'Biofuels Opportunities and Development of Renewable Energies Markets in Africa: A Case of Nigeria', available at <<http://www.ifad.org/events/jatropha/presentation/nigeria.pdf>> (assessed 23 October 2012).

## 2.0 Potentials of Biofuel Production in Nigeria

In order to set the appropriate context for our discussions of the potentials and paradoxes of biofuel production in Nigeria, it is pertinent to briefly explore and understand Nigeria's energy profile.

### *Nigeria's Energy Profile*

The Nigerian economy is arguably a monoculture: about 80% of government income, 90-95% of export earnings and more than 90% of foreign exchange revenues evolve from the conventional oil sector. Over the last fifty years, Nigeria has earned approximately \$800 Billion as oil revenue, a figure that dwarfs earnings from other sectors. While this is by itself good, Nigeria continues to miss the social, economic and sustainability prospects of diversifying energy sources, and the prospects of attracting investments in alternative energy sectors. Reeling from the impacts of the global financial meltdown, a number of countries have detected the sense in pursuing alternative energy sources to widen the national financial income base, avoid the higher cost of conventional oil production, combat energy insecurity, reduce dependence on fossil fuel and to encourage investments in renewable energy sources (RES).

Despite the international awareness on the impetus for energy diversification, Nigeria remains over-dependent on crude oil as a source of energy and revenue to the detriment of other sectors, particularly agriculture. In 2005, the Federal Government of Nigeria issued a directive on an Automotive Biomass Programme for Nigeria. This directive mandated the Nigerian National Petroleum Corporation (NNPC) to create an environment for the take-off of a domestic fuel ethanol industry with the aim to gradually reduce the nation's dependence on imported gasoline, reduce environmental pollution while at the same time creating a commercially viable industry that can precipitate sustainable domestic jobs. This was followed by the release of a *National Policy on Biofuel Production in 2007*.<sup>7</sup> Despite these moves, Nigeria remains largely dependent on crude oil. The extents to which these policy documents have been given any coherent level of implementation remain highly doubtful. This is arguably because policy makers in Nigeria have not compressively absorbed the huge positive impacts and impetus which biofuel production could provide to the Nigerian economy. Investments in biofuel production could provide alternative sources of energy to combat energy insecurity concerns in Nigeria, it could also result in job creation, increased investment in agriculture and a rise in the standard of living in many rural and urban areas in Nigeria. Furthermore, biofuel production in Nigeria could: enhance a massive reduction in carbon emissions; provide increased rural development primarily through technology transfer and mechanized farming. It would also result in diversification of energy and financial sources for the country through a shift from conventional energy to a more renewable and long-lasting source.

Some thinkers have however pointed to the high opportunity costs of commencing renewable energy projects in the presence of natural crude oil resources in Nigeria. It is the argument that biofuel production may be an unprofitable venture for Nigeria in terms of the net income that may result from biofuel investments when compared to crude oil investments. Specifically, scholars point to the high level

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<sup>7</sup> See Federal Republic of Nigeria, Official Gazette of the Nigerian Bio-fuel Policy and Incentives, <[http://www.sunbirdbioenergy.com/docs/Nigeria\\_E10\\_POLICY\\_GAZETTED.pdf](http://www.sunbirdbioenergy.com/docs/Nigeria_E10_POLICY_GAZETTED.pdf)>, accessed 12 October 2013

of investments required for biofuel infrastructure in Nigeria, uncertainties surrounding biofuels demand and continued high demand for Nigeria's crude oil as negative indicators that make biofuel production highly unrealistic for Nigeria. This economic argument compares the expenses and revenues of crude oil versus alternative energy production and highlights the higher production costs of renewable sources.<sup>8</sup> This makes renewable energy production appear unprofitable and unattractive.

Arguably, these contentions fail to examine the larger picture. To thoroughly understand the costs and benefits of biofuel production in Nigeria, there is a need to look beyond short-term gains. It is important to pay attention to the long-term sustainable development gains of biofuel production. This includes environmental benefits resulting from reductions in carbon emission; preserving the environment and its resources for the use of future generations and ensuring that oil and gas resources are not depleted before considering alternatives. For instance, Okoro, Akuru, & Ogbonnaya have demonstrated that Nigeria's crude oil production has peaked and that a decline is imminent and should be expected over the next few decades.<sup>9</sup> The Hirsch Report also showed that with the peaking of oil production, the world faces significant risks associated with oil price volatility. The Hirsch report advocates for mitigation at least a decade before the peak in order to ameliorate the associated risks. Global demand for oil is growing while the Hirsch report points out that geologists expect crude oil supply to fall below the level of demand.<sup>10</sup>

Renewable sources such as biofuels on the other side cannot be depleted. Due to the fact that they are drawn from plants and animals, their availabilities for future generations are substantively assured. According to the International Energy Agency (IEA) forecast, unconventional gas would account for nearly half of the increase in global gas production to 2035, with most of the increase coming from China, the United States and Australia.<sup>11</sup> Unconventional gas production is poised to result in change in energy demand and supply trends, massive expansions of energy production, solutions to energy shortage, increased economic activity and job opportunities for local communities.

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<sup>8</sup> See Duncan, J., "Costs of Biodiesel Production" Report Prepared for The Energy Efficiency and Conservation Authority. May 2003; also Charles, C., Gerasimchuk, I., Bridle, R., Moerenhaut, T., Asmelash, E. and Laan, T., "Biofuels – At What Cost? A Review of Costs and Benefits of EU Biofuel Policies (International Institute for Sustainable Development Research Report, April 2013).

<sup>9</sup> Udochukwu B. Akuru and Ogbonnaya I. Okoro, "A Prediction on Nigeria's Oil Depletion Based on Hubbert's Model and the Need for Renewable Energy" (2011) International Scholarly Research Network, Renewable Energy, available at <<http://www.hindawi.com/isrn/renewable.energy/2011/285649/>> (accessed 12 October 2013).

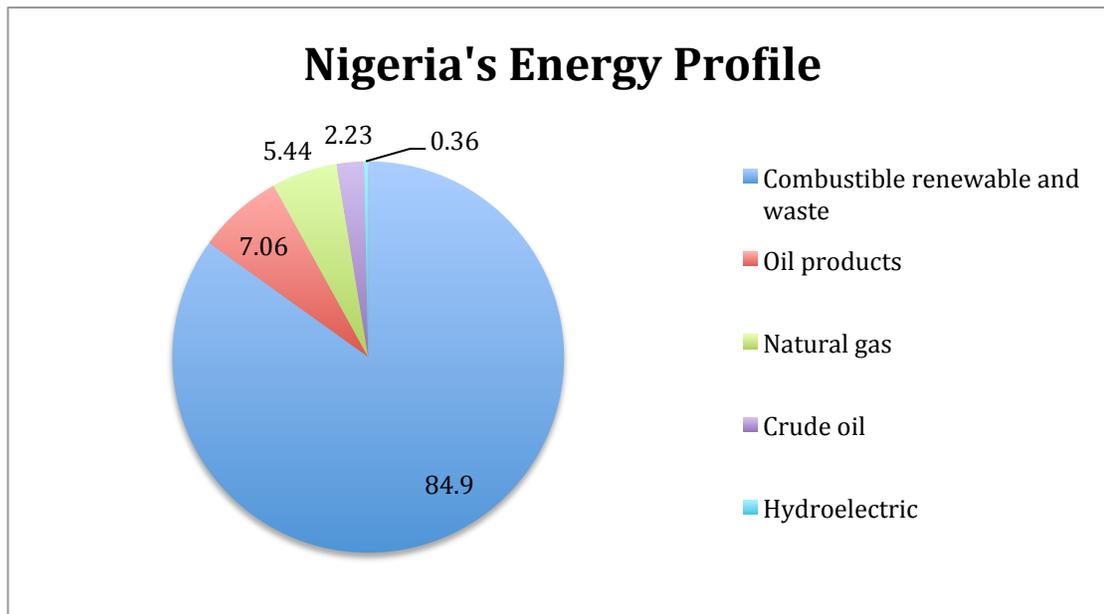
<sup>10</sup> Hirsch, Robert L.; Bezdek, Roger; Wendling, Robert, "Peaking Of World Oil Production: Impacts, Mitigation, & Risk Management" (Science Applications International Corporation/U.S. Department of Energy, National Energy Technology Laboratory, February 2005), available at <[http://www.netl.doe.gov/publications/others/pdf/Oil\\_Peaking\\_NETL.pdf](http://www.netl.doe.gov/publications/others/pdf/Oil_Peaking_NETL.pdf)> (accessed 12 November 2013).

<sup>11</sup> WORLD ENERGY OUTLOOK 2012 FACTSHEET, How Will Global Energy Markets Evolve to 2035 <<http://www.worldenergyoutlook.org/media/weowebbsite/2012/factsheets.pdf>> (accessed 12 November 2013).

**Table 1: Energy Production and Consumption in Nigeria, 2012**

Energy source	Production (in percentages)	Consumption (in percentages)
Combustible renewable and waste	84.9	82
Oil products	7.06	13
Natural gas	5.44	4
Crude oil	2.23	-
Hydroelectric	0.36	1
Other renewables	0	0
Nuclear	0	0
Coal and peat	0	0

*Source: Laurel University of Applied Sciences, 2012 Authors' modified*



## 2.2 The Economics of Production

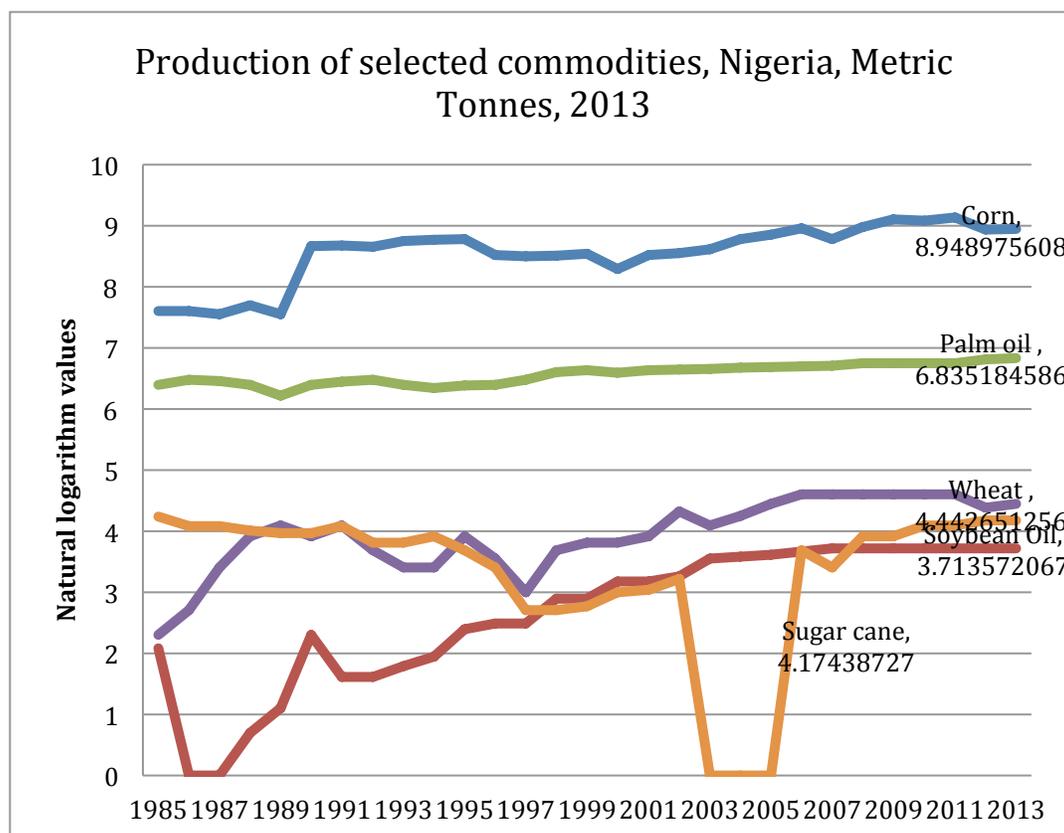
Despite the contentions, the potential for biofuel production in Nigeria remain considered as generally high.<sup>12</sup> Due to Nigeria's massive land size of 924million hectares, its distinctively rich soil topography, favourable climatic conditions and high level of agricultural activities in the country, the opportunities for large biofuel plantations are enormous.<sup>13</sup> About 82 million hectares of land in Nigeria is arable, while only about 33 percent of this arable land resource is currently utilized. This gives Nigeria a competitive advantage in terms of availability of arable land for

<sup>12</sup> See for example, Abila, N. (2010) "Biofuels Adoption in Nigeria: A Preliminary Review of Feedstock and Fuel Production Potentials", (2010) 21(6) *Management of Environmental Quality: An International Journal*, 785 – 795.

<sup>13</sup> See A. Olaniyi, 'Biofuels Opportunities and Development of Renewable Energies Markets in Africa: A Case of Nigeria', available at < <http://www.ifad.org/events/jatropha/presentation/nigeria.pdf>> (assessed 23 October 2012).

cultivating, growing and producing relevant agricultural plants and seeds for biofuels. Furthermore, Nigeria has consistently ranked very high in terms of the growth and exportation of agricultural products and commodities such as corn, palm oil, wheat, sugarcane, and cassava within the last three decades.

**Fig. 2: Commodity production, Nigeria, 1985- 2013**



*Source: United States Department of Agriculture*

Figure 2 shows the trend in commodity production in Nigeria between the periods 1985 to 2013. These show the potentials for biofuel production in Nigeria.

This aside, Nigeria may be considered a top destination for biofuel production in terms of the cost effectiveness of production. Due to the availability of affordable land and relatively cheap labour costs, it is an incentive to produce biofuels in Nigeria at the least cost possible, giving Nigeria a comparative advantage in the biofuel market.<sup>14</sup> While bioenergy production is capital intensive to kick off, long-term benefits may accrue in particular to the labour force in Nigeria, which has unemployment levels estimated by the IMF at 20.3 per cent in 2011.<sup>15</sup> Job creation at the rural level has motivated European Union (EU) subsidies on biofuels and a similar policy framework would be useful for Nigeria. Notably, agriculture currently

<sup>14</sup> D. Carrington, 'Biofuels boom in Africa as British firms lead rush on land for plantations', available at <<http://www.guardian.co.uk/environment/2011/may/31/biofuel-plantations-africa-british-firms>> (accessed 12 September 2012).

<sup>15</sup> International Monetary Fund. 2011. Annual report. Accessed March 19, 2012  
[www.imf.org/external/pubs/ft/ar/2011/eng/](http://www.imf.org/external/pubs/ft/ar/2011/eng/)

employs a significant proportion of workers in Nigeria. Investing in large-scale biofuel plantations across state and local governments levels will only improve the employment opportunities for youths and graduates; foster the investments in and transfer of technological equipment for mechanized farming; promote improved farming techniques and therefore turn the agricultural sector to a more attractive and competitive sector of the economy.

**Table 3: Costs of biofuel production according to product lifecycle approach**

<b>Lifecycle</b>	<b>Costs</b>	<b>Benefits</b>
1. Feedstock  Approximately 80 per cent of production costs for biofuels. <sup>16</sup>	1. Costs of water services and water footprint 2. Environmental Costs 3. Land degradation 4. Displacement 5. Land use effects on life cycle analysis	1. Decline in price of alternative fuels (kerosene) 2. Carbon credit earnings 3. Improved national employment rates 4. Possible impact on external trade and current account 5. Reduced consumption of fossil fuels
2. Transportation	1. Resource costs	1. Revitalization of the agricultural and transportation sector
3. Bio-refinery costs	1. Financial Costs	1. Internal rate of return (IRR) 2. Technology and innovation externalities
4. Process and Conversion costs	1. Process plant 2. Plant installation, piping, instrumentation 3. Plant buildings 4. Storage 5. Costs of production: Capital costs 6. Costs of operation	1. Energy security 2. Reduced greenhouse gas emissions

Table 3 presents the five stages in the product lifecycle for biofuel production and lists possible costs and benefits of the product according to each stage. Sielhorst *et al* (2008) aver that feedstock bears the highest weight in the cost of production. Notably, table 2 shows that infrastructure costs for establishing biofuel production plants are high, while table 3 poits out that once the technology is in place, the costs for the actual production process is heavily biased towards feedstock.

### 3. PARADOXES AND CHALLENGES

Despite these enormous potentials of biofuel production as a viable alternative energy source in Nigeria and Africa as a whole, biofuel production has witnessed a sort of false start in the African continent in general. There have been concerns that biofuel production may not deliver sustainable development to local communities. Local communities predominantly continue to view biofuel production as attempts at the largest land grabs of all time, and as a false solution to the economic, social and environmental problems facing Africa.<sup>17</sup> Due to competing land tenure systems,

<sup>16</sup> Sielhorst, Molenaar, & Offermans, 2008

<sup>17</sup> See J Conant, 'Massive UN-Supported African Palm Plantations Leading to Oppression, Kidnapping and Murder' (2012) available at

traditional and cultural attachments of indigenes to land, many biofuel projects have produced negative impacts on the culture and traditional lifestyles of peasants and rural land owners who have or fear that they may be displaced from their ancestral farmlands. There are also human rights concerns such as the mass displacement of citizens from their homes to allow for biofuel plantations; citing and concentration of biofuel projects in poor and vulnerable communities; lack of governmental accountability on projects and the absence of judicial and quasi-judicial remedies for victims of these problems.

The first few large-scale biofuel investments in Africa have provided reinforcements to these suspicions. A good example is the protest generated by the Sun Biofuel project in Tanzania. This was a project sponsored by Sun Biofuels, a UK based company in the District of Kisarawe, Tanzania. The project aimed at producing the agrofuel crop *Jatropha* on more than 8,211 hectares of land that was leased from 11 villages. However, the project has allegedly led to massive loss of farmlands and supply of fresh water.<sup>18</sup> Locals also allege that the employment and creation of infrastructure expected from this project did not materialize. Studies showed that the project employed only 35 locals before it packed up.<sup>19</sup>

Similarly in Nigeria, there have been massive projects against biofuel projects due to the fear that it would lead to loss of traditional lands.<sup>20</sup> As Nigeria's main environmental group argued:

The expansion of biofuels on our continent is transforming forests and natural vegetation into fuel crops, taking away food-growing farmland from communities, and creating conflicts with local people over land ownership. We want real investment in agriculture that allows us to produce food and not fuel for foreign cars.<sup>21</sup>

According to Friends of the Earth Europe,

Our research shows that Europe's demand for biofuels is a major driver of land grabbing in Africa. Local communities are facing increasing hunger and food insecurity just so rich countries can fuel their cars. The EU must urgently scrap its biofuel policy. We must invest instead in environmentally friendly agriculture and decrease the energy we use for transport.<sup>22</sup>

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<[http://www.alternet.org/environment/149778/why\\_u.n.backed\\_carbon\\_credit\\_schemes\\_may\\_be\\_fueling\\_land\\_grabs%2C\\_kidnappings\\_and\\_murder?page=entire](http://www.alternet.org/environment/149778/why_u.n.backed_carbon_credit_schemes_may_be_fueling_land_grabs%2C_kidnappings_and_murder?page=entire)> accessed 12 April 2013. See also G Monbiot, 'North Biofuel Appetite Causing South Starvation' *The Hindu*: November 7, 2007.

<sup>18</sup> See "Tanzanian Villagers Pay for Sun Biofuel Investment Disaster" available at <[http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/OI\\_Land\\_Deals\\_Brief\\_Sun\\_Biofuel\\_s.pdf](http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/OI_Land_Deals_Brief_Sun_Biofuel_s.pdf)> (accessed 12 October 2012).

<sup>19</sup> *Ibid.*

<sup>20</sup> It has been described as 'perverse incentives' to convert natural forests into monoculture tree plantations and to actually increase deforestation. See '<<http://www.foei.org/en/media/archive/2010/biofuels-for-europe-driving-land-grabbing-in-africa>> (accessed 18 October 2012).

<sup>21</sup> See "Biofuels for Europe Driving Land Grabbing in Africa" available at <<http://www.foei.org/en/media/archive/2010/biofuels-for-europe-driving-land-grabbing-in-africa>> (accessed 18 October 2013).

<sup>22</sup> See Friends of the Earth, Europe,

<[http://www.foeurope.org/agrofuels/FoEE\\_Africa\\_up\\_for\\_grabs\\_2010-Map-Tables.pdf](http://www.foeurope.org/agrofuels/FoEE_Africa_up_for_grabs_2010-Map-Tables.pdf)> (assessed 12 October, 2012).

These trends are exacerbated by lack of effective consultation with local stakeholders and landowners. According to the World Bank, ‘consultations with local communities are often weak’ while some developed countries take advantage of the weak infrastructures in these countries to carry out land grabs and irresponsible agro-investments in developing countries.<sup>23</sup> These concerns are also compounded by the absence of legal guidelines and framework on biofuel production in many African countries. There is also the absence of institutional and intergovernmental coordination across federal, state and municipal levels- a situation that has led to the exclusion of stakeholders and indigenous communities in project planning and implementation.

**Table 2: Strengths, Weaknesses, Opportunities and Threats for Biofuel Production in Nigeria**

Table 2 (below) presents a simplified SWOT analysis of biofuel production in Nigeria in an attempt to account for the net effects of biofuel production by comparing expected strengths, weaknesses, opportunities and threats of biofuel against fossil fuel production.

Biofuels	Fossil Fuels	Biofuels	Fossil fuels
Strengths		Weaknesses	
<ol style="list-style-type: none"> <li>1. Large land mass</li> <li>2. Rich soil topography</li> <li>3. Advanced farming techniques and agricultural research</li> <li>4. Employment generation, Rural jobs creation and reduction of pressures on urban migration</li> <li>5. Alternative fuel source including for aviation</li> <li>6. Available labour</li> <li>7. Cleaner and more sustainable</li> <li>8. Positive on climate</li> <li>9. Recycles used materials</li> <li>10. Production possible in various locations geographical regions countrywide</li> <li>11. Increases in world oil demand*</li> </ol>	<ol style="list-style-type: none"> <li>1. Infrastructure in place for extraction</li> <li>2. Lower economic costs of production in the short term</li> <li>3. Significant source of export</li> <li>4. Increases in world oil demand*</li> </ol>	<ol style="list-style-type: none"> <li>1. Requires foreign investment particularly in technology</li> <li>2. Soil depletion</li> <li>3. Water management</li> </ol>	<ol style="list-style-type: none"> <li>1. Unstable global oil prices</li> <li>2. Persistent decline in available crude oil resources</li> <li>3. Non renewable energy source</li> <li>4. Projected decline in global demand for fossil fuels</li> <li>5. Environmental concerns</li> <li>6. Resource available biased in certain geographical locations</li> </ol>

<sup>23</sup> See World Bank, <<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/0,,contentMDK:23284610~pagePK:148956~piPK:216618~theSitePK:336682,00.html>> (assessed 16 October 2012).

Opportunities		Threats	
1. Carbon credit earnings		1. Displacement	1. Price volatility resulting from peaking <sup>25</sup> of production
2. Internal rate of return (IRR)		2. Land grabbing	2. Increasing difficulty in accessing oil and rises in costs of fossil fuel production
3. Attracting investment opportunities <sup>24</sup>		3. Lack of judicial and quasi judicial institutions to protect the vulnerable	
4. Employment generation in the agricultural sector		4. Nature compensation of rare species displaced from natural habitat	
5. Decline in the price of alternative energy sources through increased competition		5. Food price hike`	
6. Energy access to rural areas			

#### 4. TOWARDS SUSTAINABLE BIOFUEL PRODUCTION IN NIGERIA: CONCLUDING THOUGHTS

Despite the seriousness of the concerns surrounding biofuel production, they should not call for a total abandon of biofuel opportunities as a whole. This will be tantamount to throwing the baby with the water. Instead, a proactive way forward is to ask, what legal and institutional frameworks could be adopted to ensure accountability and sustainable biofuel production in Africa, particularly in Nigeria.

To address the identified threats to sustainable biofuel production, a starting point will be to adopt a holistic national energy policy, which identifies Nigeria's key strengths in the renewable energy sector and national approaches to improving these strengths. Such a comprehensive policy document is yet to be developed and articulated in Nigeria. The closest Nigeria has is the 2007 *Official Gazette of the Nigerian Bio-fuel Policy and Incentives*.<sup>26</sup> Even though this policy document contains ambitious plans and programs, they have not been implemented with the desired level of impetus. This aside, this policy document focuses mainly on establishing a thriving fuel ethanol industry in Nigeria by utilizing agricultural products as a means of improving the quality of automotive fossil-based fuels in Nigeria. A comprehensive biofuel production policy and plan would aim to achieve more than this.

There is a need to move beyond a gazette national policy to adopt a more comprehensive *National Renewable Energy Plan* that clearly identifies the social, economic, environmental and political potentials, paradoxes, barriers and challenges of sustainable biofuel production in Nigeria and then prescribe policy measures on how to overcome those challenges. A national policy document will serve as a master plan that will guide participants and prospective foreign investors on the key agricultural sectors and strengths in Nigeria. It will also provide assurances to local communities on how the government plans to address land ownership issues, environmental concerns, water shortage concerns and other human rights concerns

<sup>24</sup> The Nigerian biofuel project stipulates for waiver on custom and import duties, value added tax for companies involved in biofuel production

<sup>26</sup> See Federal Republic of Nigeria, *Official Gazette of the Nigerian Bio-fuel Policy and Incentives*, <[http://www.sunbirdbioenergy.com/docs/Nigeria\\_E10\\_POLICY\\_GAZETTED.pdf](http://www.sunbirdbioenergy.com/docs/Nigeria_E10_POLICY_GAZETTED.pdf)>, accessed 12 October 2013.

that continue to fuel pessimism in the biofuel venture in Nigeria. A national policy on biofuel will also establish clear guidelines on the mandatory requirements and project approval threshold that must be met by prospective biofuel investors in Nigeria. A clear project approval threshold would ensure that projects that do not guarantee or satisfy the indicators of sustainable development, cutting across the economic, social and environmental indicators would not be approved no matter the potentials for agricultural expansion or biofuel production.

#### ***4.1 Proposed Sustainability Threshold for Biofuel Projects***

In this section, we propose the adoption of a five-part legal threshold that could serve as the minimum requirements that must be met before biofuel projects are approved. They are: project eligibility screen, human rights impacts assessment, stakeholder identification and consultation, information disclosure system and project review mechanism. The threshold addresses the need for a pre-project analysis of any project to ascertain its nature and the manner in which it would be planned and executed.

##### **1 Pre-project eligibility screen**

This test illustrates the need for a detailed description and analysis of a project proposal to ascertain the nature, objectives and likely impact of the project. Preliminary questions here would include whether the nature and scope of the proposed project raises any conflict with local priorities, the nature of technology involved in the proposal, the proposed location of the project including the criteria for site selection; and whether it could potentially affect the quality of the environment of the proposed location. To effectively answer these questions there is a need for a detailed environmental impact assessment early on in the project planning stages. There is a need for mandatory EIA for all projects at the planning stages. This would help shed light on the nature of the project and its likely social and environmental effects.

The results of the pre-project analysis should be included in a comprehensive project description document (PDD) which would amongst other things detail the purpose and nature of the project; the likely short and long term environmental impact, and alternative measures to reduce the impact. The nature of information to be disclosed will include a detailed description of physical and technical characteristics of the proposed activity, including an estimate of the expected residues and emissions; the size, pace, reversibility, and scope of any proposed project or activity; the duration of the project and/or activity; the locality of areas that will be affected; a preliminary assessment of the likely economic, social, cultural, and environmental impact, including potential risks; a description of the measures envisaged to prevent and/or reduce the effects, including emissions in line with the precautionary principle; a description of personnel likely to be involved in the execution of the proposed project (including indigenous peoples, private sector staff, research institutions, government employees, and others); and procedures that the project may entail; information as to whether that the activity is subject to a national or transboundary environmental impact; a non-technical summary of the foregoing information and an outline of the main alternatives studied by the applicant; the main report and advice issued to the public authority at the time when the public

concerned shall be informed of the proposed activity.<sup>27</sup> Information on projects and policies would also need to be completely disclosed.

The pre-project analysis of project location would also help identify with precision the various stakeholders who may be affected by a project. This would help to identify options for a project location with the least impact. For example, if this analysis were done early on at the planning stage, we can then find out, how many people would lose their lands and homes due to this project? This data would help with the decision as to whether there is a need for an alternative site location for the project and how to re-settle or compensate those who would be inevitably affected.

## II. Human Rights Impact Assessment (HRIA)

This threshold would require project proponents to flag the likely impact of a project on fundamental human rights and to demonstrate or describe the efforts put in place to mitigate or avoid these results. Different projects are likely to affect certain rights more than others and in different ways. For example biofuel projects involving mass sugarcane plantations have been criticized for resulting in flooding of farmlands and neighbouring houses.<sup>28</sup> This would violate several human rights including subsistence rights where crops are destroyed, a violation of the right to property where the reservoir floods homes or the right to health where the flooding causes transfer of diseases. Other biofuel projects have been criticized for violating the rights of indigenous communities to use lands for cultural and religious purposes; and for leading to crop and food shortage, hunger and rise in food prices, thereby infringing on the right to food.<sup>29</sup> It is therefore important to identify with precision through a self-reporting system the human rights that would likely be affected by a project and the measures that would be taken to avoid these impacts.

Through a Human Rights Impact Assessment (HRIA) project proponents could systematically identify, predict and respond to the potential human rights impact of a project or policy. The key questions under this test are: what human rights concern does this project raise or could it raise, which groups are likely to be affected by these human rights concerns; what specific rights are affected by this project or policy and what efforts would be taken to address these issues in the process of project design and implementation. A HRIA would provide clear and comprehensive answers to these questions to avoid any element of surprise or secrecy in project implementation.

HRIAs would help assess the impact of policies and projects, which are not specifically designed with human rights in mind, so they can improve the proposal to reduce potential negative human rights effects and increase the positive ones.<sup>30</sup> HRIA would complement other impact assessments such as the EIA and the sustainability screen. Its main difference is that it would be framed by appropriate international human rights principles and conventions to demonstrate how a project could affect the recognized human rights of stakeholders and how best to directly

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<sup>27</sup> See Article 6(6) of the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters adopted 25 June 1998, entered into force 30 October, 2001) No. 37770; see also Report of the International Workshop on Methodologies Regarding Free Prior and Informed Consent E/C.19/2005/3, endorsed by the *United Nations Permanent Forum on Indigenous Issues* (UNPFII) at its Fourth Session in 2005.

<sup>28</sup> P Lucas and T Patzek, 'The Disastrous Local and Global Impacts of Tropical Biofuel Production' (March 2007) *Energy Tribune* 19.

<sup>29</sup> See G Timilsina and A Shrestha, 'Biofuels Markets, Targets and Impacts', <[http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2010/07/19/000158349\\_20100719162226/Rendered/PDF/WPS5364.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2010/07/19/000158349_20100719162226/Rendered/PDF/WPS5364.pdf)> (accessed 12 September 2012).

<sup>30</sup> *ibid*

provide a leeway to those peoples whose rights may be at risk. A HRIA would help to produce comprehensive analyses that show a direct link between a project activity and how it might affect human rights. It takes a project-by-project approach to aid a quick understanding of the current situation and issues and the human rights impact both now and in the future. It also helps to shed light on measures that could be taken to avoid any anticipated impact.

HRIA would also require project proponents to demonstrate the fair distribution of projected risks. It would help to assess the implications of projects for low income people, the representation afforded to such categories in decision-making and ways to protect the interests of the marginalized through policies, legislation and programmes. It would make it compulsory for project proponents to demonstrate that a particular section of the society is not exceptionally disadvantaged by a project before said project could be approved. By developing concrete risk assessment procedures to ensure better characterization of risk across populations, communities, or geographic areas Measures would then be put in place to reduce high concentrations of risk among specific population groups.

To be effective, the HRIA must be completed at the project planning and design stages. The HRIA should be shown to have been conducted prior to the registration and approval of the project. As such, conducting a HRIA should be incorporated as a pre-condition for project approvals. This would ensure that any human rights impact would be put into consideration in planning and designing a project. It would also provide sufficient time for policymakers and planners to avoid the known consequences of a project or measure. Where the impact assessment indicates the possibility of potential human rights violations, it provides time for the project design to be revised to remove any incompatibility that has been found with pre-existing human rights obligations of the State concerned. This will prevent a situation whereby violations are detected only after a project has been commenced or completed. It provides an opportunity to anticipate and respond to the likely impact of a project on the human rights of citizens and stakeholders.

Not every possible impact of a project or agreement can be anticipated at the planning stage. As such, as such *ex ante* human rights impact assessments should be complemented by human rights impact assessments performed *ex post*, once the effects can be quantified. Human rights impact assessment should be regarded as an iterative process, taking place on a regular basis, for instance, every three or five years. Safeguarding clauses should be included to ensure that, should such *ex post* assessments lead to the conclusion that the State is unable to comply with its human rights obligations under the project scenario, registration for such projects would be re-appraised and if necessary withdrawn.<sup>31</sup>

### III. Information disclosure system

This threshold would make it mandatory for project developers to establish public disclosure programmes that allow for easy and cost effective dissemination of project information. This would include the need to place mandatory public disclosure requirements on project proponents for biofuel projects and on national governments to publish on a regular basis, all information related to a project including new risks and challenges; even when citizens do not specifically make

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<sup>31</sup> See OHCHR, 'Guiding Principles on Human Rights Impact Assessments of Trade and Investment Agreements'

<[http://www2.ohchr.org/english/issues/food/docs/20110701Draft\\_Guiding\\_Principles\\_on\\_HRIA.pdf](http://www2.ohchr.org/english/issues/food/docs/20110701Draft_Guiding_Principles_on_HRIA.pdf)> accessed 23 February 2012.

requests for such information. Information disclosure does not end at the planning stages, as projects move from one stage of development to the other, information is most likely to change with new facts emerging and some previous project information becoming outdated. There is thus a need to establish a comprehensive information management system that allows the public to receive the latest and most up to date information about approved projects. This information would enable the public to assess if projects are environmentally sound or if they have become harmful at some point along the line.

Disclosure of relevant project information on an ongoing basis helps affected communities understand the risks, impact and opportunities of the project. As such, this threshold would require public bodies to do more than accede to requests for information. They must also actively publish and disseminate key categories of information that are of significant public interest. Public bodies are to publish and disseminate widely, documents that are of significant public value and interest, for example, information about how the public body functions and the content of any decision or policy affecting the public.<sup>32</sup> This places a duty on governments and project developers to run disclosure programmes that allow individuals to gain regular access to publicly held information. This could be by keeping a public database or by releasing periodic documents on governmental affairs. The aim is to reduce the culture of secrecy in governance and to ensure that the right to information is not only reactive, but also proactive. Project developers must demonstrate that they have established a system of publishing information *suo motu* (proactively) on their own volition. The requirement here is to publish and inform citizens about known hazards relating to a project as soon as such information is available even when no request has been made by citizens. It takes access to information one step further by placing an obligation on custodians of publicly held information which is vital and important to the people, to publish it *suo motu*. Examples of project information that should be constantly released through public disclosure programmes include operational information, budgeting and costs, information on complaints, procedures for public input, and the details of decisions taken regarding issues affecting the public.<sup>33</sup>

A national policy or legal regime on biofuel production must place obligations on biofuel investors to promote and facilitate the provision of all available information on projects and policy measures to the public; and to ensure that the public have access to up-to-date information. The process of obtaining information should not be so tedious and complex; neither should it be designed to frustrate and discourage individuals from seeking publicly held information. By establishing cost effective disclosure programmes, the public would be encouraged to seek and obtain publicly held project information. Generally, biofuel investors must put in place procedures that facilitate and simplify the processes of obtaining project information. This can be done by publishing project updates on dedicated websites, sending periodic emails and newsletters to subscribing members of the public concerned, through radio, television documentaries and photos. It also includes delivering project update or information in the appropriate language and format understood by locals and in a way that such information reaches the most remote and rural communities.

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<sup>32</sup> See Report of the Special Rapporteur, 'Promotion and Protection of the Right to Freedom of Opinion and Expression' UN Doc. E/CN.4/2000/63, 18 January 2000.

<sup>33</sup> ARTICLE 19, 'The Public's Right to Know: Principles on Freedom of Information Legislation' (1999): <<http://www.article19.org/pdfs/standards/righttoknow.pdf>> accessed 12 May 2012.

#### **IV. Stakeholder identification and consultation**

The question that project proponents must answer under this threshold is ‘have all likely stakeholders been identified and consulted?’ The first part of this test highlights the need for project proponents to demonstrate that all likely stakeholders have been identified during the project analysis stage. This goes back to the question, who are the stakeholders? Generally, there are six categories who should be considered as relevant stakeholders and who should participate in decision-making, project planning and implementation.<sup>34</sup> They are: the specific public concerned; the local community or people; indigenous people; non-governmental organizations (NGOs); and the historically marginalized groups of women; and youths.<sup>35</sup> For example, the Aarhus convention defines the public as ‘one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organizations or groups’.<sup>36</sup> This definition of the public would include individuals, NGOs, grassroots organizations, youth, women groups, and corporations and other business organizations.<sup>37</sup> As Rodenhoff points out, the term ‘public’ is used in the Aarhus Convention to mean ‘the sum total of all of society’s potential actors’.<sup>38</sup> Article 2(5) of Aarhus also states that the public concerned means ‘the public affected or likely to be affected by, or having an interest in, the environmental decision-making’.<sup>39</sup>

Project proponents must demonstrate that they have identified the ‘public concerned’ i.e. all stakeholders that will be affected by the impact of a project or who are concerned about the activity in question. The need to properly identify the stakeholders cannot be over emphasized.<sup>40</sup> Some of the complaints in current biofuel projects is that project proponents only liaise and discuss with some stakeholders, leaving out others. There is also the issue that project proponents and governments at times liaise with people who are not considered representatives of the community or who do not have the mandate of the community in decision-making. When dealing with representatives of the community, it is pertinent to verify their status and mandate as elected representatives of the public concerned.

This test requires the participation of all citizens affected by a decision irrespective of social status or societal strata. It would mandate the representation of all significant sectors of the society at the decision table.<sup>41</sup> It requires that citizens

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<sup>34</sup> See C Nwapi, ‘A Legislative Proposal for Public Participation in Oil and Gas Decision-Making in Nigeria’ (2010) *Journal of African Law* 184-211.

<sup>35</sup> See Article 2 and 4 of the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters adopted 25 June 1998, entered into force 30 October, 2001) No. 37770.

<sup>36</sup> See Article 2(4) of Aarhus Convention. *ibid.*

<sup>37</sup> See C Nwapi, ‘A Legislative Proposal for Public Participation in Oil and Gas Decision-Making in Nigeria’ (2010) *Journal of African Law* 184-211.

<sup>38</sup> V Rodenhoff, ‘The Aarhus Convention and its Implications for the “Institutions” of the European Community’ (2002) 11:3 *RECIEL* 344.

<sup>39</sup> Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters adopted 25 June 1998, entered into force 30 October, 2001) No. 37770.

<sup>40</sup> See P Lallas, ‘The Role of Process and Participation in the Development of Effective International Environmental Agreements: A Study of the Global Treaty on Persistent Organic Pollutants (POPs) (2001) 19 (1) *UCLA Journal of Environmental Law and Policy* 83-152.

<sup>41</sup> See J Poiser, ‘A Civic Republican Perspective on the National Environmental Policy Act’s Process for Citizen Participation’ (1996) 26 *Envtl. L.* 53 at 83.

collectively and cooperatively analyse and discuss a problem with the view of proposing solutions.<sup>42</sup>

The second test here is whether the identified members of the public concerned have been duly consulted and whether their free prior and informed consent (FPIC) has been obtained? This should constitute a minimum legal threshold that must be demonstrated before a project is approved or registered. FPIC refers to the collective rights of individuals and community members to participate in decision-making on matters affecting them and to give or withhold their consent to activities affecting their lands, territories and resources or rights in general. It requires that consent be freely given, obtained prior to implementation of activities and be founded upon an understanding of the full range of issues implicated by the activity or decision in question; hence the formulation: free, prior and informed consent.<sup>43</sup>

For FPIC to be realistic, the public concerned must be given timely information about the project description. Article 6(2) of the Aarhus Convention can serve as a guide as to what 'timely information' means. It provides that the public concerned shall be informed, either by public notice or individually as appropriate, early in an environmental decision-making procedure and in an adequate, timely and effective manner. Article 6(3) also provides that the public participation procedures shall include reasonable time frames for the different phases, allowing sufficient time for informing the public and for the public to prepare and participate effectively during the environmental decision-making. It also stipulates that each party shall provide for early public participation, when effective public participation can take place. This underscores the importance of timely information so that members of the public can effectively participate in the process.

FPIC also requires the establishment of a system of free deliberation among all individuals in the society, particularly individuals who would be affected by the outcome of the process. This focuses on the need to provide a fair opportunity for stakeholders and representatives of diverse societal groups or interests to attend decision-making meetings. It requires the dismantling of artificial barriers to participation. All stakeholders must have the same chance to make an input. It includes providing means for stakeholders to take part in decision-making, this could include: providing a common platform for everyone to participate, either by choosing a suitable venue or strategic locations for meetings; by providing free mass transportation for the poor; ensuring participation by members of vulnerable groups such as women and minorities; hiring language interpreters for locals who cannot speak the common language, and by reducing technicalities in discussions. Technological advancements could also be used to provide an opportunity for online participation through webinars, online surveys and questionnaires.<sup>44</sup>

<sup>42</sup> See J Hartz-Karp and M. Briand, 'Institutionalizing Deliberative Democracy' (2009) 9 *Journal of Public Affairs* 127.

<sup>43</sup> See UNEP, *UN-REDD Programme Guidelines on Free Prior Informed Consent* (UNEP 2012) 7. See also M Colchester & F MacKay, *In Search of Middle Ground: Indigenous Peoples, Collective Representation and the Right to Free, Prior and Informed Consent* (Forest Peoples Programme 2004) 8-14; A Perrault, K Herbertson and O Lynch, 'Partnerships for Success in Protected Areas: The Public Interest and Local Community Rights to Prior Informed Consent (PIC)' (2007) 19 (3) *Georgetown International Environmental Law Review* 477.

<sup>44</sup> For detailed discussions on the value of e-rulemaking, see S Novek, 'Electronic Revolution in Rule Making' (2004) 53 *Emory L. J* 434; see also C Coglianese, 'Citizen Participation in Rule Making: Past, Present and Future' (2006) 55 *Duke L.J* 943; A Fung and E Olin Wrights (eds) *Deepening Democracy: Institutional Innovations in Empowered Participatory Governance* (Verso 2003).

To satisfy this, project proponents must demonstrate that they have consulted and obtained the FPIC of the public concerned. They must show that they fully explored the issues, identified the different deliberative options and provided logical arguments for and against each option through an indefinite period of extensive and continuing discussions.<sup>45</sup> The decision to go ahead or not with the project must reflect the popular opinions as expressed in the deliberative process.

## V. Project Review Mechanisms

Under this threshold, project proponents must demonstrate that adequate internal mechanisms for project review and conflict resolution are in place. A project review mechanism is necessary to provide a chance for stakeholders who have legitimate concerns or whose rights might be affected by a project to raise their concerns and have them addressed. A review mechanism would enable project proponents to address any claims that affected persons may have early in the project planning stages. This would provide an opportunity for a remedy before disputes become inflamed. For example, though not legally binding, Paragraph 29 of the *UN Norms and Responsibilities of Transnational Corporations and other Businesses with Regard to Human Rights* provides that:

To make it possible for grievances to be addressed early and remediated directly, business enterprises should establish or participate in effective operational-level grievance mechanisms for individuals and communities who may be adversely impacted.<sup>46</sup>

Grievance mechanisms support the identification of an adverse human rights impact as part of the due diligence on a project; they also make it possible for grievances, once identified, to be addressed and for an adverse impact to be remedied early and directly by project proponents, thus preventing any escalation.

Generally, as new project information emerge, new human rights issues could too. As such, it is not enough to only provide updated information on projects; it is pertinent for project proponents to provide an internal project complaint and review platform for stakeholders to establish complaints that have arisen especially after the initial consultations. A practical approach would be to establish project review committees that would get feedback from stakeholders on projects and to consider if and how these projects could affect them. This can be through household perceptions, opinion surveys or a simple questionnaire, for example ‘do you think the biofuel project in Ibadan violates or could violate human rights?’ Such feedback would allow stakeholders the chance to demand human rights enforcements and would make it easier for the project proponents to prevent human rights violations. For example the World Bank has recently introduced a requirement for project proponents and clients to establish a grievance mechanism as an element of community engagement by the project sponsor.<sup>47</sup> This mechanism is part of the

<sup>45</sup> This point was put forward and elaborated by J Hartz-Karp & M. Briand, ‘Institutionalizing Deliberative Democracy’ (2009) 9 *Journal of Public Affairs* 127.

<sup>46</sup> UN Doc/E/CN.4/Sub 2/2003/38/Rev. 2.

<sup>47</sup> International Finance Corporation, “Performance Standards on Social and Environmental Sustainability,”

30 April 2006, Performance Standard 1, Social and Environmental Assessment and Management Systems, para 23, Available at

<[http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/pol\\_PerformanceStandards2006\\_full/\\$FILE/IFC+Performance+Standards.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/pol_PerformanceStandards2006_full/$FILE/IFC+Performance+Standards.pdf)> (accessed 12 March 2012).

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requirements of the Performance Standards on Social and Environmental Sustainability.

According to this standard, if the project proponents anticipate ongoing risks to or adverse impacts on affected communities, the client will establish a grievance mechanism to receive and facilitate resolution of the affected communities' concerns and grievances about the client's environmental and social performance. According to the World Bank, the grievance mechanism should be scaled to the risks and adverse impact of the project. It should address concerns promptly, using an understandable and transparent process that is culturally appropriate and readily accessible to all segments of the affected communities, and at no cost and without retribution. The mechanism should not impede access to judicial or administrative remedies and the project proponents are to inform the affected communities about the mechanism in the course of its community engagement process.<sup>48</sup> This standard established by the World Bank is a good example on the need and the methodology for including a project review mechanism as part of the threshold to be met or demonstrated by project proponents before the project receives implementation approval.

## 5.0 CONCLUSION

Biofuel production provides a plausible option for reducing the excessive dependence on fossil fuels in Nigeria and in many other resource-rich countries. With the rising costs of oil, biofuels could provide competitive and less expensive source of energy in the coming years. Biofuels have also been identified as a more environmentally friendly energy source that mitigate or avoid some of the environmental concerns associated with conventional oil production.

However, for the gains of biofuel production to be more visible, biofuel projects must be executed in less acrimonious, right-based and sustainable ways. Current biofuel projects sponsored by industrialized countries across Africa have resulted in massive protests and criticisms due to concerns such as: the mass displacement of citizens from their homes to allow for biofuel plantations; citing and concentration of biofuel projects in poor and vulnerable communities; lack of governmental accountability on projects and the absence of judicial and quasi-judicial remedies for victims of these problems. These concerns are further compounded by the absence of legal guidelines and framework on biofuel production in many developing countries where these projects are often pursued in large proportions.

It is therefore important to put in place a National Renewable Energy Plan that would provide in concrete terms, the modalities for project approval and the conditions that must be met before biofuel projects can be implemented in a national context. This would be by establishing a minimum threshold for project approval and registration. This threshold would lay down the levels of environmental and human rights protection which would be regarded as the minimum acceptable outcome under a given project scenario. Such performance standards (thresholds) would emphasize the importance of an integrated assessment to identify the human rights, the impact on social and environmental issues and the risks of biofuel projects; the importance of effective community engagement through disclosure of project-related information; consultation with local communities on matters that directly affect them; and the need for project proponents to manage and disclose the human rights concerns and social and environmental performance of a project

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<sup>48</sup> *ibid*

throughout the life of the project.<sup>49</sup> Establishing a legal threshold would provide clear guidelines that projects are required to meet before they could be approved, registered and recognized. The legal framework would set out modalities that contain this threshold levels that should not be breached either directly or indirectly by the project. The framework would also be the basis to grant host country institutions such as the Ministry of Agriculture, National Biofuel Commission, amongst others, the powers and mandate to consider and enforce this threshold.

This paper has discussed a five-part legal threshold that could ensure that the protection of individual human rights are regarded as the minimum acceptable outcome under a given biofuel project or policy scenario. It is important for national governments to consider the aspects of this threshold as pre-requisites for allowing biofuel production and agricultural investments.

This threshold would represent a move from the current needs-based approach to biofuel production to a transformative, empowering and process-oriented approach. It also presents a holistic, long-term and anticipatory process through which human rights are systematically integrated into biofuel policies and projects. By requiring project proponents to demonstrate that this threshold has been met, a far-reaching obligation is placed on biofuel investors to consider the direct and indirect impacts of a particular project on the enjoyment of existing human rights. Project proponents are placed under the searchlight to demonstrate how they have anticipated and avoided the likely human rights, social, economic and environmental impacts of a given project. This threshold would also provide a platform for stakeholders to demand their rights and to be involved in project planning and decision-making from day one.

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<sup>49</sup> See International Finance Corporation, 'Performance Standards on Social and Environmental Sustainability' 30 April 2006, Performance Standard 1, Social and Environmental Assessment and Management Systems. Para. 2.24.