ATTRACTING AND REGULATING FOREIGN DIRECT INVESTMENTS IN BIO-FUELS PRODUCTION IN TANZANIA

BY

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A mini thesis submitted in partial fulfilment of the requirements for the degree of Magister Legum (LL.M) in International Trade and Investment Law of the Faculty of Law of the University of the Western Cape.

MAY 2009
DECLARATION

I, Baraka J. Shuma, declare that *Attracting and Regulating Foreign Direct Investments in Bio-fuels Production in Tanzania* is my own work and that it has not been submitted before for any degree or examination in any other university, and that all sources I have used or quoted have been indicated and acknowledged as complete references.

Signed ___________________________

Baraka J. Shuma

May 2009

I have read this work as university supervisor and I am satisfied that it is fit for examination

Signed ___________________________

Prof. Riekie Wandrag

UNIVERSITY of the WESTERN CAPE

May 2009
DEDICATION

This work is dedicated to the loving memories of my mother, who sacrificed so much and endured so much to ensure that we get an education and to the loving memories of my aunt Piande and my uncles Jacob and William.
ACKNOWLEDGEMENTS

First and foremost I would like to thank the Almighty God for giving me strength and good health during the course of my studies and enabling me to finally complete the degree.

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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AGOA</td>
<td>African Growth Opportunity Act</td>
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<tr>
<td>CBI</td>
<td>Caribbean Basin Initiative</td>
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<tr>
<td>CDM</td>
<td>Clean Development Mechanism</td>
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<td>CPR</td>
<td>Common Property Resources</td>
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<td>EAC</td>
<td>East African Community</td>
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<tr>
<td>EBA</td>
<td>Everything But Arms</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EMA</td>
<td>Environmental Management Act</td>
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<td>EU</td>
<td>European Union</td>
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<td>EWURA</td>
<td>Energy and Water Utilities Regulatory Authority</td>
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<td>FAO</td>
<td>Food and Agricultural Organisation</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FFV</td>
<td>Flex Fuel Vehicle</td>
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<td>FIPPA</td>
<td>Foreign Investment (Protection) Act 1963</td>
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<td>GBEP</td>
<td>Global Bio-energy Partnership</td>
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<td>GHG</td>
<td>Green House Gas</td>
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<td>GTZ</td>
<td>German Technical Cooperation</td>
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<td>Ibid</td>
<td>Ibidem</td>
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<tr>
<td>ICSD</td>
<td>International Centre for Settlement of Investment Disputes</td>
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<tr>
<td>IEA</td>
<td>International Energy Agency</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IPA</td>
<td>Investment Promotion Agency</td>
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<td>IR</td>
<td>Investment Regulations</td>
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<tr>
<td>IRGC</td>
<td>International Risk Governance Council</td>
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<tr>
<td>LIFDC</td>
<td>Low Income Food Deficit Country</td>
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<tr>
<td>Mha</td>
<td>Million hectares</td>
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<tr>
<td>MIGA</td>
<td>Multilateral Investment Guarantee Agency</td>
</tr>
<tr>
<td>MNC</td>
<td>Multinational Corporation</td>
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<tr>
<td>NTBF</td>
<td>National Bio-fuels Task Force</td>
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<tr>
<td>NEMC</td>
<td>National Environmental Management Council</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<tr>
<td>NIPPA</td>
<td>National Investment Promotion Policy</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
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<td>PRSP</td>
<td>Poverty Reduction Strategy Papers</td>
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<td>R</td>
<td>South African Rand</td>
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<tr>
<td>SADC</td>
<td>Southern African Development Community</td>
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<td>SEKAB</td>
<td>Swedish Ethanol Chemistry AB</td>
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<td>SOE</td>
<td>State Owned Enterprise</td>
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<td>TIA</td>
<td>Tanzania Investment Act</td>
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<td>TIC</td>
<td>Tanzania Investment Centre</td>
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<td>TRIM</td>
<td>Agreement on Trade Related Investment Measures</td>
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<td>Tsh</td>
<td>Tanzanian Shilling</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNCTAD</td>
<td>United Nations Council on Trade and Development</td>
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<td>UNCTC</td>
<td>United Nations Commission on Transnational Corporations</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>USD/$</td>
<td>United States of America dollar</td>
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<tr>
<td>WTO</td>
<td>World Trade Organisation</td>
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KEY WORDS

Bio-energy
Bio-fuel
Developing countries
Economic growth
Foreign direct investment
Investment promotion agency
Investment regulation
Multi-National Corporation
United Nations Council on Trade and Development
World Bank
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CHAPTER ONE
INTRODUCTION

1.1 Background

There has been a wave around the world in search of land for bio-fuels production. This has partly been prompted by rising prices of fuel, the need for energy security and the need to find ‘cleaner’ and renewable sources of energy. It has led to an increased demand for land and since developing countries have large land areas, foreign investors have targeted them; and Tanzania has not been left out. The high demand for land for bio-fuels production has sparked controversy in light of the rising food prices globally leading to the growing food and fuel debate. The emerging bio-fuels market has been blamed for the increase in food prices globally, due to rapid expansion in the use of agricultural commodities to produce bio-fuels. The demand for bio-fuels has created a new impetus for investment in them, and has intensified the pressure on available arable land. Foreign investors are looking for new areas to invest in. New investments are being channelled to developing countries which have huge tracts of uncultivated land. For poor countries that tend to have comparative advantages in the production of feedstock, bio-fuels may offer some genuine development opportunities, but the potential economic, social, and environmental costs are severe. Multi-National Corporations (MNCs), the vehicle through which foreign capital is channelled, are making massive investments in developing countries. This new demand for arable land is likely to cause social tension between investors and the local population.

1“Bio-fuels war: The new scramble for Africa by Western big money profiteers” available at http://ecoworldly.com/208/09/06/biofls-war-the-new-scrambe-for-africa-by-western-big-money-profiteers/ (accessed on 21-10-08). It is contended that “a Bio-fuel war has broken out in Africa. Newspaper headlines have not proclaimed it but the gist of it is already out. Big money profiteers from Europe and United States are rushing to Africa in a new scramble for the continent, transforming large swathes of arable land into massive bio-fuels plantations.”


3 Murphy (2007) 19 states that “currently, 25 per cent of Paraguay arable land is being used to cultivate soybeans which are used for bio-fuel production.”

Though bio-fuels are perceived to be environmentally beneficial because they are “renewable,” they have the potential to positively or negatively affect the natural world as regards local soil and water quality, biodiversity, the global climate and human health, depending on various factors, such as, feedstock selection and management practices used. Whether the impacts are largely positive or negative will be determined, in great part, by policy. Policies that guide the production and use of bio-fuels will impact on whether bio-fuels will have positive or negative consequences.

In light of the eminent environmental danger posed by bio-fuel production, it is crucial that governments must prioritise the protection of virgin ecosystems and should adopt policies that compel the bio-fuels industry to maintain or improve current management practices of land, water, and other resources.

On the other hand, Foreign Direct Investment (FDI) in bio-fuel production also creates opportunities, such as, jobs and economic growth of the host country. The United Nations (UN) points out that the rapid development of modern bio-energy presents a wide range of opportunities, but also entails many trade-offs and risks. Experience of associated economic, environmental, and social impacts is limited and the types of impacts will depend largely on local conditions and policy frameworks implemented to support bio-energy development. It further warns that risks must be carefully assessed before deciding whether, and how rapidly, to develop the industry and what technologies, policies, and investment strategies to pursue. This is particularly important to Tanzania, with no experience in such an undertaking. Despite the opportunities that bio-energy production may bring, countries should tread cautiously.

Furthermore, some authors support the production of bio-fuels in developing countries. Mathews argues that developing countries and development agencies, such as, the World Bank, should support bio-fuel production as it can unlock a chain reaction of favourable

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5 Conference Handout ‘Bio-fuels For Transportation: Global Potential And Implications For Sustainable Agriculture And Energy In The 21st Century’ Berlin,16 - 17 May 2006 p 30
6 Ibid
8 UN Energy (2007) 4
development processes provided developing countries seize the initiative and set in place renewable energy industry creation projects before the developed world has managed to shake itself out of its fossil fuel dependence. He argues that developing countries must seize this opportunity because of bio-fuels’ multiple benefits and multiplier effects.

The United Nations Conference on Trade and Development (UNCTAD)\(^\text{10}\) is optimistic about bio-fuels production and argues that current agricultural production does not use all available land worldwide. Thus, bio-fuels production will not necessarily affect food security. It further suggests that bio-fuel production can be done on grazing land which is considered less fertile. This may be a good suggestion to ensure that food security is not compromised by bio-fuel production, but it may not be of universal application as some bio-fuel crops, such as, sugar cane, require relatively fertile soils and water. Even land that is considered as marginal land and less fertile has other potential uses as will be discussed later in chapter two.

Bio-fuels production and the risks that it creates have started surfacing in Tanzania.\(^\text{11}\) There are allegations that investors are short-circuiting the process of acquiring land for investment as stipulated by the law.\(^\text{12}\) This might in turn create a landless class if there are no strong land ownership rights. Again, this fear has started showing itself in Tanzania as word has started spreading that people are being evicted from their land. Though the Tanzanian Land Acts\(^\text{13}\) provide for consultation and payment of compensation upon such relocations, the people are complaining that the laws are not being followed with regard to their eviction.\(^\text{14}\) What is also alarming is the lack of clear policies and guidelines on bio-fuel production in the country; yet

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\(^\text{10}\) UNCTAD (2006a) Challenges and opportunities for developing countries in producing bio-fuels, UNCTAD/DITC/COM/2006/15, p 19

\(^\text{11}\) ‘Bio-fuels War: The New Scramble for Africa by Western Big Money Profiteers’ available at http://ecoworldly.com/208/09/06/bio-fuels-war-the-new-scramble-for-africa-by-western-big-money-profiteers/ (accessed on 21-10-08.) “In Tanzania thousands of farmers growing cereals, like corn and rice are already being evicted from fertile land with access to water, for bio-fuel sugar cane and jatropha plantations on newly privatised land.”

\(^\text{12}\) Under the Land Act 1999 (Act No. 4). Under the law, Tanzania Investment Center controls a land bank with land to be allocated to investors for investment. Investors are only given derivative rights to use such land for investment and they are not to get land directly from the people. Some investors are getting land directly from the people and village councils contrary to law.

\(^\text{13}\) See The Land Act 1999 (Act No. 4) and the Village Land Act 1999 (Act No. 5)

\(^\text{14}\) Knaup, H ‘Africa Becoming a Bio-fuel Battleground’, “On the Rufiji River, thousands of residents are being forced to move to make way for the Swedish company Sekab’s plans to grow sugarcane, a highly water-intensive crop, on at least 9,000 hectares (22,230 acres) and then distill it into ethanol. Five thousand hectares (12,350 acres) have already been approved,” at http://www.spiegel.de/international/world/0,1518,576548,00.html (accessed on 21-10-08.)
there have already been foreign investments in bio-fuels production. These events raise concerns as to the effectiveness of the investment regime in regulating FDI in Tanzania. The Tanzania Investment Centre (TIC)\(^{15}\) has an important role in attracting and promoting investments in Tanzania. It also plays a crucial role in advising the government in matters pertaining to investments. The government also has the duty to promote and facilitate investments in the country by ensuring that there are conducive legal frameworks in place to protect, promote and facilitate investments in the country.\(^{16}\) Whether both the TIC and the government have properly discharged their duties will be subject to discussion later on in the work.

Bio-fuels production is multi-dimensional and raises many issues. Many interests are bound to clash at one point in time and raise conflicts if they are not properly regulated. Therefore, there needs to be strong, clear and coherent regulation of the production of bio-fuels.

### 1.2 Statement of the problem

Bio-fuels production creates both opportunities and risks. It may attract FDI and lead to economic development or it may lead to economic, social and environmental problems if not properly regulated. Before seeking to attract FDI in a certain sector, it is assumed that a host country will have put in place the appropriate legal and institutional framework to govern the sector. The risks being presented by bio-fuels production cannot be ignored. The importance of having strong legal and institutional frameworks is crucial in the regulation of such an activity. The importance of this is underscored by Charlotta J et al:\(^{17}\) who argue “that legislative and institutional weaknesses can create barriers to the development of bio-energy and act as a disincentive for private investors or entrepreneurs wishing to be involved in bio-energy markets” therefore, it is important to review the existing legal framework in order to determine its effectiveness in regulating the new bio-fuels sector in the country.

### 1.3 Objectives of the research

- Examine the existing FDI investment regime in Tanzania in order to determine whether:

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\(^{15}\) Established under s. 4(1) of the Tanzania Investment Act 1997 (Act No. 26)

\(^{16}\) The United Republic of Tanzania ‘The National Investment Policy 1996,’ paragraph 4.4.1

a) The Tanzania Investment Centre (TIC) has performed its duties as stipulated by law in attracting investments in bio-fuels production.

b) The government has performed its duty of being a promoter and facilitator of investments in the country.

- Examine the challenges and prospects in the regulation of FDI in bio-fuels production in Tanzania and make recommendations on how these challenges may be addressed with examples drawn from other jurisdictions.

1.4 Significance of the research

The research is important due to the growing importance of bio-fuels as a renewable source of energy.\textsuperscript{18} The growing importance of bio-fuels signals the dawning of more investments in their production and use. This increases the likelihood of the negative consequences associated with their production if not properly regulated.

The research is significant as it seeks to highlight the social, economic and environmental effects of bio-fuels production. Bio-fuels may have adverse effects on the social, economic and environmental dimension of livelihoods if not properly regulated. For instance, bio-fuel production is blamed for the significant role in the food crisis and has been identified as one of the major culprits by the UN, World Bank, and International Monetary Fund (IMF), though not the sole cause. The IMF estimates that in 2007 bio-fuels accounted for almost half of the increase in demand for major food crops.\textsuperscript{19}

FDI in the production and use of bio-fuels is welcomed as it brings with it positive social and economic impacts. FDI may lead to job creation, transfer of technology and skills and mobilise capital. However, for FDI to have any meaningful impact on the economy of the host state, it must be regulated and integrated into the wider context of the country’s development goals. Therefore, there is need to ensure that FDI is regulated. The research aims at examining the existing investment regime in Tanzania to determine whether it has the potential of attracting foreign investments in bio-fuels production. There is need to ensure

\textsuperscript{18} UN Energy (2007) 3 where it is stated: “global production of bio-fuels alone has doubled in the last five years and will likely double again in the next four.”

\textsuperscript{19} OXFAM (2008) pp 19 and 20 and Wrought L (2008) ‘Bio-fuels major driver of food price rise-World Bank,’ Reuters, where in a World Bank report, it was found that “bio-fuels and related low grain inventories, speculative activity, and food export bans pushed prices up by 70 percent to 75 percent.” Available at http://www.alertnet.org/thenews/newsdesk/N28615016.htm (accessed on 19-4-2009)
that bio-fuels production is based on the principles of “social and environmental sustainability.” This calls for regulation of its production and use in order to minimise the risks and maximise the opportunities.

1.5 Methodology
The research will be library based. The research relies upon secondary data, as contained in textbooks, journals, articles and newspaper articles relevant to the area of research. Relevant government policies and legislations will be used. Electronic data will be sourced and used from various internet sources having a bearing on the subject. Such electronic sources include but not limited to UN and FAO websites.

1.6 Scope and limitation of research
The study only focuses on foreign investments in bio-fuels production in Tanzania, though there are local investors engaged in bio-fuels production and small scale farmers. The study only examines foreign investments due to its magnitude in scale and the far reaching impacts it is likely to exert socially, economically and environmentally.

1.7 Conclusion
This research is divided into five chapters. Chapter one forms the introduction to the study. It sets forth inter alia the background to the research, statement of the problem, objectives of the study and the significance of the study laying the ground work for the ensuing chapters.

Chapter two examines the controversies and opportunities associated with the production of bio-fuels. The socio-economic, environmental and food security concerns associated with bio-fuels production are discussed at length. The policy considerations behind the production of bio-fuels are also discussed.

Chapter three endeavours to give a brief overview of the evolution of foreign investments in Tanzania from independence to the present. The investment regime is examined and the role of the TIC as the sole Investment Promotion Agency (IPA) in attracting and promoting investments in Tanzania is examined to determine whether the TIC has discharged its duties. The government’s role in promoting and facilitating investment by way of providing

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conducive legal frameworks is also discussed in order to determine whether the government has performed its duty. The place of renewable energy in the investment regime is also discussed. The chapter closes by examining a few players currently involved in bio-fuels production.

Chapter four points out some of the challenges faced by Tanzania in regulating FDI in bio-fuels production. The chapter draws examples from other countries that have enacted or proposed legislations to regulate the production and use of bio-fuels. The chapter seeks to draw examples that might be useful to Tanzania in regulating the production and use of bio-fuels. Achievements so far gained in attempting to regulate bio-fuels production though limited are highlighted.

Chapter five concludes the research and provides recommendations on how the challenges posed by bio-fuels production may be addressed by legislation.
Likewise, despite all the hype about bio-fuels, we have to be careful about the impact of massive investments in this area. While we welcome investments in bio-fuels, we remain — we should remain conscious of the fact that by their nature, bio-fuels will require very large tracts of land, which will either come from diverting land use from food production to bio-fuel crops, or encroaching upon forest reserves and water cache materials. The rising cost of some food crops such as corn could also price food out of reach to many poor Africans. Bio-fuels hold great promise, but we have more questions, and we have got to be careful about sustainability, or rather, we have to ascertain sustainability.\footnote{Transcript of the Speech by President Kikwete of Tanzania at the Inaugural Annual African Union and AED African Presidential Lecture, September 17, 2007, p 5.}

2.1 Introduction

Increased interest in bio-fuels has come as a result of several factors. Governments see bio-fuels as a way of addressing different policy goals, such as greater energy security, agricultural development and climate change mitigation. Likewise, foreign direct investment (FDI) in bio-fuels is also a fairly new phenomenon.\footnote{Dufey, A (2008) “Exploring new sectors for attracting FDI: The case of bio-fuels” in Dufey A et al (Eds) in Responsible enterprise, foreign direct investment and investment promotion: Key issues in attracting investment for sustainable development, London: IIED, p 73.} The novelty of bio-fuels has led to both excitement and fears due to the potentials and dangers that it may pose. Countries are faced with various policy considerations before embarking on bio-fuels production.

This chapter seeks to examine the controversies surrounding bio-fuels. The opportunities, risks and trade offs associated with bio-fuels will be discussed.

2.1.1 Bio-fuels: Conceptual framework

Bio-fuels are defined as:

fuels produced from biomass for purposes such as transport, heating, electricity generation and cooking. They can be produced from agricultural and forest products and the biodegradable portion of industrial and municipal waste.\footnote{Dufey A et al (2007) ‘Bio-fuels: Strategic choices for commodity dependent developing countries, Amsterdam: Common Fund for Commodities, p 19.}

Bio-fuels are simply transportation fuels derived from biological sources, and may either be in the form of liquids such as fuel ethanol or biodiesel, or gaseous form such as biogas or hydrogen.\footnote{Transcript of the Speech by President Kikwete of Tanzania at the Inaugural Annual African Union and AED African Presidential Lecture, September 17, 2007, p 5.}
They may further be divided into bio-ethanol and biodiesel.

Bio-ethanol is alcohol produced by fermenting and then distilling sugars from sugar-rich plants (e.g. sugarcane, maize, beet, cassava, wheat, sorghum). The alcohol is then purified to remove water. Both anhydrous bio-ethanol (<1% water) and hydrous bio-ethanol (1-5% water) can be used pure as fuels, but they are usually blended with gasoline. Blends of 5% or 10% of bio-ethanol in gasoline, denominated E5 and E10 respectively, do not require any modification to the vehicle engine. Biodiesel is produced from the reaction of vegetable oil with alcohol in the presence of a catalyst to yield mono-alkyl esters and glycerine, which is then removed. The oil comes from oily crops or trees (e.g. rapeseed, sunflower, soya, palm, coconut or jatropha), but also from animal fats, tallow and waste cooking oil. Some types of biodiesel can be used unblended or in high-proportion blends with modification to the vehicle engine. A blend of 5% of biodiesel is denominated as B5.25

For the purpose of this research, bio-fuel is referred to in its liquid form, normally used for transport. The plural is also used to refer to both bio-ethanol and biodiesel indiscriminately, unless the context requires otherwise. Bio-energy26 is also used interchangeably with bio-fuels in the work.

Countries have embarked on the production of bio-fuel for different policy goals. Such policy goals have included greater energy security, agricultural or rural development, climate change mitigation, improvement of balance of trade by reducing oil imports and export development. In pursuit of these goals certain risks and trade offs are presented by bio-fuel production.27 Such risks and trade offs include food security, society, environment and the economy. Strategic decision-making about the adoption of bio-fuels requires a careful and integrated analysis of all these issues.28

2.1.2 The food security issue

Threats to food security are recognised as the primary drawback of large-scale bio-fuels development. Bio-fuel production stands to impact on both of the major dimensions of food security of availability and access.29 Availability of food could be threatened because

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26 “Bio-energy is renewable energy made available from materials derived from biological sources. In its narrow sense it is a synonym to biofuel, which is fuel derived from biological sources.” Available at http://en.wikipedia.org/wiki/Bio-energy (accessed on 9-5-2009)
28 Dufey et al (2007) 17
29 Dufey et al (2007) 12 and 35. It is interesting to note increased production of bio-fuels has raised grave concerns that participants at a recent FAO meeting considered it urgent to establish a moratorium on extending the use of land for bio-fuels production in developing countries in FAO (2008b) ‘Climate change, bio-energy
resources such as land, water and other productive resources will be diverted from food production. This diversion will lead to competition as there will be less water, land and other resources dedicated to food production. Access to food could also be hampered, as high food prices will make food out of reach for low income net food purchasers.

It is estimated that about 14 million hectares of land which is about 1 percent of the world’s arable land, are currently used for the production of bio-fuels. According to International Energy Agency (IEA) scenarios, in 2030 this share will rise to 2.5-3.8 percent.

Growing crops for bio-fuels is often criticized because of its direct competition for land for food production. The recent price increases on world food markets are partly a result of this competition. This assumption is based on the ground that bio-fuels production would lead to a competition for land that would otherwise be used for food production, further reducing global food stocks and marginalizing the poor. However supporters of bio-fuels have advanced different arguments in support of the increasing global food prices. Some argue that the increase in global food prices is not a result of bio-fuel production, but “rather due to weather related shortfalls and increasing demand of agricultural crops from newly industrialising economies.” Others have argued that much of the decline in stocks is a result of restructuring of the highly inefficient agricultural production subsidies in Europe and USA. Others have been so bold as to assert that the land for food and fuel debate only pertains in the developed world particularly in the USA and Europe and does not apply in the developing world. They argue that there are vast tracts of degraded and semi-arid land in developing countries that can be used for fuel crops such as sugar cane, cassava and castor


30 UN Energy (2007) 31
31 UN Energy (2007) 31


36 Dufey et al (2007) 12
37 GTZ (2005) 86
beans. Nevertheless, bio-fuels will compete with food crops for land and water and thus contribute to increase in food prices. Likewise where bio-fuels are produced from food crops there will also be a direct competition for end use. Even if bio-fuels were derived from non-food crops, they could still place an additional demand on agricultural resources, specifically land and water, and lead to a rise in food prices. Therefore, no matter the type of feedstock used to produce bio-fuels, rise in food prices is inevitable. The rise in food prices is a blessing in disguise, as it will benefit countries and households that are net food producers due to increase in price of agricultural commodities that are used as feedstock, but at the same time it might hurt urban dwellers who are net consumers and the urban poor. Furthermore, in the absence of clear policies and analyses, it is feared that:

commercial production of bio-fuels may target high quality lands due to better profit margins and high soil requirements of first generation crops such that bio-fuels as the “next big cash crop” will be grown on the best lands, leaving cereals and subsistence crops to the low-quality lands.

Perhaps the solution to the competition between bio-fuels and food crops for land and water lies in the development of second generation bio-fuels, which rely on non-edible parts of food crops and do not necessarily compete for land, though second generations technologies are not yet developed to full commercial capacity. Better still, countries should make food security a priority above bio-fuels production. A good example is China, which upholds food

38 Mathews (2006) 13-14
39 Doornbosch, R and Steenblik, R (2007) Bio-fuel: Is the cure worse than the disease? Roundtable on Sustainable Development, Paris, 11-12 September Report SG/SD/RT, p 4 “Moreover, land use will be driven by the net private benefit owners can derive from their land. Any diversion of land from food or feed production to production of energy biomass will influence food prices from the start, as both compete for the same inputs.”
40 Sagar, A.D and Kartha, S (2007) “Bio-energy and sustainable development?” The Annual Review of Environment and Resources, p 152. Available at http://environ.annualreviews.org (accessed on 11-10-2008) and Kojima M and Johnson T (2005) Potential for bio-fuels for transport in developing countries, Washington: UNDP and World Bank, p74, it is interesting to note that: “Brazil is endowed with a huge land mass that is agriculturally productive and has plentiful rainfall. Despite this abundance of land and water, the subsidies and incentives given for sugar production for fuel ethanol in the 1970s and 1980s were sufficiently attractive that land use was diverted to ethanol production, replacing food crops. For example, the 362,000 new hectares of cane added in São Paulo between 1974 and 1979 occurred largely at the expense of food production. The greatest impact was on maize and rice, which declined in area by 35 percent (Saint 1982). The result was higher food prices, affecting especially the poor.”
41 Dufey et al (2007) 15
42 UN Energy (2007) 32 (emphasis supplied)
43 Doornbosch and Steenblik (2007) 5, consider these so-called second-generation technologies could, in theory, make it possible to avoid competing land use claims by growing biomass feedstocks on marginal and degraded land and using residual biomass materials, their feasibility is doubted as conversion facilities will incur costs of transporting these residues.
44 Dufey et al (2007) 35
security above all.\textsuperscript{45} Developing countries that are food importers must ensure that food security takes precedence over bio-fuels.

Countries are advised to closely monitor bio-fuels production in order to reduce the negative consequences on food security. Countries that are net importers of food are cautioned to assess the balance between bio-fuels earnings and food costs. Should there be indications that bio-fuels production will have severe impacts on food production, then there should be no further development of bio-fuels.\textsuperscript{46} Countries are further advised to set aside land for food production, have early warning systems on prices and distribution of staple foods and to have a better understanding of impacts of international agricultural prices on domestic food prices and incomes.\textsuperscript{47}

\textbf{2.1.3 Environmental issues}

The assumption that modern bio-energy is a renewable source of energy is challengeable,\textsuperscript{48} due to the fact that there are a several factors that have to be considered before concluding that bio-fuels are a renewable source of energy. Bio-fuels can reduce carbon emissions by absorbing and releasing carbon from the atmospheric pool without adding to the overall pool (in contrast to fossil fuels) and by displacing fossil fuels. However, production of bio-fuels does in most cases involve consumption of non-renewable fuels.\textsuperscript{49} The use of machinery, fertilisers and transportation of bio-fuels all contribute to increasing GHG.\textsuperscript{50} The degree to

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\textsuperscript{45} Dong F (2007) ‘Food security and bio-fuels development: The case of China,’ Iowa State University, Centre for Agricultural and Rural Development, Briefing Paper 07-BP 52, p 13, where it is stated that. “Wang Xiaobing, an official in the Ministry of Agriculture’s Crops Cultivation Department said, “In China the first thing is to provide food for its 1.3 billion people, and after that, we will support bio-fuel production.” Another official, Yang Jian, director of the Development Planning Department under the Ministry of Agriculture, said, “We have a principle with bio-fuel. It should neither impact the people’s grain consumption nor should it compete with grain crops for cultivated land.” Available at http://www.card.iastate.edu/publications/DBS/PDFFiles/07bp52.pdf (accessed on 1-4-2009)

\textsuperscript{46} Dufey \textit{et al} (2007) 37

\textsuperscript{47} Dufey \textit{et al} (2007) 37

\textsuperscript{48} Although biomass is frequently labelled a “renewable” source of energy, this term is used loosely, as biomass production requires non renewable inputs, including fossil fuels, and ties up other finite resources such as land and water. Furthermore, Doornbosch and Steenblik (2007) 4-5 argue: “Even without taking into account carbon emissions through land-use change, among current technologies only sugarcane-to-ethanol in Brazil, ethanol produced as a by-product of cellulose production (as in Sweden and Switzerland), and manufacture of biodiesel from animal fats and used cooking oil, can substantially reduce GHG compared with gasoline and mineral diesel. The other conventional bio-fuel technologies typically deliver GHG reductions of less than 40% compared with their fossil-fuel alternatives. When such impacts as soil acidification, fertilizer use, biodiversity loss and toxicity of agricultural pesticides are taken into account, the overall environmental impacts of ethanol and biodiesel can very easily exceed those of petrol and mineral diesel.”

\textsuperscript{49} Dufey \textit{et al} (2007) 13

\textsuperscript{50} Dufey \textit{et al} (2007) 39
which a bio-fuel is in fact a renewable energy source depends on the amount of non
renewable energy inputs relative to the energy outputs of the bio-fuel cycle.\textsuperscript{51} This will
depend on the bio-fuels energy balances, i.e. whether the production chain has a low or
negative energy balance. A negative energy balance is achieved when the energy inputs
needed to produce a unit of bio-fuel are greater than energy contained in that unit of bio-
fuels. Similarly, inefficient bio-fuels production chains with low or negative energy balances
are also likely to have poor or negative Green House Gases (GHG) balances. A production
chain with a negative GHG balance results in greater GHG emissions occurring when the bio-
fuels is used than would have resulted from the original fossil fuel use such as petrol or
diesel.\textsuperscript{52}

However, bio-fuels production does not only affect the environment in terms of GHG, but
also in terms of its impact on biodiversity, water, soil, forestry and nature conservation. In
meeting the demand for bio-fuels it is unlikely that yield increases will be sufficient. There
will have to be a displacement of other crops and an expansion of the total agricultural land
area. This expansion of agricultural land is feared that it will affect biodiversity,\textsuperscript{53} as forests
and other fragile ecosystems might be cleared to give way to large scale plantations. It is also
feared that feedstock production might negatively affect the environment as land which was
previously uncultivated might be cultivated in the process and this land might be land with
high environmental value or a high level of stored carbon, or encourage monoculture with
related adverse impacts on biodiversity.\textsuperscript{54} It is also argued that increased bio-fuel production
will not come through agricultural efficiency alone, so further land conversion can be
expected.\textsuperscript{55} Counter arguments are that expansion of agricultural land for bio-fuels production
will been done in ‘marginal’ lands that have little or no agricultural value. This only adds to
the confusion as there is no accepted definition of marginal land.\textsuperscript{56} However, it is contended
that these ‘marginal’ lands have other uses and functions for poor people such as gathering of

\textsuperscript{51}GTZ (2005) 144
\textsuperscript{52} GTZ (2005) 92
\textsuperscript{53} The advance of the agricultural frontier into natural habitats is an international environmental concern,
particularly the massive expansion of soy and palm oil in the rainforests of the Amazon and South-East Asia
respectively.
\textsuperscript{54} UNCTAD (2006b) ‘Adjusting to recent changes in the energy sector: challenges and opportunities,’ Trade
And Development Board, Commission on Trade in Goods and Services, and Commodities,
Expert Meeting on the Participation of Developing Countries in New and Dynamic Sectors of World Trade:
Review of the Energy Sector, Geneva, 29 November – 1 December, TD/B/COM.1/EM.31/2, p 15
\textsuperscript{55}Dufey \textit{et al} (2007) 39
\textsuperscript{56} OXFAM (2008) 21
wild products for subsistence and cash, livestock grazing, wildlife corridors, maintenance of water quality, shifting agriculture, maintenance of soil fertility and biodiversity conservation.\textsuperscript{57} A recent study in India found out that about 400,000 hectares of land which had been classified as marginal land by the government and planted jatropha was actually classified as Common Property Resources (CPR) which are integral to the livelihood of poor people and they are used for food, fuel and building materials and contribute up to a quarter of poor household incomes.\textsuperscript{58} From the above listed likely uses of ‘marginal’ lands, it is clear that they in deed have use and should not be considered as unproductive lands \textit{per se}. Their use can not be underestimated.

The expansion and intensification of agricultural land for bio-fuels production also means that irrigation and fertilisers will be needed to increase yields. This may lead to soil erosion and land degradation. This is so because agrochemicals leave residues in run-off which may lead to eutrophication in nearby water bodies. However, the situation may be eased by using selective farming techniques to reduce the environmental impacts of bio-fuels production, farming techniques such as intercropping, rotations, use of nitrogen-fixing plants and use of organic fertilisers can improve environmental impacts.\textsuperscript{59} Environmental impacts may also be reduced by planting perennial energy crops creating year round plant coverage to improve soils and reduce degradation. The situation may also be improved by introducing second generation technologies otherwise the negative impacts of bio-fuels production on soils will increase and become a serious problem.\textsuperscript{60}

However, should bio-fuels threaten biodiversity by encroaching biodiversity rich areas, then countries are warned to reconsider bio-fuels expansion. Should it also affect water distribution and bio-safety in terms of uncontrolled spreading new plant species then counties should also reconsider bio-fuels production.\textsuperscript{61}

\textsuperscript{57}Dufey \textit{et al} (2007) 13  
\textsuperscript{58}OXFAM (2008) 21  
\textsuperscript{59}Dufey \textit{et al} (2007) 39  
\textsuperscript{60}Kojima and Johnson (2005) 71  
\textsuperscript{61}Dufey \textit{et al} (2007) 40
Nevertheless, the International Energy Agency (IEA) predicts that bio-fuels in transport will contribute an important 6% reduction in global GHG emissions. This is an important contribution in combating global warming.

2.1.4 Socio-economic issues
Serious doubt exists over the wider benefits to society that accrue when bio-energy (or other food/non-food production) occurs without meaningful involvement of local communities. Socio-economic issues such as rural development, income generation, employment, land access and labour conditions have to be taken into consideration before embarking on bio-fuels production. It is expected that bio-fuels production will have benefits to society. This presupposes meaningful involvement of local communities in its production, otherwise serious doubts will exist. Though bio-fuels production presents income opportunities for agricultural producers, large scale production poses risks as it puts pressure on land and may lead to the displacement of people. Landlessness is the major threat that is often posed by expansion of bio-fuels production, an example being the class of landless people that has resulted from the expansion of sugar production in Brazil. With large scale production of bio-fuels, pressure on land is inevitable. It is contended that poor households in many developing countries do not have formal title over their land and formal rights over water. This will likely lead to the poor being evicted from their land, thus threatening their access to land and water. It is clear that the type and nature of land rights will play a vital role in large scale bio-fuels production in order to avoid the attendant eviction of poor people without clear title to their land. The social impacts of bio-fuels development will depend upon the feedstock and the production system chosen. Bio-fuels production will only have significant positive impacts on the livelihoods of rural communities where production involves the participation and ownership of plants by small-scale farmers, their proximity to conversion facilities that are suitable to rural settings and a fair share of the accrued revenue. Experience from Brazil and the United States of America has shown that infrastructure for transformation of feedstock into bio-fuels is likely to be located in rural areas thus increasing

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63 Dufey et al (2007) 41
65 FAO (2008b) 6-7
economic activities in rural areas leading to economic diversification. Rural infrastructure may also be improved as roads leading to the factories will be built.67

Governments will have to strike a balance between large scale and small scale systems of production and processing of bio-fuels. Generally, large scale systems are more globally competitive and export oriented, a characteristic of FDI, though small scale systems offer greater opportunities for employment generation and poverty alleviation. The multiplier effects of bio-fuels production in rural areas are likely to be greatest under small scale production under local investment, production and consumption.68 However, the two systems are not mutually exclusive and can interact successfully through outgrower schemes, cooperatives, marketing associations, service contracts, joint ventures and share-holding in the value chain.69

However, experience has shown that some bio-fuels such as ethanol is more competitive if produced in large scale industrial production.70 This large scale production may be advantageous in the short term as it requires unskilled labour in the initial stages of production. As production advances, there is a tendency of rapid mechanisation and a decrease in the number of manual workforce with resultant poor labour rights and socio-economic conditions.71 Furthermore, most jobs will be seasonal and often require unskilled labour. Though jobs will be created, the nature and quality of jobs created is debatable bearing in mind that the number of workers will decrease as the industry matures and becomes mechanised with time. However, this is not to completely discredit large scale industrial production of bio-fuels. Large scale production benefits local communities by enabling small holder production access to international markets, professional know how and private investment.72

The people’s views and concerns should be considered. They should have an open dialogue in order to air out their fears and concerns. This will help clear the air as their fears and misconceptions will be explained.73

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67 UNCTAD (2006b) 14  
68 Dufey et al (2007) 13-14  
69 Dufey et al (2007) 13-14  
70 FAO (2008b) 6  
71 Dufey et al (2007) 41  
72 GTZ (2005) 96  
73 Dufey et al (2007) 42
If bio-fuels pose a threat to disruption of rural areas by undermining land rights, thereby occasioning landlessness and social upheavals, governments should take all necessary measures to avert this.\textsuperscript{74} The government must ensure the protection of communal and individual land rights. It should also take deliberate measures to support small-scale farmer organisations and cooperatives, giving preferential market conditions, such as tax incentives to those companies that source their feedstock form small-scale farmers in order to ensure sustainability.\textsuperscript{75} The government should also ensure that labour standards are followed and the people are well informed about bio-fuels in order to remove misconceptions.

2.2 Policy considerations in bio-fuels production

Countries have embarked on bio-fuels production because of different policy considerations. Such considerations include greater energy security, rural development and climate change mitigation.\textsuperscript{76} These policy considerations may vary between countries depending \textit{inter alia} on local contexts such as level of energy security and independence, socio economic variables, availability of land and water.\textsuperscript{77} Countries should be clear of the policy objectives upon introduction of bio-fuels production as this will allow countries to identify a suitable role for bio-fuels within their development strategies hence guiding the policies in order to maximise the opportunities and minimise the risks.\textsuperscript{78} The policy objectives should be clear in order to ensure that investments in bio-fuels productions are sustainable and beneficial to the host country. Knowledge of the policy objectives will also be important in making strategic choices and trade offs.\textsuperscript{79}

2.2.1 Energy security

This was the main policy driver for the introduction of bio-fuels production in Brazil in the 1970s.\textsuperscript{80} Volatility of world oil prices, uncompetitive structures governing global oil supply and uneven global distribution of oil supplies are factors that encourage countries to diversify their energy portfolio by looking at other available options and this is where bio-fuels feature.\textsuperscript{81} Fluctuating world oil prices have been detrimental to oil importing countries as they

\textsuperscript{74} Dufey \textit{et al} (2007) 43
\textsuperscript{75} Dufey \textit{et al} (2007) 43
\textsuperscript{76} Dufey \textit{et al} (2008) 73
\textsuperscript{77} IRGC (2008) ‘Risk governance guidelines for bio-energy policies,’ Policy Brief, p 16
\textsuperscript{78} Dufey \textit{et al} (2007) 29
\textsuperscript{79} Dufey \textit{et al} (2007) 27
\textsuperscript{80} Dufey \textit{et al} (2007) 27
\textsuperscript{81} Dufey \textit{et al} (2007) 27
disrupt their development goals as scarce resources are used to purchase oil.\textsuperscript{82} Uncertainty in fossil fuel prices has prompted countries to find alternative sources of energy in order to reduce dependency on fossil fuels. Therefore, energy diversification, improved control of supply and price and reduction of the oil import bill may be grounds for countries to introduce bio-fuels production. Countries like to feel that they are in control of an essential commodity such as fuel.

Enhancing energy security might be a priority for Tanzania, whose energy expenditure has more than doubled in recent times.\textsuperscript{83} Prioritising energy security as a policy driver for bio-fuels production will be wise in order reduce the oil import bill. It has been found in a recent World Bank publication that “there is not necessarily a linear relationship between energy security and the creation of a bio-fuels sector, adding that current technologies can only marginally enhance security of supply.”\textsuperscript{84} However, this will only be achieved through clear bio-fuels policies and guidelines, which will be discussed in chapter four.

\textbf{2.2.2 Rural development}

This is also a key policy consideration as it may generate new demand for agricultural products. This may be a welcomed move by rural areas as it revitalises the countryside by providing a market for its produce. Furthermore, this may help in reducing the volatility of world market prices of agricultural commodities. Should conversion plants be situated in rural areas, this will improve the people’s livelihoods and create employment especially when the cultivation of the feedstock involves small scale farmers.\textsuperscript{85} The UNDP has stated that bio-energy “can contribute directly to poverty alleviation by helping to meet basic needs, creating opportunities for improved productivity and better livelihoods, and preserving the natural environment on which the poor depend.”\textsuperscript{86} For instance in Brazil, the location of bio-fuels

\footnotesize{\textsuperscript{82} De Castro FM (2007) ‘Bio-fuels-an overview’ Final Report, p 27 “While the depth and persistence of foreign exchange problems in most African countries have been linked to petroleum importation dependency, the Brazilian ProAlcool program is estimated to have leveraged US$ 48 billion in avoided hard currency expenditures on the basis of a US$ 5 billion investment”\textsuperscript{83}UNCTAD (2006b) 9 “In the United Republic of Tanzania, the cost of oil imports has risen from roughly $190 million in 2002 to about $480 million in 2006 for approximately the same amount of Oil.”\textsuperscript{84} ‘Bio-fuel caution urged’ (2007) available at http://www.polity.org.za/article/bio-fuels-caution-urged-2007-11-02 (accessed on 2-4-2009)\textsuperscript{85} Dufey et al (2007) 27-28\textsuperscript{86} IRGC (2008) 16}
industries in rural areas has played a crucial role in creating employment.\textsuperscript{87} There has been a deliberate move to include small scale producers and cooperatives by providing incentives to companies that source their feedstock from small scale farmers through the ‘Social Seal’ project.\textsuperscript{88}

Therefore, rural development is an important policy consideration in promoting bio-fuel production. The social impacts of bio-fuels development will depend upon the feedstock and the production system chosen.\textsuperscript{89} This is so because bio-fuels may also provide by-products that may be used as animal feeds and fertilisers and can even improve rural economies by improving the irrigation and mechanisation and contributing towards energy security in rural areas, thus revitalising the rural areas.\textsuperscript{90}

However, these social benefits will not come automatically, countries must take steps to ensure that these benefits are realised. It is upon countries promoting bio-fuels production to ensure that rural communities participate. Policies should clearly state the rural area’s participation and extent of participation. Will the rural areas participate by way of outgrower associations, cooperatives, and partnerships or will it be by way of contract farming?\textsuperscript{91} All these considerations need to be kept in mind by governments involved in bio-fuels production in order to ensure that bio-fuels production contributes towards rural development.

2.2.3 Export development

Bio-fuels may also present countries with the opportunity to diversify their export base. The largest consumers of bio-fuels are developed countries, which also produce bio-fuels, but do not have enough production capacity to meet their domestic needs.\textsuperscript{92} Developing countries have comparative advantage in the production of bio-fuels as they have the land, labour and favourable climatic conditions. Therefore, developing countries may seize this opportunity to supply the developed world’s markets. In fact for a country like Tanzania which has preferential market access into the EU, may use this opportunity to diversify exports.

\textsuperscript{87} UNCTAD (2006b) 18 and De Castro (2007) 30 states that the “Brazilian sugarcane sector was responsible in 2004 for 700,000 jobs and around 3.5 million indirect jobs, corresponding to the production of 350 million tonnes of cane.”
\textsuperscript{88} Dufey et al (2007) 43
\textsuperscript{89} FAO (2008b) 6
\textsuperscript{90} FAO (2008b) 6
\textsuperscript{91} FAO (2008b) 7
\textsuperscript{92} Dufey et al (2007) 28
Exporting bio-fuels or their feedstock may be a positive step for developing countries to participate in the world economy, which is a precondition to speed up economic development. Countries should also work on expanding their domestic capacity if they are to benefit from exportation of bio-fuels, for having the requisite climatic conditions and comparative advantage is not sufficient on its own. The necessary infrastructure such as roads, ports and waterways must be made fully functional. Countries are also advised to seek South-South cooperation with countries that have long experiences with bio-fuels production. Such countries as Brazil could provide the required technology in order to increase production. Countries should also ensure that they meet certification requirements of importing countries, as these if not properly adhered to may prevent access to the markets of importing countries and act as technical barriers to trade.

2.2.4 Climate change mitigation

According to the IEA, bio-fuels in transport are expected to enable a 6% global GHG reduction, though this is debatable. The need to mitigate climate change is due to international commitments to reduce pollution such as the Kyoto Protocol and the increased awareness of the impacts of fossil fuels. Bio-fuels contribute to carbon reduction; therefore the Clean Development Mechanism (CDM) could be used to further investments in bio-fuels production. CDM projects must show that the emission reductions are additional to those that would have occurred in the absence of the registered CDM activity. Projects that reduce greenhouse gas emissions and contribute to sustainable development can earn saleable certified emission reduction credits (CERs). Countries with a commitment under the Kyoto Protocol can use the CERs to meet a portion of their obligations under the Protocol.

93 Lee et al (2008) 4
94 Dufey et al (2007) 52
95 Dufey et al (2007) 53
96 Dufey et al (2007) 54
97 Dufey et al (2007) 40
99 GTZ (2005) 117 “Under the Kyoto Protocol, countries can engage in projects through which an entity in one country partially meets its domestic commitment to reduce GHG levels by financing and supporting the development of a project in another country. CDM projects are between an industrialised and a developing country. One country provides the other with project financing and technology, while receiving CO2 reduction credits that can be used in meeting its emissions reduction commitments. A major requirement for CDM projects is that they also have to further the sustainable development goals of the host country. In addition, CDM projects must involve activities that would not otherwise have occurred, and should result in real and measurable emissions reductions.”
However at present its utility in relation to bio-fuels is limited due to the fact that “there is a lack of capacity in CDM project development and limited availability of CDM baseline methodology specifically developed for bio-fuels projects and geared to assess their potential to contribute to global GHG emission reductions and sustainable development.” To date, the only liquid bio-fuel CDM project under consideration is: "Biodiesel Fuel Production Project in Indonesia" which is currently at the validation phase. It is estimated that only about 3% of all CDM projects are based in Africa. However these barriers might soon be removed as UNCTAD is currently working to streamline the CDM bio-fuel approval process, which will enable industrialized countries to facilitate bio-fuel projects in Africa for their benefit. The importance of CDM to developing countries is underscored in the following words:

The funding channelled through the CDM should assist developing countries in reaching some of their economic, social, environmental and sustainable development objectives, such as cleaner air and water, improved land-use, accompanied by social benefits such as rural development, employment, and poverty alleviation and in many cases, reduced dependence on imported fossil fuels. In addition to catalysing green investment priorities in developing countries, the CDM offers an opportunity to make progress simultaneously on climate, development, and local environmental issues. For developing countries that might otherwise be preoccupied with immediate economic and social needs, the prospect of such benefits should provide a strong incentive to participate in the CDM.

2.3 Tanzania’s bio-fuels potential

Tanzania has a large potential for bio-fuels production however this potential has not been fully exploited due to inadequate know how and lack of policy support for bio-fuels development. It is further estimated that the country has the potential to produce 4,010 million litres of ethanol and 1726 million litres of biodiesel. The local annual demand for

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102 UNCTAD (2006c) 29-30
104 Ibid
105 Pfeifer (2008) 138-139
106 This part relies on a report commissioned by the German Technical Cooperation (GTZ), as the report has made research into the country’s bio-fuels potential. It is titled ‘Liquid Bio-fuels for Transportation in Tanzania: Potential and Implications for Sustainable Agriculture and Energy in the 21st Century’.
107 GTZ (2005) 22
ethanol is estimated to be 568 million litres for ethanol and 886 million litres for biodiesel.\textsuperscript{109} This means that after satisfying its domestic market, Tanzania will have an annual export potential to the world market of 3,442 million litres of ethanol and 840 million litres of biodiesel.\textsuperscript{110} However these figures are based on a high percentage of available arable land and fails to take into account other land uses.\textsuperscript{111}

Tanzania is a country endowed with vast tracts of land that are arable and uncultivated.\textsuperscript{112} Land for investment purposes may be obtained from the Tanzania Investment Centre (TIC) which operates a land bank for investments. The investor is normally granted derivative rights over the land and foreigners may not own land in Tanzania. Tanzania has 55.2 Mha potential area for rain-fed crop production from the total land area of 93.8 Mha.\textsuperscript{113} 10.8 Mha of this area is in use for crop production, leaving 44.4 Mha of land potentially available for (food and non-food) crop production.\textsuperscript{114} These figures suggest that land availability is not likely to be a barrier to bio-energy production in Tanzania.\textsuperscript{115} However, FAO estimate that 10-30\% of the land may not be available for bio-fuels production due to competing land use.\textsuperscript{116}

Tanzania is also blessed with rainfall and moisture. Agriculture in Tanzania mainly depends on rain. The rainy season varies between the north and south. The north has two growing seasons, i.e. during the short rainy season which begins in October to January, and the long rainy season that starts in March to June. However in the South, there are is little rain and one growing season which starts in November/December to June. Therefore, the growing period indicates that about 46 million ha (about half of the land area) have a growing period of over 120 days and a reliable onset of the rainy seasons.\textsuperscript{117}

The climatic conditions are conducive to grow several feedstocks such as castor seed, sunflower, groundnut, cashew nut, sesame, copra, cottonseed, palm seed and soya. Trees with seeds rich in oil such as \textit{Jatropha curcas} and \textit{Pongamia pinnata}, have a large potential.
*Jatropha curcas* can be intercropped with other agricultural products and has the potential to improve the soil quality of degraded lands.\textsuperscript{118} Other crops that may be used for bio-fuel production include maize and cassava, sugar cane and jatropha.\textsuperscript{119} Currently, jatropha is grown by smallholder farmers and promoted by local NGOs for non-transport applications such as fuel for cooking and feedstock for soap making. Smallholder farming is the dominant mode of production in the current jatropha growing areas.\textsuperscript{120}

Tanzania also has a large potential for the production of bio-ethanol. In a research conducted by the University of Dar es salaam, a possibility in producing ethanol from lignocellulosic waste materials, primarily from the sugarcane industry in Tanzania was identified.\textsuperscript{121} Tanzania has substantial potential in the production of bio-fuels due to availability of land and favourable climatic conditions which support the growing of a wide variety of feedstocks. Some feedstock are already being grown, albeit in small scale for domestic use, such as jatropha in northern Tanzania used primarily for domestic energy purposes.

### 2.4 Conclusion

It has been shown that bio-fuels production raises the issue of food security, environmental concerns, economic and social concerns. However, amidst all these concerns, bio-fuels provide benefits such as energy security, rural development, export development and climate change mitigation. It has been shown that bio-fuels may be grown on ‘marginal lands’ in order to avoid or to reduce the competition for land with food crops. Likewise, bio-fuels may be produced from non food crops such as jatropha which also thrives on degraded land. Environmentally, it is generally accepted that bio-fuels reduce GHG. However care should be taken to ensure that land degradation does not occur by using good agricultural practices and that acts such as clearing of virgin ecosystems are refrained from. Socio-economically, bio-fuel production raises the issues of land access, labour conditions and local communities’ participation. Large scale bio-fuels production is feared that it will bring with it mechanisation hence affecting the labour force. Jobs will also be seasonal. Therefore, for bio-fuels production to be meaningful and produce meaningful results the local communities

\textsuperscript{118} GTZ (2005) 34

\textsuperscript{119} GTZ (2005) 34

\textsuperscript{120} GTZ (2005) 26

\textsuperscript{121} GTZ (2005) 24
should be fully involved and the concerned government should see to it that large scale producers and small scale producers live in harmony.

One of the biggest challenges is regulating large scale production of bio-fuels in Tanzania, which will further be explored in chapter four. Having seen the controversies surrounding bio-fuels production, risks, opportunities and trade offs, attention will now be focused on the current sate of FDI in bio-fuels in Tanzania with the attendant challenges facing the investment regime in attracting investments in this new, fast growing and controversial sector.
3.1. Introduction
Having discussed the current debate on bio-fuels in chapter two, this chapter seeks to examine FDI in general and the investment regime in bio-fuels production in Tanzania in particular. The chapter analyses the investment law to show how FDI is attracted in Tanzania, and the role of both the government and the Tanzania Investment Centre (TIC) the government’s official Investment Promotion Agency (IPA). The place of renewable energy in the investment regime is discussed, and current foreign investments in bio-fuels are highlighted.

3.2 Foreign Direct Investment (FDI)
Foreign direct investment has been defined differently by different international institutions. According to the Organisation for Economic Cooperation and Development (OECD) benchmark definition, a direct investment enterprise is an incorporated or unincorporated enterprise in which a single foreign investor either owns 10 per cent or more of the ordinary shares or voting power of an enterprise (unless it can be proved that the 10 per cent ownership does not allow the investor an effective voice in the management) or owns less than 10 per cent of the ordinary shares or voting power of an enterprise, yet still maintains an effective voice in management. An effective voice in management only implies that direct investors are able to influence the management of an enterprise and does not imply that they have absolute control. The most important characteristic of FDI, which distinguishes it from portfolio investment, is that it is undertaken with the intention of exercising control over an enterprise.123

Likewise, according to UNCTAD’s World Investment Report 2002, FDI is defined as an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate). FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals as well as business entities.\(^{124}\)

Foreign direct investment is also defined as:

> the transfer of tangible or intangible assets from one country into another for the purpose of their use in that country to generate wealth under the total or partial control of the owner of the assets.\(^{125}\)

FDI is contrasted with portfolio investment, which involves the movement of money in order to acquire an interest in a company formed or functioning in another country. The main difference between the two types of investment is the “divorce between management and control of the company and the share of ownership of it.”\(^{126}\) From the above definitions, it is clear that the purpose of FDI is to gain control of the tangible or intangible assets transferred into another territory.

However, to better appreciate FDI and both the positive and negative impacts it might have on the economic welfare of the host state, it is crucial to have an understanding of the underlying theories of foreign investment and their dynamics. These will assist in determining whether FDI can produce any meaningful benefits to the host state’s economy.

### 3.3 Theoretical foundations of foreign investment

These theories seek to explain the impact of FDI on the economic development of the host country. These are the classical theory, dependence theory and the middle path.

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\(^{126}\) Sornarajah (2004) 7
3.3.1 The classical theory on foreign investment

This theory is based on the assumption that foreign investments are wholly beneficial to the host country. The logic is rooted in the assumptions that when foreign capital is brought into the economy of the host state, domestic capital may be diverted to other uses for public benefit.\textsuperscript{127} Furthermore, foreign investments are believed to lead \textit{inter alia}, to job creation, transfer of technology, and introduction of new management skills.\textsuperscript{128} The beneficial aspects of foreign investments have led countries to believe that foreign investments must be protected. According to proponents of the classical theory, the benefits from FDI are derived through positive spillovers. Although the classical theory seems to paint an overwhelmingly positive picture about the benefits that can be derived from FDI, empirical evidence on the subject is mixed. Some studies have found a positive spillover effect, some no effect and others a negative spillover effect. However the beneficial effects of FDI have been questionable, for not all that glitters is gold. For example in a recent report on attracting FDI by African governments, doubts were raised. It was stated that internationally “FDI is hardly accompanied by substantial employment creation, and in some cases may even lead to job losses.”\textsuperscript{129} The type and quality of jobs created is also far from pleasing as jobs were low paid and job conditions were poor.\textsuperscript{130} The report also shows that capital out flows of FDI also exceeded capital inflows. It was stated that for instance,

FDI flowing out of South Africa had increased rapidly, and since 1994, it has exceeded direct capital flow... Between 1994 and 2000, FDI into the country came to R45 billion, while outflows of direct investment came to R54 billion.\textsuperscript{131}

Furthermore, foreign investment may not always enhance technological development in the host country. This is so because in some instances, the technology imported into the host country is obsolete and has reached the end of its life cycle in the country of origin.\textsuperscript{132} FDI has also been blamed for creating competition with local technology which results into stifling of local technology developments and diverts resources from technology development

\textsuperscript{127} Sornarajah (2004) 51
\textsuperscript{128} Sornarajah (2004) 51
\textsuperscript{130} Mwilima (2003) 34
\textsuperscript{131} Mwilima (2003) 34 and see Sornarajah (2004) 53
\textsuperscript{132} Sornarajah (2004) 53
to attracting FDI.\textsuperscript{133} FDI may not transfer managerial skills as high confidential managerial jobs are seldom given to local personnel.\textsuperscript{134}

It is argued that, the overall effects of FDI will depend on a host country’s investment climate. For this to be realised, there must be developed local markets and institutions, investment friendly policies and administrative framework, as well as complementary factors of production.\textsuperscript{135} The beneficial effect of FDI on development is not self-evident. FDI does not automatically promote the economic development of a country.\textsuperscript{136} Benefits derived from FDI depend on the existence of a number of factors. These factors range from the economic policies pursued by the host state, the sectors in which investment is made, the political risks present, availability of effective institutions and the presence of developed financial markets, to the stock of human capital availability.\textsuperscript{137}

Others have also argued that private investment leads to economic growth and prosperity in countries that have stable socio-political institutions, certainty in macroeconomic policies and flexibility in the financial market.\textsuperscript{138} Socio-political instability, regime change instability and policy uncertainty may also affect private investment negatively. To create a healthy investment climate, governments need to design and implement consistent policies to address these political risks.\textsuperscript{139}

Despite all the shortcomings of the classical theory on foreign investment, it continues to thrive because of the driving force behind it. It is supported by international institutions such as the World Bank and IMF that are controlled by capital exporting countries like the US.\textsuperscript{140}

\begin{thebibliography}{9}
\bibitem{Mwilima} Mwilima (2003) 33
\bibitem{Somarajah} Somarajah (2004) 54
\bibitem{Kebonang} Kebonang Z “NEPAD: Drawing lessons from theories of foreign direct investment” (2006) \textit{Indian Journal of Economics and Business} available at \texttt{http://findarticles.com/p/articles/mi_m1TSD/is_2_5/ai_n25012650} (accessed on 19-3-2009)
\bibitem{Kebonang2} Kebonang (2006)
\bibitem{Kebonang3} Kebonang (2006)
\bibitem{Kebonang4} Kebonang (2006)
\bibitem{Somarajah2} Somarajah (2004) 52-53. In the 1980s, this was evidenced by the so called ‘Washington Consensus,’ whereby the IMF and the World Bank acted in concert with the US to impose conditions that were based on notions of economic liberalism.
\end{thebibliography}
It continues in strength because of the powerful support rallying behind it and neoliberal assumptions supported by the international financial institutions.141

3.3.2 The dependency theory
This theory was developed in the 1950s and was popularised by Latin American economists and philosophers such as Raul Prebisch.142 It is in total opposition to the classical theory. Dependency is defined as:

[Dependency is]...an historical condition which shapes a certain structure of the world economy such that it favours some countries to the detriment of others and limits the development possibilities of the subordinate economies...a situation in which the economy of a certain group of countries is conditioned by the development and expansion of another economy, to which their own is subjected.143

According to this theory, foreign investment will not bring about meaningful economic development.144 The multinational corporations which are the vehicles through which FDI is channelled act in the interest of the parent company in the developed world. Their first priority is serving the interests of the parent company and not in the economic development of the developing host state. As a result of this, “the home states become the central economies of the world, and the states of the developing world become subservient or peripheral economies serving the interests of the home country.”145 The main thrust of the theory is the inability of the periphery to develop autonomous and dynamic technological innovation. This is attributed to the centre’s control of technology and systems of generating technology. Foreign capital only transmits limited technology.146 Therefore, the multinational corporations do not export any meaningful technology to the periphery. Only limited technology is transmitted, further hindering the development and innovation of the periphery.

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141 Kebonang (2006) and Mwilima (2003) 33
144 Sornarajah (2004) 57
145 Sornarajah (2004) 57
Under the dependency theory, FDI only promotes dependence and underdevelopment because it furthers the production and export of primary products, which are dependent on world markets, which in turn fluctuates. Remittance of profits and payment of royalties to the home state lead to declining reinvestments in the host state. These surplus transfers reduce funds available for domestic investment in the less developed countries. This capital flight forces the developing countries to seek financing from else where resulting into further borrowing, thus making them ever dependent on the developed world. The developing countries were plunged into a vicious cycle of dependency.

The theory holds that foreign investments are bad. Due to the exploitative nature of FDI, dependency theorists contend that the solution to underdevelopment requires closing developing countries to international investment and trade, calling upon states to adopt policies that intentionally discriminate against FDI in order to foster the growth of domestic industries.

However times have changed and countries that advocated for this theory are courting FDI by attracting it with incentives and reforming their investment regimes. Countries have realised that they cannot do without FDI. As a result, countries have moved from the dependency theory to what is known as the middle path, which seeks to reconcile the classical theory and the dependency theory.

### 3.3.3 The middle path

This theory is based on the combination of the classical and dependency theory. Changing events in the global economic system have forced countries to change their stance on foreign investment. Countries have taken a more pragmatic approach towards foreign investment by enacting favourable legislations that guarantee the protection of investments and by signing bilateral investment treaties.

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147 Kebonang (2006)
148 Kebonang (2006)
149 Kebonang (2006)
150 Kebonang (2006) According to a World Bank finding, “Between 1991 and 2001, for instance, a total of 1,393 regulatory changes were introduced in national FDI regimes, of which 1,315 (or 95 percent) were in the direction of creating a more favorable environment for FDI”
The reduction of hostility towards MNCs is greatly attributed to studies of international organisations such as the United Nations Commission on Transnational Corporations, (UNCTC).\textsuperscript{151} Such studies highlighted both the benefits and harmful effects of foreign investment and showed if foreign investment was properly harnessed it could lead to economic development of developing countries.\textsuperscript{152} Among the benefits stated by such studies included the flow of capital and technology, generation of new employment opportunities and creation of new opportunities for export. The negative impacts found by such studies included acts which tended to defeat the tax laws of the host countries by engaging in transfer pricing, restrictive practices that limited the transfer of technology.\textsuperscript{153} There were a lot of restrictive clauses introduced in the transfer agreements in such a way that developing host countries could not fully reap the benefits of the transfer. The technology exported is often obsolete and hazardous. There were also restrictions on the export of goods manufactured by the imported technology.\textsuperscript{154}

The theory also states that foreign investment must be protected but only to the extent of the benefits it brings the host state and the extent to which foreign investors have behaved as good corporate citizens in promoting the economic and social objectives of the host country.\textsuperscript{155} In response to this, developing countries have enacted legislation which sets up screening bodies which permit entry or give incentives to approved bodies.\textsuperscript{156} This is a good approach in attracting foreign investment, but may not be practicable in poorer developing countries which are desperate to attract foreign investment. Screening becomes a luxury that they may not indulge in, as they are desperately in need of FDI though it is highly desirable. Finally the theory calls for a mixture of interventionist measures such as regulation and openness in dealing with foreign investment but cautions against too much openness and too much regulation or intervention.

From the above theories on foreign investment, one may infer that countries have to ensure proper regulation of FDI. If need be, FDI must be screened and regulated. Right of entry of FDI must not be unlimited, rather, investors must be screened so that only genuine investors

\textsuperscript{151} Sornarajah (2004) 60
\textsuperscript{152} Sornarajah (2004) 60
\textsuperscript{153} Sornarajah (2004) 61
\textsuperscript{154} Sornarajah (2004) 61
\textsuperscript{155} Sornarajah (2004) 63-64
\textsuperscript{156} Sornarajah (2004) 63
who will contribute to the economic development of the host state are welcomed.\textsuperscript{157} This will ensure that the kind of investment that is allowed in is one that can complement the developmental objectives of host states. Unless FDI is aligned with the development objectives of host countries, there will be no added value in having FDI. Countries should not be guided by the quantity of investment, but rather the quality. Though liberal policies might be required to attract FDI, regulation is needed to ensure FDI enhances development.\textsuperscript{158}

Moreover, FDI can contribute to economic growth through capital flows, technology transfer, and employment creation. These benefits are not, however, automatic. The benefits derived from FDI depend on the sector in which investment is made and on the level of economic development of the host country. Investment in the primary sector has fewer positive spillovers than investment in the manufacturing sector. Countries should promote investment that will enhance the growth of the secondary industries. In this way, real employment, technological and infrastructural benefits can be experienced.\textsuperscript{159} FDI must be made to work for development despite there being a liberal policy to attract it.

### 3.3.4 African countries’ perception of FDI

African countries generally viewed FDI with suspicion. Her early experience with foreign companies has continued to affect her perceptions of FDI. During the early independent years of most African countries, her leaders were staunch supporters of socialism and viewed western capitalism with suspicion. Africa’s suspicion is deeply rooted owing to historical, ideological, and political reasons. These suspicions towards FDI led to nationalisation of foreign firms, state intervention in the economy and direct legal restrictions on foreign trade. However these ideological objections have withered with time and there have been major reforms in FDI regimes in Africa over the last two decades. African countries have been eager to attract FDI and this has been due to external pressures from the West to liberalise trade and cut tariffs.\textsuperscript{160} Perhaps it is about time for African countries to change their tactics in attracting FDI. They should aim to attract FDI that serves their development interests.

\textsuperscript{157} Kebonang (2006)
\textsuperscript{158} Third India National Reference Group Meeting, 13\textsuperscript{th} March 2003. Available at www.cuts-international.org/IndNRG3.doc (accessed on 18-3-2009)
\textsuperscript{159} Kebonang (2006)
3.4 A historical overview of FDI in Tanzania

The attitude of the government towards FDI has not been consistent throughout Tanzania’s history. The government has had different attitudes towards FDI at different times. The attitude which the government harboured at independence is different from the attitude that it had during the Arusha Declaration, and it is different from the attitude that it currently has.

3.4.1 Attitude towards FDI at independence

It is contended that at independence and shortly thereafter, “there was no clear and elaborate government policy on investment.” There were growing feelings of anti-private property ownership by nationalists. Perhaps dislike of FDI could be linked to the powers multinationals had in host country politics. However, this attitude did not last long, as soon after independence, the government realised the importance of both FDI and local investments. It is in this vein that the then president of the country, Julius K. Nyerere remarked that:

The government wishes to work with private investors for the development of Tanganyika.

It is during this time that the Foreign Investment (Protection) Act 1963 (FIPA) was passed. The Act aimed at providing statutory guarantees to foreign investors to encourage investments. To create a conducive investment climate, the government also entered into bilateral agreements with foreign governments in order to attract FDI by guaranteeing protection to foreign investors. Such bilateral investment treaties included inter alia the Exchange of Notes Constituting an Agreement Between the United States of America and Tanganyika Relating to Investment Guarantees of 14th November 1963 and the Treaty Between the Federal Republic of Germany and United Republic of Tanzania Concerning the

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161 This was a declaration issued by the ruling party Tanganyika African National Union (TANU) in February 1967. The government sought to overhaul the economic set up of the country. It nationalized the major means of production such as banks, insurance companies and industries, thus marking the birth of socialist Tanzania.

162 Peter CM and Mwakaje SJ Investments in Tanzania, some comments-some issues (2004) Dar es salaam: Friedrich Ebert Stiftung and Department of International Law, Faculty of Law, University of Dar es salaam, p 8

163 Third India National Reference Group Meeting, 13th March 2003, where it is stated: “During the 1960’s multinationals were actively involved in politics in the host states in which they operated, and the dominant attitude toward multinationals was one of hostility.” Available at www.cuts-international.org/IndNRG3.doc (accessed on 18-3-2009)


165 Act No. 40 of 1963

166 Peter (1994) 6 and Peter and Mwakaje (2004) 9-10
Encouragement and Reciprocal Protection of Investments of 30th January 1965. However all this was short lived as the country soon nationalised foreign investments in 1967.

3.4.2 Attitude towards FDI after the Arusha Declaration

On the 5th of February 1967, the government issued the famous Arusha Declaration, whereby the government nationalised the major means of production. This was an attempt to place the major means of production under “the control and ownership of Tanzania’s people.” The government nationalised inter alia, banks, wholesale and retail trade, insurance business and agricultural products marketing. These takeovers continued up to the 1970s though the government paid compensation, these nationalisations tarnished the country’s image as an investment destination. Companies that refused to sell their controlling interest to the government such as Bata Shoe Company Limited were completely nationalised. Investors feared investing in Tanzania due to nationalisations and this negatively affected FDI flows into Tanzania. The development of both foreign and local investments were discouraged, as private ownership of small industrial enterprises was banned and those that ventured into entrepreneurship were termed ‘economic saboteurs’ and subjected to penal sanctions.

As a result of the Arusha Declaration and ensuing nationalisations, FDI inflows into the country declined significantly. During 1970-1990 FDI inflows in Tanzania averaged about USD4.4 million as compared to Kenya’s USD 32 million. From 1970 until 1990 the East African countries received some USD757 million of total inflows, 90 percent of which went to Kenya, nearly 10 percent went to Tanzania, while Uganda hardly received any at all.

169 Peter (1994) 8
170 Binhammer (1975) 127
172 Kabelwa (2006) 4
173 Kabelwa (2006) 4
Kenya’s high inflows of FDI are attributed to its adoption of non restrictive policies towards foreign investors.\textsuperscript{174}

3.4.3 Attitude towards FDI during the 1980s to the present

The nationalised enterprises became State Owned Enterprises (SOEs) and these did not perform well. They were inefficient, made large losses and drained the government of revenue in the form of subsidies.\textsuperscript{175} By the mid 1980s, it was clear that the economy and business environment in Tanzania did not simply need an adjustment, “but an overhaul and a complete structural transformation.”\textsuperscript{176} This need was met by the Structural Adjustment Programs (SAP).\textsuperscript{177} Countries were advised by the World Bank and IMF to restructure their economies and liberalise trade. With countries forced to liberalise their economies, sell government enterprise, reduce tariffs and liberalise foreign investment regulation. By 1988, Tanzania had 413 public enterprises.\textsuperscript{178} These were obviously a burden to the government. It is contended that,

\begin{quote}
Between 1976 and 1979 one third of the parastatals ran at a loss...In the 1980s and early 1990s, the majority of parastatals had negative net returns, and this trend was accelerating. In 1988, more than 180 parastatals reported losses totalling TSh 33 billion (US$ 56±9 million) which were being financed directly and indirectly by the government. Direct subsidies to parastatal s accounted for 11 per cent of the total government expenditure and these were increasing over time...\textsuperscript{179}
\end{quote}

There was therefore need for FDI to revamp these declining SOEs which had ground to a halt. The economy was in decline and essential consumer commodities such as soaps, clothes and edible oils were in short supply. In light of these events, Tanzania’s FIPA was rendered obsolete and redundant. A new investment law that would reflect the changes taking place

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\textsuperscript{174} Kabelwa (2006) 4
\textsuperscript{176} Temu and Due (2000) 685
\textsuperscript{177} Welch C and Oringer J ‘Structural Adjustment Programs’ (1998) International Relations Centre, Foreign Policy in Focus, Vol. 3, No. 3 “These were formulated as loan conditions by Northern governments and the International Financial Institutions (IFIs), SAPs mandate macroeconomic policy changes that obligate recipient nations to liberalize their trade and investment policies. They generally entail severe reductions in government spending and employment, higher interest rates, currency devaluation, lower real wages, sale of government enterprises, reduced tariffs, and liberalization of foreign investment regulations.” Available at http://www.fpif.org/briefs/vol3/v3n3sap.html (accessed on 18-3-2009)
\textsuperscript{178} Temu and Due (2000) 693
\textsuperscript{179} Temu and Due (2000) 693
\end{flushleft}
had to be formulated. This resulted into the birth of the National Investment (Promotion and Protection) Act 1990\(^{180}\) (NIPPA).

The new Act established the Investment Promotion Centre (IPC), listed the priority areas for investment; controlled and reserved areas; and activities reserved for local investors. The Act provided for areas of investment, application procedures, incentives, transfer of currency and dispute resolution.\(^{181}\) The Act was only in effect for seven years. There were many changes taking place in the investment field both locally and globally. There was the establishment of the World Trade Organisation (WTO) at the global level and locally, Tanzania was experiencing increasing volumes of FDI.\(^{182}\) FDI inflows rose from USD 12 million in 1992 to USD 260.2 million in 2004 after reaching a peak of USD 516.7 million in 1999.\(^{183}\) In 1998, 200 parastatals had either been privatised by way of outright sale, leases, share sales, management buy outs or liquidation to local and foreign investors with some closed.\(^{184}\) A new law was needed to reflect all these changes taking place at the time. This led to the enactment of the Tanzania Investment Act 1997\(^{185}\) (TIA), an Act which repealed and replaced the NIPPA and forms the current investment law. However, the TIA was preceded by the National Investment Promotion Policy 1996 (NIPP). The TIA has to be read together with the Financial Laws (Miscellaneous Amendments) Act 1997\(^{186}\) (FLMAA).

3.5 An analysis of Tanzania’s current investment law

Currently, the Tanzania Investment Act, (TIA) is the law governing investments, both local and foreign in the country. Under the TIA, several terms are defined.\(^{187}\) The term investment and foreign investor\(^{188}\) is defined. The term investment is defined in order to include new investments as well as the taking over of privatised businesses. However the term foreign

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\(^{180}\) Act No. 10 of 1990

\(^{181}\) Peter (1994) 18 and Peter and Mwakaje (2004) 11

\(^{182}\) Peter and Mwakaje (2004) 12

\(^{183}\) Kabelwa (2006) 6

\(^{184}\) Temu and Due (2000) 694

\(^{185}\) Act No. 26 of 1997

\(^{186}\) Act No. 27 of 1997

\(^{187}\) Section 3 of TIA is the interpretation section.

\(^{188}\) “Investment” means the creation or acquisition of new business assets and includes the expansion, restructuring or rehabilitation of an existing business enterprise, whilst the term “foreign investor” means in the case of a natural person means a person who is not a citizen of Tanzania, and in the case of a company, a company incorporated under the laws of any country other than Tanzania in which more than fifty percent of the shares are held by a person who is not a citizen of Tanzania, and in the case of partnerships, means a partnership in which the partnership controlling interest is owned by a person who is not a citizen of Tanzania.
direct investment is not defined in the Act. Terms are defined in order to try and remove ambiguity.

### 3.5.1 Scope of application

According to the Act,\(^{189}\) it applies to any business that is wholly owned by a foreign investor or if a joint venture, the minimum investment capital must not be less than USD 300,000 or if it is locally owned the minimum investment capital must not be less than USD 100,000 or an equivalent amount in Tanzanian shillings. Therefore, the Act covers both foreign investments and local investments. However, the Act specifically excludes from its application certain businesses. Businesses not covered by the act are:

- Businesses that are authorised to conduct mining or prospecting in mining under the Mining Act 1979 or seeking authorisation to conduct any such operations.
- Businesses that are involved in the exploration or production operations or to construct or operate a pipeline under the Petroleum (Exploration and Production) Act 1980 or seeking authorisation to conduct such operation.
- Businesses engaged in the manufacture, marketing or distribution of hazardous chemicals, armaments or explosives.

These are businesses that are explicitly excluded from the purview of the TIA *per se* in Tanzania. However such businesses may still enjoy facilities normally available to approved enterprises under the Act. Such businesses still enjoy the guarantees of transfer of capital, profits and dividends and enjoy the guarantees against expropriation provided for by the TIA.\(^{190}\) The TIC also has a duty to assist these businesses in obtaining approvals, registrations, consents, licences and any other matter required by law in order to set up and operate investments, should the need arise.\(^{191}\) Therefore, investors in mining and petroleum and related fields “enjoy the best of the two worlds.”\(^{192}\)

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\(^{189}\) Section 2 of TIA  
\(^{190}\) Section 2(3)  
\(^{191}\) Sections 2(5) and 6(d) of TIA  
\(^{192}\) Peter and Mwakaje (2004) 17
3.5.2 Organs of the TIC

Basically the duties of the Centre are to be discharged by the Board and the Secretariat. The board has the duty to discharge the functions of the TIC. It is to consist of the chairman who is appointed by the President and six other board members selected by the Minister, two from the private sector, two from the public sector and any other two members appointed by the Minister. Such persons are to have sound knowledge and experience in public or private sector investment and management issues.

The Secretariat consists of the Executive Director, a presidential appointee and other officers and staff of the TIC. The Executive Director also acts as the secretary of the Board and is responsible for the day to day running of the TIC and implementation of the decisions of the Board.

3.5.3 Investment opportunities

Under the Act, the TIC is to cooperate with other relevant Government ministries and authorities to determine investment opportunities in the country and modalities of accessing them. Together with government ministries and authorities, priority sectors for investment have been listed. Areas of priority for investment are: agriculture and livestock, aviation; commercial buildings; commercial development and microfinance banks; export oriented projects; geographical special development areas; human resource development; manufacturing; natural resources including fisheries; rehabilitation and expansion; tourism and tour operations and radio and television broadcasting. Surprisingly, there is no mention of renewable energy or bio-fuels production for that matter as a priority sector of investment. The Act is silent on promoting investments in bio-fuels production or renewable energy.

A glaring omission in the TIA is the lack of demarcation of what sectors are open for investment to local and foreign investors. As one author has put it, “the whole country is up

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193 Established under section 7
194 Established under section 11
195 Section 7(2) of TIA
196 Section 7(3) of TIA
197 Section 11 of TIA
198 Section 10 of TIA
199 Section 7(4) of TIA
200 Section 11(6)
201 Section 15
202 Fourth Schedule to the Financial Laws (Miscellaneous Amendments) Act 1997, Act No. 27

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for grabs without any inhibitions. This is unlike the NIPPA, which had clearly spelt out the areas open for investment. This Act had divided investment areas into priority areas for investment, controlled areas and reserved areas. Controlled areas were those requiring large investment such as inter alia iron and steel production and chemical fertilisers. Such areas called for private/public partnership. Reserved areas were those of strategic importance such as manufacturing, marketing and distribution of ammunition which called exclusively for public investment. Such areas as retail and wholesale trade, product brokerage, hair dressing and beauty salons were left for local investors.

3.5.4 Application for a certificate of incentives
In order for an investor to enjoy benefits and incentives that accrue under the Act, such an investor must be registered with the TIC. The registration process is provided for under section 17. Once an investor is registered, a certificate of incentives is issued. An investor may also be granted strategic investor status where, the project is over USD 20 million, offering specific/great impact to the society or economy. Such an investor may request for special incentives from the government. The procedure for registration differs according to the type of business enterprise or investment being sought to be registered. The investment being registered may either be a new investment, the rehabilitation or expansion of an existing enterprise or both or application to register equity investment, shares or stock in an enterprise.

If it is a new investment, the application is to have the full particulars of the new enterprise. Names of the directors or partners should be provided in full, including their nationalities and those of the shareholders. The qualifications and experience of the project management are to be provided. The nature of the business activity such as the capital structure and source of funding is to be stated. In 2006, the Centre registered a total of 679 projects worth Tshs. 7,052,749.2 million with employment potential estimated at 74,946 compared to 550 projects

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203 Peter and Mwakaje (2004) 19
204 Peter and Mwakaje (2004) 19
205 Peter and Mwakaje (2004) 19
206 Peter and Mwakaje (2004) 19
207 Section 20 of TIA and regulation 49 of IR
208 Section 17(2) of TIA
worth Tshs. 1,876,063 million and employment potential of 55,663 in 2005.\textsuperscript{209} Out of these 679 registered projects, 454 were new.\textsuperscript{210}

In the case of a rehabilitating or expanding an existing enterprise, the application is to contain the name of the existing enterprise, the Articles and Memorandum of Association or the partnership agreement in case of a partnership. The qualifications of the project management, audited accounts for the previous three years, the nature of rehabilitation or expansion, the capital structure and projected growth over the next five years and evidence of financing the enterprise and an undertaking that the expansion or rehabilitation of the enterprise shall be carried out as indicated in the projection.\textsuperscript{211} In 2006 out of the 679 projects registered with the TIC, 225 were for rehabilitation and expansion of existing facilities.\textsuperscript{212}

Where the application is for equity investment, shares or stock in an enterprise, it should contain name of the enterprise in which the equity investment is made or shares are held, the constitution of the enterprise, the amount of equity investment made, the number of stock or shares held by the equity investor and the currency in which the investment is made.\textsuperscript{213} There seems to have been no projects registered for equity investment, shares or stock in an enterprise.\textsuperscript{214}

Once the certificate of incentives is issued, it cannot be transferred or assigned or amended without the approval of the TIC and should an investor not start operations within two years of issuance of the certificate without satisfactory reasons, the TIC may declare the certificate void taking into consideration the rights of innocent third parties.\textsuperscript{215} Should a holder of a certificate cease to operate the investment, or there has been any change in the ownership of the investment, he shall notify the TIC which will effect changes to the certificate.\textsuperscript{216}

\textsuperscript{210} The Economic Survey 2006, paragraph 135
\textsuperscript{211} Section 17(3) of TIA
\textsuperscript{212} The Economic Survey 2006, paragraph 135
\textsuperscript{213} Section 17(4) of TIA
\textsuperscript{214} The Economic Survey 2006, paragraph 135
\textsuperscript{215} Section 17(7) and (8) of TIA
\textsuperscript{216} Section 17(9)-(13) of TIA
Once the certificate of incentives has been issued by the TIC, a registered investor enjoys a number of privileges. Once registered, an investor enjoys the right to ownership and protection of his property under the constitution. This right to protection of property is also recognised internationally as Tanzania is a member of the World Bank’s Multilateral Investment Guarantee Agency (MIGA). Tanzania is also a member of the Convention on the Settlement of Disputes between States and Nationals of Other States 1965, which establishes the International Centre for the Settlement of Investment Disputes (ICSID).

3.5.5 Fiscal/tax incentives
Fiscal incentives available include allowances on capital expenditure, reinvestment allowances on capital expenditure, infrastructure allowances on infrastructure expenditure, preferential tax rates for withholding tax on dividends, royalties and interest, preferential tax rates on personal income tax, preferential rates on indirect taxes and double deductions of approved or specified costs and expenses.

3.5.6 Non fiscal incentives
A registered investor enjoys a number of non fiscal incentives in Tanzania. Such an investor enjoys unconditional transferability of capital, net profits or dividends attributed to the investment, royalties, fees and charges in respect of any technology transfer agreement registered under the act, remittance of net proceeds after payment of taxes and other obligations after in case of sale or liquidation of investment and payment of emoluments and other benefits to foreign personnel employed in Tanzania in connection with the business.

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217 Article 24 of the Constitution of the United Republic of Tanzania 1977 (as amended) also available at http://www.nec.go.tz/publications/constitution.pdf (accessed on 31-3-2009) which provides for the right of ownership and protection of property lawfully acquired and the right to fair and adequate compensation in case of nationalisation.

218 The Multilateral Investment Guarantee Agency (MIGA) is a member of the World Bank Group. It was established to promote foreign direct investment into developing countries. MIGA was founded in 1988 with a capital base of $1 billion and is headquartered in Washington, D.C. MIGA promotes foreign direct investment into developing countries by insuring investors against political risk, advising governments on attracting investment, sharing information through on-line investment information services and mediating disputes between investors and governments. MIGA’s strength compared to private providers of political risk insurance is its membership of the World Bank Group, which allows it to intervene with host governments to resolve claims before they are filed. Available at http://en.wikipedia.org/wiki/Multilateral_Investment_Guarantee_Agency (accessed on 25-3-2009)

219 Peter and Mwakaje (2004) 32. See also http://www.tic.co.tz/ (accessed on 31-3-2009)

220 Under section 26 of TIA, a person with an established enterprise may enter into a technology transfer agreement, subject to it being registered with TIC.
An investor also enjoys the guarantee against expropriation unless the acquisition is made under the due process of law upon payment of fair, adequate and prompt compensation and with a right to access to the courts of law or arbitration.\textsuperscript{222}

A registered investor also enjoys an initial automatic immigration quota of up to five persons during the start up period with the possibility of adding more personnel subject to consultation with the TIC.\textsuperscript{223} A registered investor may also obtain credit from a domestic bank and financial institution up to the limit established by the Bank of Tanzania, provided the loan is used for the purpose sated in the loan application. The TIC has the right to make a follow up to ensure that the loan is used for the purpose that was stated in loan application.\textsuperscript{224}

A registered investor also enjoys access to regional and sub regional markets\textsuperscript{225} such as East Africa Community and SADC.

### 3.5.7 Dispute resolution

The Act does not provide elaborately for settlement of investment disputes. Should a dispute arise between a foreign investor and the TIC or the government in respect of a business enterprise, the first is to take all efforts to settle the dispute through negotiations amicably.\textsuperscript{226} Should this fail, then the dispute is to be submitted to arbitration in accordance to the method agreed to by the parties. The dispute may either be settled through the arbitration laws of Tanzania for investors or in accordance with the rules of procedure for arbitration of the International Centre for the Settlement of Investment Disputes or within the framework of any bilateral or multilateral agreement on investment protection agreed to by the government of the Tanzania and the government of the country the investor originates.\textsuperscript{227}

However, the dispute resolution procedure has two main weaknesses. Firstly, the law provides for settlement of investment disputes by the arbitration laws of Tanzania for investors.\textsuperscript{228} There is actually no such law in the law books of Tanzania. There is only the Arbitration Act (Cap 15 of the Revised Edition of the Laws 2002). This act deals with

\begin{itemize}
  \item Section 21 of TIA
  \item Section 22 of TIA
  \item Section 24 of TIA
  \item Section 25 of TIA
  \item Peter and Mwakajje (2004) 33
  \item Section 23(1) of TIA
  \item Section 23(2)(a)-(c) of TIA
  \item Section 23(2)(a) of TIA
\end{itemize}
arbitration generally and it is not a law specifically tailored for investors. Secondly, the law assumes that there will only be disputes between a foreign investor and the TIC or government.229 It does not envisage a situation where there can be a conflict between the government or the TIC and a local investor, yet the law caters for both local and foreign investors. This has seriously weakened the credibility of the law in as far as local investments are concerned. It tempts one to conclude that the law was just meant to cater for foreign investors.230

3.5.8 Weaknesses of the TIA

There are several weaknesses that have been noted in the investment regime in Tanzania. Such weaknesses include joint ventures, duties to the investor, double taxation avoidance and the provision of the investment regime in two legislations.

The Act has not defined the term joint venture, though it has been used in the act, albeit limitedly. There has been no elaborate explanation of how joint ventures are to be realised in the Act, it has only been vaguely referred to. This is one thing that the Act failed to capture though it was something captured in the NIPP and hailed as part of the overall national development goal.231 The policy had the view of encouraging joint ventures by providing incentives for such ventures in all sectors of the economy, however the law has not done this. Joint ventures are essential in ensuring the spill over effects of FDI are felt because the local people are in a better position to acquire skills and technology from the people.

A quick perusal of the act satisfies one that the act has not imposed any duties upon the investors. As one author notes, investors have not even been given “the basic duty to respect the law of the country in which they are investing.”232 This is a serious anomaly.

The act also does not provide for double taxation avoidance schemes. This is crucial to be included in the law as investors are keen to know their tax liability in the both the host and home country.233 Lack of such a scheme might act as a disincentive to potential investors.

229 Section 23(1) and (2) of TIA
230 Peter and Mwakaje (2004) 23
231 Paragraph 2.2.4 and paragraph 3.3(i) of NIPP
232 Peter and Mwakaje (2004) 27
233 Peter and Mwakaje (2004) 28
Finally, the investment regime being placed in two separate laws is also a weakness as it complicates the task of the investor in ascertaining the law in two different acts. It defeats the need of making the law simple and accessible to all affected parties. Investment laws must be comprehensive.234

The next discussion focuses on the role of IPAs in attracting FDI and more particularly on the role of the TIC in attracting FDI in bio-fuels production.

3.6 The role of Investment Promotion Agencies (IPAs)

These are normally government agencies that are created for the purpose of attracting and promoting FDI in countries. According to UNCTAD,235 few governments around the world do not present a specialized agency to intermediate and negotiate foreign investments or even carry on prospective activities of new investment opportunities abroad. The success of IPAs depends on their relative independence from the government and sufficient resources. They also need close links with the government and the private sector, and a direct influence in policies that affect individual investments and investment policies.236 In promoting FDI, IPAs have four major functions. These include image building, investment generation, investor facilitation and investor servicing, and policy advocacy.

Image building is the function of marketing the country in order for it to appear attractive for international investment. This is mainly achieved through advertising and public relations events.237 Image building is also considered as the “foundation stone in the process of attracting FDI.”238 It plays a crucial role in building the investor’s interest on the location and overcoming negatives perceptions.239

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234 Peter and Mwakaje (2004) 28
239 OECD (2006) 39
Investment generation is another function of IPAs. This includes targeting of specific sectors and companies in order to create investment leads. Potential investors and sectors are identified for investment through such activities as individual presentations to targeted investor and investor forums.\textsuperscript{240} However, targeting of investors and sectors is not encouraged, as it is time consuming and requires sophisticated institutional capacities and preference over one sector to another may have a negative implication for competition.\textsuperscript{241}

Investor facilitation and investor servicing on the other hand includes services provided to investor upon their initial entry and after entry service. IPAs are charged with the duty to provide investors with a ‘one stop shop,’ which assists investors in identifying suitable investment sites and the available investment opportunities. The after care includes the acquiring the necessary permits, licences, consents and approvals and the necessary custom clearance after establishing a business in the host country. This helps streamline the investment process for the investor.\textsuperscript{242}

Policy advocacy is also undertaken by IPAs in order to improve the investment climate, including the views expressed by the private sector. It includes activities such as surveys of the private sector in particular issues, policy and legal proposals and lobbying.\textsuperscript{243} In one study, it was found that policy advocacy appears to have the strongest impact on FDI inflows, followed by image-building, investor servicing, and investment generation.\textsuperscript{244}

The term investment promotion is defined as:

activities that disseminate information about, or attempt to create an image of the investment site and provide investment services for the prospective investors.\textsuperscript{245}

It is argued that the definition has two very important analytical justifications for IPAs.\textsuperscript{246} Therefore, IPAs not only play an important role in disseminating information about the

\begin{footnotesize}
\textsuperscript{240} Rajan (2004) 13
\textsuperscript{241} OECD (2006) 36
\textsuperscript{242} Rajan (2004) 13
\textsuperscript{243} Rajan (2004) 13
\textsuperscript{244} Morisset J ‘Does a country need promotion agency to attract foreign direct investment? A small analytical model applied to 58 countries’ (2003), World Bank Research Working Paper 3028, p 15
\textsuperscript{245} Morisset (2003) 3
\textsuperscript{246} Morisset (2003) 3, states, “The first consists of its role in communicating and disseminating information. Since this latter can be considered as a public good, it is possible that the private sector behavior will not lead to the optimal social welfare. As a matter of fact, local firms may voluntarily restrict information flows to prevent the entry of new potential competitors. The second justification is that the IPA can play a role of coordinating
investment site, but also have a crucial role to play in the legal and policy reforms in order to enhance the business environment in the host state. Most IPAs are in a strategic position to carry out policy advocacy activities because of their interface between the private and the public sector.\footnote{Morisset (2003) 16} This crucial role of lobbying for legal and policy reforms will be discussed further in order to see the potential of IPAs in attracting FDI particularly in new sectors such as bio-fuels.

### 3.6.1 The role of the TIC in attracting FDI

The TIC is the official investment promotion agency (IPA) in Tanzania. It is established under the TIA.\footnote{Section 4 of TIA} The centre has the duty to coordinate, encourage, promote and facilitate investment in Tanzania and to advise the government on investment policy and related matters.\footnote{Section 4(1) of TIA} It is a body corporate with perpetual succession, capable of acquiring and holding property, both movable and immovable, capable of contracting, suing and being sued and performing any other duty that is normally done by bodies corporate.

The Centre has been doing a commendable job in the discharge of its functions and this is evidenced by being awarded the world’s best Investment Promotion Agency (IPA) of the year 2007.\footnote{Kisembo P (2007) ‘TIC wins top world award,’ The Guardian, 22-3-2007 available at http://kurayangu.com/ipp/guardian/2007/03/22/86813.html (accessed on 25-3-2009)} About 206 IPAs were evaluated by UNCTAD in the category of provision of aftercare services to investors.\footnote{Ibid} TIC was selected due to its effectiveness in its one-stop-shop facilitative services, successful international and local investors’ roundtable meetings with the President, which are organised by the Tanzania National Business Council and National Investment Steering Committee, which deals with investment of cross cutting nature chaired by the Prime Minister.\footnote{Ibid} The centre registered 679 projects in 2006 as compared to 550 projects in 2005.\footnote{Ibid} It also provided services to 11,229 investors as compared to 8,948 in 2005.\footnote{Ibid} According to World Investment Report 2006, Tanzania took position number 11 in most activities aimed at improving the business environment in the host country. This role can range from providing assistance to potential and existing investors in their daily problems to lobbying for key policy and legal reforms.”

The TIC is ‘a one stop centre’ for investors and its main duties are to coordinate, encourage, promote and facilitate investment in Tanzania. It is also has a very important task of advising the government on investment policy and other related matters. The functions of the centre are enumerated in section 6 of the act and they include such things as:

- Initiating and supporting measures that will contribute towards enhancing the investment climate in the country for both local and foreign investors.
- To collect, collate, analyse and disseminate information about investment opportunities and sources of investment capital, and advise investors upon request on the availability, choice or sustainability of partners in joint venture projects.
- Identify investment sites such as land and estates in consultation with other government institutions and agencies for the purposes of investment.
- Assist investors, both those that the Act applies to and those that the Act does not apply to in order to get the requisite permits, licences, approvals and consents in order to set up investments.
- To provide and disseminate up to date information on benefits or incentives available to investors.
- To support and take necessary measures to promote activities that encourage and facilitate increased local investments.
- To create and manage export processing zones.

The TIC is also given wide powers to perform any other functions that are incidental to the attainment of the objectives of the Act.

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255 Ibid
256 Ibid
257 Section 5 of TIA
258 Section 6(h) of TIA
The overall mission of the TIC is to promote and facilitate investment for national economic growth by enhancing and creating an environment conducive for business and entrepreneurship.\textsuperscript{259}

In being ‘a one stop centre’, all government departments and agencies and other public authorities are to cooperate fully with the centre in the performance of its functions.\textsuperscript{260} In obtaining licences and approvals for investors, the centre is to liaise in writing with the relevant authority in the issuance of licences or approval.\textsuperscript{261} Such an authority is to issue the licence or approval within fourteen days after receipt of such a request. Should the centre not receive an objection from the relevant authority within the fourteen days, then the necessary licence or approval shall be deemed to have been granted.\textsuperscript{262} If the centre receives a written objection from the relevant authority within the fourteen days, and it does not agree with the objection, it shall within seven days upon receipt of such an objection notify the Minister\textsuperscript{263} together with its recommendation for his decision.\textsuperscript{264} The Minister is then to give his decision within seven days, and the same is to be communicated to the centre and the relevant authority. The centre is then to communicate the decision to the investor.\textsuperscript{265} A party not satisfied with the decision of the minister may appeal to the Minister.\textsuperscript{266} The appeal to the Minister may prove superfluous as he would have made his decision, and it would be an uphill task of trying to persuade the Minister to change his initial decision. Perhaps it would have been better to lodge the appeal with another different person/body.

3.6.2 Has the TIC and the Government performed their duties in relation to bio-fuels production?

The TIC is charged with the objective of coordinating, encouraging, promoting and facilitating investment in Tanzania and advising the government on investment policy and related matters.\textsuperscript{267} Under the TIA, the government is not explicitly given any role in the attraction of FDI in Tanzania. In the National Investment Promotion Policy 1996, the role of

\begin{footnotesize}
\begin{itemize}
\item\textsuperscript{259} Peter and Mwakaje (2004) 37
\item\textsuperscript{260} Section 16(1) of TIA
\item\textsuperscript{261} Section 16(2) of TIA
\item\textsuperscript{262} Section 16(4) of TIA
\item\textsuperscript{263} Refers to the Minister responsible for investments. See section 3 of TIA
\item\textsuperscript{264} Section 16(5) of TIA
\item\textsuperscript{265} Section 16(6) of TIA
\item\textsuperscript{266} Section 16(7) of TIA
\item\textsuperscript{267} Section 5 of TIA
\end{itemize}
\end{footnotesize}
the government in the promotion of investments is clearly spelt out. The role of the government regarding investment policy is:

...the provision of clear policy guidelines, the stimulation and promotion of investment sectors, and overseeing the general development, rather than directly engaging itself into productive activities within the investment sector. Therefore the Government’s role is limited to guiding, promoting and facilitating, and being a service provider for investment.268

Among the different roles placed upon the government to facilitate the promotion of investments in the country, is the role of the government to provide a supportive regulatory framework to support private sector investment.269 The government in its capacity as a facilitator and promoter of both foreign and local investments is charged with the duty of putting in place a conducive legal framework for protection, promotion, facilitation and guaranteeing of investments. The lack of policy and regulatory frameworks to guide bio-fuels production in Tanzania is a flaw on the government’s role as a facilitator and promoter of investments. This is a flaw which will definitely affect FDI in bio-fuels production as the industry will lack clear direction and it will be difficult if not impossible for the government to realise its policy goals in attracting investments in bio-fuels production. Lack of clear policies and regulatory frameworks might also deter potential investors.270

The TIC as an IPA, has no doubt performed relatively well in promoting investments into the country as evidenced by the numerous awards given. However, as it was noted above,271 investment promotion is more than simply image building and marketing the country as an investment destination. In its wider context, it also includes policy advocacy, which was noted includes lobbying for policy and legal reforms. This is very important bearing in mind that the TIC is given the statutory duty of advising the government on investment policy and related matters. Unfortunately, the term investment policy is nowhere defined in the TIA or the NIPP.

The term investment policy is generally defined as any government regulation or law that encourages or discourages foreign investment in the local economy such as currency

268 Paragraph 4.1.1 of NIPP
269 Paragraph 4.1.(iv) of the NIPP
271 Morisset (2003) 3, see the footnote generally.
exchange limits. In its broad sense, investment policy includes all rules and regulations that affect the investment climate in one way or another. According to the OECD, “investment policy is at the heart of the broader policy framework aimed at creating a healthy investment climate.” Investment policy should be transparent in terms of the rules and regulations, protective of both physical and intellectual property and non discriminatory between foreign and domestic investments, both should be afforded the most favoured nation treatment (MFN). Therefore, having a healthy investment climate presupposes the existence of well laid and transparent regulations to guide the investment, an element that is lacking in the bio-fuels sector in Tanzania.

Furthermore, under the Investment Regulations 2002 (IR) the TIC is charged with the duty to develop professional knowledge, skills and other technical capacity to advise the government on investment policy and other investment related matters. It is argued that the duty to advise the government also includes such matters as policy and legal reforms as they impact on investment. Currently, there are no policy guidelines nor regulations to guide investments in bio-fuels production in Tanzania, yet the TIC has registered investments in bio-fuels production. Though the government is also to blame for lack of clear policy guides lines and regulations in this new and emerging sector, the TIC also shares the blame, for failure to perform its statutory duty. It should not have registered any investments in bio-fuels production when it was fully aware of lack of a regulatory framework. TIC’s omission to develop professional knowledge, skills and other technical capacity to advise the government is difficult to justify, bearing in mind that it has been given wide powers to engage advisors, consultants or managers for discharging its duties, powers and functions subject to availability of funds.

The availability of funds should not be such an issue, as the Centre has many sources of income. The Centre receives money from Parliament each year, it also collects money from

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274 GN No. 381A of 25-8-2002, Regulation 51(1)(c) of IR
276 The Citizen, 23-7-2008 ‘The government on spot over bio-fuel production,’ where it was stated that: “The Tanzanian Investment Centre (TIC) was said to have granted licences to eight multinational companies to invest in bio-fuels production, according to Energy and minerals Minister William Ngeleja.” Available at http://allafrica.com/stories/200807240051.html (accessed on 30-3-2009)
277 Regulation 63 of IR
fees and charges levied for the supply of goods and services to investors. The Centre is even given the power to invest monies not required for immediate use as it considers fit subject to approval by the Board. Such money if invested will generate profit that may be used to further its objectives. Furthermore, under the regulations, the Board may with permission of the Minister of Finance receive funds by way of schemes, grants or other financial facilities or donations or otherwise from any source in or outside Tanzania. Therefore, lack of funds can not realistically be said to be an impediment in the discharge of its duties.

It is high time that the TIC works on improving the general investment climate by performing its duties using the statutory powers at its disposal. The importance of having a conducive investment climate cannot be underestimated. In a recent study, it was found that without an appropriate business climate for investment, promotional efforts might actually make foreign investment less likely. The government should assert its role as a promoter and facilitator of investment, by providing policies and regulations to govern the bio-fuels sector, before it runs into further ridicule. The lack of clear policies cannot be underestimated, as these may dampen the general investment climate. Investment promotion is more effective in a country with a good investment climate and a poor investment climate only frustrates investment promotion.

Both the government and the TIC have not discharged their duties in attracting investments in the production of bio-fuels as evidenced by the lack of policies and guidelines on the part of the government and the failure of the TIC in advising the government in the discharge of its function of policy advocacy. The place of energy in the investment regime is also far from clear, though the National Investment Promotion Policy 1996 (NIPP) stresses the importance of energy in fostering investments. This leads to the discussion on the importance and place of energy in Tanzania’s investment regime.

278 Section 13 of TIA generally
279 Regulation 33 of IR
280 OECD (2006) 34
281 The Citizen (2008) where it was stated: “according to the research report and interviews conducted by The Citizen, the picture that emerges is of a Government that is not in control or companies that have outwitted its agencies to benefit from the business.”
282 Morisset (2003) 18
3.7 The place of renewable energy in the Tanzanian investment regime

The TIA was preceded by the formulation NIPP. The TIA was later enacted in 1997. Therefore, these two documents, together with the regulations\textsuperscript{283} made under TIA read together with FLMAA form the basis of the investment regime in Tanzania. The NIPP provides basic country data relating to the size, location and different sectors of the economy.\textsuperscript{284} It also generally provides for national development goals, national investment policy objectives, national investment policy strategies and obligations of the investors.

According to the NIPP,\textsuperscript{285} the overall long term goal of Tanzania’s socioeconomic development is to attain a society with sustainable human development, a society of educated and healthy individuals, culturally dynamic and economically sustainable society. The development goals are inter alia to ensure economic prosperity and to improve the living standards of the people, to promote and achieve a self reliant, self sustaining economy and a national resilience that can efficiently cope with market and technological conditions and to encourage the transfer of appropriate technologies and human resource development, including the enlargement and development of local scientific technological capacity.\textsuperscript{286}

The policy recognises that the socioeconomic transformation of Tanzania will be dependent on establishing a conducive and enabling environment for investment and deliberate efforts to promote the development of productive economic sectors especially the manufacturing industry, agriculture, exploitation of natural resources and tourism. However for this to be realised, there should be investments in human resource development and in economic infrastructure especially transport and communications and energy resources.\textsuperscript{287}

Energy is among the specific sectoral policy objectives\textsuperscript{288} to contribute towards achieving investment transformation. The policy aims to encourage investment in the development of all possible commercial and alternative sources of energy with emphasis on the utilisation of domestic resources with the aim of ensuring security and continuity of supplies, as well as reducing dependence on bio-mass fuels. The policy also seeks to promote the adoption of

\textsuperscript{283} These are made by the Minister under section 29 of TIA  
\textsuperscript{284} See paragraphs 1.1-1.7 of NIPP generally  
\textsuperscript{285} Paragraph 2.0 of NIPP  
\textsuperscript{286} Paragraph 2.1(a)-(i) of NIPP  
\textsuperscript{287} Paragraph 2.2.1 of NIPP  
\textsuperscript{288} Paragraph 3.4 of NIPP
systems of production, procurement, transportation, distribution and end use which are efficient and not detrimental to the environment.\textsuperscript{289}

However, one of the shortcomings of both policy and law in terms of promoting energy is the lack of clear and unambiguous articulation of the desire to promote investments in the energy sector particularly renewable energy, which bio-fuels is part of. This is evidenced by not including the promotion of energy/renewable energy as a priority sector of investment in the law.\textsuperscript{290} Energy is recognised as an important ingredient in achieving investment transformation yet it does not feature as a priority sector of investment. Some have argued that that in the TIC context, agribusiness, which is part of agriculture includes inter alia, traditional crops, horticulture, floriculture, oil palm, jatropha, sugar ethanol, pyrethrum, fish and aquaculture.\textsuperscript{291} It is also debatable whether agribusiness in TIC’s context also includes energy crops. There is no mention of energy crops such as jatropha or rapeseed. There is only mention of the traditional cash crops such as tea, coffee, sisal and tobacco. Crops such as soya beans and palm oil are mentioned as crops that can be used for domestic food consumption if produced in large quantity and for export.\textsuperscript{292} There is only mention of the production of alcohol from sugar cane for industrial use and molasses for animal feed as by products of sugar production.\textsuperscript{293} Energy is refered to as a possible sector of investment under economic infrastructure, but there is no mention of the possibility of producing electricity or liquid fuels from renewable sources such as bio-fuels.\textsuperscript{294}

Energy in general is not given the expected priority in the investment regime as evidenced by the lack of making it a priority sector of investment. The NIPP clearly stresses the importance of energy in the investment regime, but unfortunately this is not adequately reflected in the law. It only remains in policy. It is also interesting to note that out of 2527 registered projects with the TIC between 1990-2003, only two were in the energy sector.\textsuperscript{295}

\begin{footnotesize}
\begin{enumerate}
\item[289] Paragraph 3.4(g)(i) and (iii) of NIPP
\item[290] The Financial Laws (Miscellaneous) Amendments Act 1997 in the Fourth Schedule lists priority areas of investment, in which no mention of energy/renewable energy is mentioned.
\item[291] Songela and Maclean (2008) 27
\item[292] See http://www.tic.co.tz/ (accessed on 20-4-2009)
\item[293] Ibid
\item[294] Ibid
\item[295] Peter and Mwakaje (2004) 49
\end{enumerate}
\end{footnotesize}
3.8 Driving force for FDI in bio-fuels production
Notwithstanding the lack of clear policies, foreign investments in bio-fuels production continue to thrive in Tanzania in particular and developing countries in general. This continued growth is attributed to several factors such as the availability of natural resources, size of the host market, preferential market access in the host country and the European Union and America’s blending targets all contribute to the growing zeal for investments in bio-fuels. These factors form the next points of discussion.

3.8.1 Natural resource availability
Foreign investors are attracted by countries with good natural resource endowments for bio-fuels production such as tropical and semi-tropical climate, land availability and cheap labour. These conditions make developing countries favourable to large scale bio-fuels production. Tanzania has all these natural resources that are attracting FDI in bio-fuels production. These natural resources are further backed up by the attractive tax regime towards FDI. In other contexts, foreign investors are investing in these countries to guarantee a long-term future supply of bio-fuels or raw material for their home country, since most developed countries have limited capacity to produce bio-fuels.

3.8.2 The size of the host market
Another factor that has led to FDI in bio-fuels production is the size of the domestic market of the host country. In some jurisdictions such as India, Brazil and China the domestic market promotes investment in bio-fuels production due to their large size and mandatory blending requirements plus incentives offered to producers of bio-fuels. The promise of a steady market is important in attracting investments. However, in the case of Tanzania, the domestic market will not act as an inventive to produce due to limited use of bio-fuels locally and lack of clear guidelines and policies in the use of bio-fuels in the country. There are currently no mandatory blending requirements in Tanzania of conventional fossil fuels and bio-fuels, however investors enjoy a number of tax and fiscal incentives offered under the

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298 UNCTAD (2008) 4
299 Dufey (2008) 80-82
investment regime. It is most likely that bio-fuels production in the country will be geared towards the export market rather than the domestic market which is very small at present. There is need to develop a domestic market, as it is unwise only to focus on exporting bio-fuels to developed countries since trade in bio-fuels is “incipient and demand in developed country markets is still uncertain.”\textsuperscript{300} The development of a domestic market coupled with government incentives could also attract investments.\textsuperscript{301}

3.8.3 Preferential market access in host states
This could be another driving force in attracting FDI in bio-fuels production. Investors will most likely target countries that have preferential market access to potential international markets such as the EU or the USA. A good example is countries from the Caribbean Basin Initiative (CBI). Their bio-ethanol exports enjoy duty free access, under quotas, in the US. This is acting as a focal point for foreign investors.\textsuperscript{302}

Investing in Tanzania not only gives investors access to the local market but also to the regional market of the East Africa Community (EAC) which includes Kenya, Uganda, Rwanda and Burundi. Tanzania has a population of about 36 million, and the East Africa region has 108 million people.\textsuperscript{303} The EAC formed a regional economic integration with harmonized tax code under the EAC Customs Union Protocol that went into effect on January 1, 2005. The EAC anticipates to become a tariff-free region for intra-trading by 2010.\textsuperscript{304}

Furthermore, investing in Tanzania gives investors access to markets beyond East Africa. Tanzania is a member of the Southern African Development Community (SADC), a trading bloc in southern Africa with 13 member countries and over 215 million people.\textsuperscript{305} Tanzania qualifies for preferential treatment under the European Union’s Everything But Arms (EBA) initiative where Tanzania businesses can export certain products to the European Union

\textsuperscript{301} Jank \textit{et al} (2007) 26
\textsuperscript{302} Dufey (2007) 80-82
\textsuperscript{304} Ibid
\textsuperscript{305} Ibid
tariff-free.\textsuperscript{306} Doing business in Tanzania also gives you access to the US market provided by the African Growth and Opportunity Act (AGOA), which offers tariff break for certain products originating from Tanzania.\textsuperscript{307} Moreover, under the Special Preferential Tariff Agreement with China, over 400 goods originating from Tanzania can be exported to China free of tariff.\textsuperscript{308}

3.8.4 EU and US blending targets

The increased FDI in bio-fuel production in Africa can be attributed to several factors. The increased demand for bio-fuels from the European Union (EU) and the U.S. have had a significant impact on promoting FDI in bio-fuels production in the world at large and Tanzania in particular. In 2003, the EU established new targets on bio-fuels in the transport sector of 2% by 2005 and 5.75% by 2010. In 2008, the EU presented a new directive with an obligatory target of 10% bio-fuels in the transport sector by 2020 for each European country.\textsuperscript{309} This prompts FDI in bio-fuels production abroad as the EU and the US can not produce enough bio-fuel to meet its blending requirements. Both the EU and the US will have to import bio-fuels from the South and this is what is contributing to the influx of FDI in bio-fuels production in developing countries. This influx is blamed for creating a serious threat to vulnerable people at risk from land grabbing, exploitation, and deteriorating food security.\textsuperscript{310} It is estimated that Europe is only able to produce enough bio-fuels to meet a 5% blending target, and it will need to import bio-fuels from the South in order to reach the 10% target. America proposed a blend of 36 billion gallons of renewable fuel into the nation’s gasoline supply by 2022, and currently, only 15 billion gallons of that amount is derived from corn.\textsuperscript{311} The EU’s blending target was set at an EU leaders Summit in March 2007, despite some reservations by Cyprus and Luxembourg and some opposition from countries such as France and Poland. There was also strong opposition from civil societies against the set targets.\textsuperscript{312}

\textsuperscript{306} Ibid
\textsuperscript{307} Ibid
\textsuperscript{308} Ibid
\textsuperscript{309} UNCTAD (2008) 3
\textsuperscript{311} Ibid
\textsuperscript{312} Press Release, 6 March 2007, ‘Hundreds of NGOs and thousands of individuals call on the EU Leaders Summit to say NO to bio-fuel targets’ “If the EU Summit says yes to mandatory bio-fuel targets, they will be giving the green light to plans to convert millions of hectares of rainforest, grasslands and traditional farmland across Latin America, Asia and Africa into bio-fuel monocultures. This will be a disaster for forests, for the climate, for local communities, and for food security. The greenhouse gas emissions from deforestation, peat
The opposition was based on environmental objections to bio-fuels production. But despite opposition to blending requirements, investors continue to invest in bio-fuels production.

There has been a call upon the EU to develop sustainable criteria before achieving the ten percent target it has set for the production of bio-fuels in order to avert the negative consequences which may result. The EU has been called upon to develop sustainable social criteria. Issues such as workers’ rights, destruction of livelihoods, indecent work, exploitation of smallholders and food security must be taken into consideration in formulating the sustainable social criteria. The EU must ensure that transport emissions reductions do not come at the expense of poor people’s livelihoods. The EU has realised this and has declared that “it is better to miss the target than harm the poor or damage the environment.”

3.9 Foreign investors engaged in bio-fuels production in Tanzania

There are a number of companies currently engaged in the production of bio-fuels in Tanzania. The exact number is not known due to scarcity of available data. But as of early 2007, the Tanzanian government disclosed that they were negotiating with 11 foreign companies for investment in agro-fuels crop production in the country. Therefore only a few prominent investors will be discussed hereunder.

3.9.1 Sun Bio-fuels Tanzania Limited

This is a UK based bio-fuels company operating predominantly in the developing world. It plans to engage itself in the growing, production, processing and marketing of bio-fuels. It is planning to get 18,000 hectares in Tanzania, though it has currently identified 11,226 hectares in Kisarawe District in the Coast Region which it is in the process of acquiring to plant jatropha.

\[\text{drainage and from intensive agriculture will far outweigh any apparent carbon savings from using less fossil fuels. Far from slowing down global warming, bio-fuel targets are set to accelerate it.} \]


\[\text{OXFAM (2007) 5-6} \]

\[\text{Harrabin R (2008) ‘EU rethinks bio-fuels guidelines,’} \ \text{BBC New.} \]

Available at http://news.bbc.co.uk/2/hi/europe/7186380.stm (accessed on 2-4-2009)

\[\text{African Biodiversity Network (2007) ‘Agro-fuels in Africa-The implications on land, food and forests: Case studies from Benin, Tanzania, Uganda and Zambia,’ p 17.} \]

Available at http://www.bio-fuelwatch.org.uk/docs/ABN_Agro.pdf (accessed on 27-3-2009)

\[\text{Songela and Maclean (2008) 15} \]
The targeted land is miombo woodland, a type of woodland that grows in coastal areas. The company has reached a tentative agreement with villages to purchase community managed productive forest for clearing and planting. This is a clear example of competing land use between forests and bio-fuels. The communities are expected to be compensated. The project is expected to create 5,000 jobs for the local communities. It is also expected to promote outgrower schemes and train local farmers in jatropha production. This is a welcomed move, as the local communities will benefit from outgrower schemes hence contributing to rural development, one of the key policy considerations for promoting bio-fuels production. However, some families will be displaced in the process, but this is one of the trade offs. The company has also completed an Environmental Impact Assessment (EIA) which has been submitted to the National Environmental Management Council (NEMC).

The company has also promised to provide year-round jobs tending and harvesting the plants at $3 (€1.90, £1.50) a day, relatively good pay for the area, and 5 per cent of its budget will be spent on social infrastructure such as schools. The company also disputes that it will be taking land out of food production as the land is not at present being farmed and only contains a few fruit and coconut trees and compensation is also being paid.

3.9.2 SEKAB Bio-energy Tanzania Limited

The Swedish Ethanol Chemistry AB (SEKAB) is a large producer and distributor of ethanol. It supplies 15% of the European and 75% of the Scandinavian ethanol markets. It has heavily invested in the storage and distribution of ethanol, including facilities in European ports and an established retail distribution network. SEKAB Bio-energy Tanzania Limited was formed following the signing of a Memorandum of Understanding between the government of Tanzania, SEKAB, the BioAlcohol Fuel Foundation (BAFF) and the Community Finance Company (CFC). The company was formed to facilitate the establishment of large scale ethanol and electricity generation projects. It has started with a

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317 Songela and Maclean (2008) 15
318 Songela and Maclean (2008) 15
319 Songela and Maclean (2008) 15
320 Songela and Maclean (2008) 15
321 Songela and Maclean (2008) 15
323 Ibid
324 Songela and Maclean (2008) 18
325 Songela and Maclean (2008) 18
pilot project in Bagamoyo, where it has planted 200 hectares with sugar cane in order to start cane multiplication. 326 An EIA has been completed for the pilot project. Fourteen households and a number of pastoralists are being compensated for being displaced. 327 Sugar cane requires a lot of water and this is going to lead to competition for water use as most of the water in Bagamoyo is diverted to Dar es Salaam supplying 80% of the City’s consumption. 328

The firm is looking for about 400,000 hectares for the production of ethanol from sugarcane. It has already put 20,000 hectares under the crop and a further 50,000 hectares yet to be developed. Both tracts are in Rufiji District, one of the areas believed to be ideal for food production. 329 It is claimed that SEKAB is bidding for 50,000 hectares on the banks of a lake to grow sugarcane and build distilleries to export ethanol to Europe. Unlike jatropha, sugarcane sucks up a great deal of water and requires fertile soil. 330 This is surely going to result into competition with food crops for both land and water.

The move to acquire land is being backed by the district authorities. The District Commissioner stated that SEKAB had promised to build three ethanol processing plants in the 50,000-hectares it had acquired and to offer more than 10,000 jobs to Rufiji residents and promote small scale sugar cane out-growers. 331 The promise of promoting out-growers is promising as it will contribute to rural development and participation in the bio-fuels industry, though it may not always be beneficial to the small scale growers. In a study conducted in Zambia on the tobacco and cotton out-grower schemes, it was found that:

for the majority of the farmers involved in growing tobacco and cotton, the out grower scheme programme has perpetuated poverty and in some cases even increased the poverty. 332

The poverty perpetuation is attributed to the fact that the farmers in the out-grower schemes are dependent on the company for the supply of inputs which are loaned to the farmers and deducted when they finally sell their produce to the company. The company determines the

326 Songela and Maclean (2008) 18  
327 Songela and Maclean (2008) 18  
328 Songela and Maclean (2008) 18  
331 Peter F (2008)  
332 African Biodiversity Network (2007) 15
price of the commodities and the farmers cannot sell their produce to any other company, in the end being left with no choice but to take the price offered by the company. Therefore, attention has to be paid into the kinds of contracts the farmers will be entering into with the bio-fuels companies.

3.9.3 Bioshape Tanzania Limited
This is a subsidiary company of Bioshape Holdings bv Holland. It started operations in Tanzania in 2007. Its objective is to develop large scale jatropha plantations for the production of biodiesel for export. The company seeks to acquire about 81,000 hectares from four villages in Kilwa District, Lindi Region in Southern Tanzania. However the company has so far been able to acquire 34,736 hectares. It is distressing that the acquired land is miombo woodland, which plays an important part in the preserving coastal ecological ecosystems. They plan to pay compensation to the district council and the local communities.

Bioshape plans to use 60% of the total land in planting batches of 200 hectare plots and maintain a 40% buffer zone for natural vegetation, animal free zones, hills and wetlands as well as thick forests. It has started a trial farm by planting jatropha on 76 hectares and plans to employ about 10,000 people in ten years. It is currently employing about 600 workers, mostly casual labourers and 90 permanent workers. The company has completed an EIA and has been granted a certificate by the National Environmental Management Council (NEMC). However it is argued that the integrity of the EIA is questionable, as there is no mention of coastal forest and land targeted is described as degraded miombo woodland, but evidence shows that the land is not degraded. The integrity of the EIA raises doubts as to the effectiveness of the NEMC in conducting such assessments.

Like SEKAB, the company has made verbal promises to invest in social infrastructure such as schools, wells and roads. However, it intends to start renovating the Kilwa harbour in 2009 in order to facilitate the export of oil and or seed to Europe. Whether Bioshape will be true
to its promise, we are yet to see as this is a mere verbal promise to develop infrastructure. They are not legally bound to do so.

These companies have already been established and have started operation in the country, with the government’s blessing. Orders are just being given from the top to the bottom. It is doubtful whether even the people whose land is being acquired have been consulted. This is evidenced by comments made by one district commissioner:

Although villages retain the power to make decisions over their land, they are susceptible to pressure from the central government, which vets foreign investors. He says: "We at the local level are the recipients of directives from above: you have to help this investor get land."341

Serious doubts exist as to the future of Tanzanians. Land is being acquired by the government without consultation with the affected parties. This is even prone to perpetuate human rights abuse particularly of indigenous peoples whose ways of life are being interrupted in the name of promoting and facilitating foreign investments in the country.

3.10 Conclusion

IPAs as government agencies are charged with the duty of attracting FDI in a country. However, as it has been noted, this attraction is not limited to marketing and promoting the country as an investment destination. In its wider sense, investment promotion entails policy advocacy, which deals with lobbying for policy and legal reforms in order to improve the overall investment climate of a country. It has also been found that the TIC has not performed its duties according to the letters of the law, despite its successes, as it has failed to advise the government on investment policy and other related matters. This is a call to the TIC to perform its statutory duty in order to prompt the government as a promoter and facilitator of investment to provide policy and regulatory frameworks to govern the emerging bio-fuels sector, which is currently unregulated. Therefore, both the government and the TIC are at fault by not performing their duties. Not including energy as a renewable source of energy also undermines the importance of the sector. The law on investment is also not without its weaknesses, for no law is perfect. The weaknesses will also have to be addressed in order to enhance the investment climate.

Despite the lack of clear policy and legal guidelines, bio-fuels production continues to thrive in Tanzania as evidenced by the presence of foreign companies already engaged in production. Their presence poses a challenge both for the government and the TIC in terms of regulating the nascent industry. The challenges that the government and TIC face will form the discussion of chapter four. The discussion will focus on the challenges in regulating the industry and examples of how to best regulate will be drawn from countries that have had success in regulating this industry. The prospects of the industry will also be discussed.
CHAPTER 4
CHALLENGES AND PROSPECTS IN REGULATING FDI IN BIO-FUELS
PRODUCTION IN TANZANIA

Any strategy towards promoting the development of a bio-fuels industry should be aligned with existing national policies, including sectoral policies or national policies, and plans such as Sustainable Development Strategies and Poverty Reduction Strategies.\(^\text{342}\)

Under all circumstances, governments should improve the investment climate wherever possible by establishing a clear, stable, and transparent legal and fiscal framework accompanied by efficient administration.\(^\text{343}\)

4.1 Introduction

There are currently no bio-fuels production guidelines or policies in Tanzania, yet foreign investments have been made in this sector. The National Bio-fuels Task Force\(^\text{344}\) (NBTF) was established to draw policy guidelines but this has not been done so far. The lack of clear guidelines and policies is worrying as it may deter prospective investors who would wish to invest in the sector as returns on investments remain unclear because investors are unsure whether there will be a market for their products or guaranteed prices.\(^\text{345}\) Currently, South Africa is also facing a similar fate, where investors are reluctant to invest due to lack of clear policies and guidelines.\(^\text{346}\) The investors would like to know such things as the mandated ethanol content in fuel and the type of support that the government will offer.\(^\text{347}\) The South African government has not supplied a policy, market or incentives.\(^\text{348}\)

This chapter examines the legal, socio-economic and environmental challenges facing Tanzania in regulating bio-fuels production while at the same time highlighting some positive

\(^{342}\) Dufey et al (2007) 59

\(^{343}\) Kojima and Johnson (2005) 5

\(^{344}\) It is composed of representatives from: Ministry responsible for Planning, Ministry of Energy and Minerals, Ministry responsible for Agriculture, Ministry of Labour, Employment and Youth Development, Ministry of Finance, the Vice President’s Office-Environment Division, Ministry of Water and Irrigation, Ministry of Lands and Human Settlement, Attorney General’s Chambers, Tanzania Investment Centre, Tanzania Petroleum Development Corporation, Community Finance Company Limited and Tanzania Sugar Producers’ Association

\(^{345}\) GTZ (2005) 101


\(^{347}\) Ibid

steps taken to try and bring order in the production of bio-fuels. The chapter does not attempt to provide a model law or policy, but rather seeks to draw examples from different jurisdictions that have so far formulated policies and enacted legislation to regulate bio-fuels production, in the hope that Tanzania may learn from others in ensuring sustainable regulation of bio-fuels.

4.2 Current trends in regulating bio-fuels production

Several countries have tried modelling their national bio-fuels laws on the Brazilian, American or EU model. In a recent survey, it was found that, regulations have been characterized by the creation of an institutional framework and the designation of an authority responsible for implementation.\(^{349}\) The introduction of bio-fuels programmes have not always gone hand in hand with regulation. For example, in Argentina and Peru, bio-fuels programmes were designed before the enactment of a specific law promoting bio-fuels.\(^{350}\) Other countries such as Chile and El Salvador and Panama, have established a national policy on bio-fuels but have not yet enacted accompanying legislation.\(^{351}\) In other countries, such as Ecuador and Nicaragua, legislative initiatives have preceded the formulation of a national programme on bio-fuels.\(^{352}\) In the survey, Africa was found to have the least regulation and policies.\(^{353}\) Tanzania is a peculiar case, as there are no programmes to promote the production and use of bio-fuels, no policies or legislation. Things are just being done in a haphazard manner which may have untold negative consequences. It is more like Tanzania was caught unaware.

4.3 Legal challenges

The fact that the sector is unregulated poses the greatest challenge to the government in its role as the promoter and facilitator of investment sectors in the country.\(^{354}\) There are currently no guidelines, policies or laws that regulate bio-fuels in Tanzania. Although it is generally accepted that the host state’s states discretion to control inward direct investment may be constrained by international law,\(^{355}\) under principles of state sovereignty, the host state has a

\(^{349}\) Jull C et al (2007) 31
\(^{350}\) Jull et al (2007) 31
\(^{351}\) Jull et al (2007) 31
\(^{352}\) Jull et al (2007) 31
\(^{353}\) Jull et al (2007) 31
\(^{354}\) Paragraph 4.1.1 of NIPP
theoretically unlimited discretion to regulate foreign investors.\textsuperscript{356} Matters are not helped by ambiguous and scattered policies touching on renewable energy.

4.3.1 Unclear and uncoordinated policies on renewable energy

There are no laws or policies that directly deal with bio-fuels production in Tanzania.\textsuperscript{357} However, bio-fuels can be inferred from various policies that impact on bio-fuels in one way or another. Policies such as \textit{inter alia}, the Transport Policy 2003, Energy Policy 2003, Environmental Policy 1997 and the National Land Policy 1995 allude to bio-fuels indirectly.

Most of these policies mainly emphasize the use of renewable energy and the equitable use of resources to ensure sustainability and environmental protection. The National Energy Policy 2003 has the objective to:

\begin{quote}
Ensure availability of reliable and affordable energy supplies and their use in a rational and sustainable manner in order to support national development goals. The national energy policy, therefore, aims to establish an efficient energy production, procurement, transportation, distribution and end-use systems in an environmentally sound and sustainable manner.\textsuperscript{358}
\end{quote}

This is the overall objective of the policy. There is no explicit mention of bio-fuels in the policy. The closest the policy comes to mentioning bio-fuels is when it calls for “the exploration for possibilities of fuel switch to other energy forms such as electricity, ethanol and compressed natural gas.”\textsuperscript{359} The policy recognises the need for both foreign and domestic investors in the energy sector and calls for public and private sector investments in the energy sector.\textsuperscript{360} It also emphasises the need to facilitate and encourage the development of alternative sources of energy, putting emphasis on utilisation of indigenous resources.\textsuperscript{361}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{356} Muchlinski (2007) 178
\item \textsuperscript{357} Songela and Maclean (2008) 22
\item \textsuperscript{358} The National Energy Policy 2003, p 7 available at http://www.rea.go.tz/RESOURCES/VirtualLibrary/PublicLibrary/tabid/95/id/5/Default.aspx (accessed on 11-4-2009)
\item \textsuperscript{359} The National Energy Policy 2003, p 14
\item \textsuperscript{360} The National Energy Policy 2003, p 32
\item \textsuperscript{361} The National Energy Policy 2003, p 32
\end{itemize}
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The Environmental Policy 1997 promotes the use of sustainable renewable energy resources, energy conservation and wood fuel efficiency. The Environmental Policy 1997 defines the environmental framework for various sectors, including energy. Its objectives are:

- sustainability, security, and equitable use of resources to meet the basic needs of present and future generations, without risking health and safety. Another major objective is to prevent degradation of land, water, vegetation and air, which constitute our life support systems, and to conserve and enhance our natural and man-made heritage, including biological diversity of the ecosystem of Tanzania.362

Therefore, the policy recognizes the need to sustainably use resources in an environmentally friendly manner and promote sustainable energy resources but with no explicit mention of bio-fuels.

The Transport Policy 2003 has the objective to “facilitate sustainable development by ensuring that all aspects of environmental protection and management are given sufficient emphasis at the design development stages of transport infrastructure and when providing services.” There is no explicit mention of alternative energy resources such as bio-fuels, but it is argued that the mandate to design ‘appropriate technology’ to support and diversify the transport sector is wide enough to include bio-fuels in the transport sector.363 Be as it may, there is still no direct mention of bio-fuels. Therefore, the above few mentioned policies have not directly addressed bio-fuels, but rather alluded to the sustainable use of resources to ensure environmental protection.

There is also a lack of integration of bio-fuels in the national Poverty Reduction Strategy Papers (PRSP). In a study conducted, it was found that most PRSPs in sub Saharan Africa recognised the need for access to affordable energy sources for domestic and industrial uses.364 The PRSPs recognise the need for expansion of electricity supply and the potential of decentralised and renewable energy.365 Out of the 17 PRSPs reviewed, only the PRSP for Ghana contains specific strategies for biogas development.366 Tanzania’s PRSP was also

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362 The National Energy Policy 2003, p 8
363 Songela and Maclean (2008) 24
examined and it did not have any explicit mention of bio-fuels. The lack of unambiguous mentioning of bio-fuels in these policy documents is attributed to the novelty of the sector.

Therefore, it can safely be concluded that, basically, there is no policy that directly addresses the production of bio-fuels in Tanzania. Policies just emphasise the need to develop alternative sources of energy in an environmental sound and sustainable manner. The lack of policies thus intensifies the need for regulation in the sector in order to bring order.

4.3.2 The need for a specific law on bio-fuels

There is urgent need to have a comprehensive law on bio-fuels production in Tanzania. There is need to have a law that will define bio-fuels, their production, use, distribution and marketing. A law that will also ensure that bio-fuels are produced in a sustainable manner in order to reduce the negative impacts of bio-fuels and increase the positive benefits associated with bio-fuels such as energy security, rural development and climate change mitigation.

Tanzania must first be clear on the policy goals behind the production of bio-fuels. For instance, in 1975 Brazil embarked on ethanol production from sugar cane and the aim of this was to meet rising energy needs in transport sector fuels. The programme aimed at reducing the national energy bill, increase hard currency revenues and foster energy independence at a time when global energy commodity prices were very high. Likewise, the US introduced its bio-fuel production from corn in the 1980s in order to revitalise the farming sector which was in decline at the time. In the EU, bio-fuels productions were started with the aim of diversifying fuel supply sources, climate change mitigation and increase trade opportunities for agricultural products. A country is advised to be clear on the policy behind the introduction of bio-fuels before it may embark on enacting legislation. In establishing an extensive regulatory framework for bio-fuels production, countries are advised to ensure that “regulatory measures are linked with wider environmental protection and development goals.”

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372 Jull et al (2007) 18
Developing and developed countries have different priorities for promoting the use of bio-fuels. Developed countries perceive bio-fuels as a way of reducing GHG gases from the transport sector and diversifying energy resources, whilst on the other hand, developing countries perceive bio-fuels as a way to stimulate rural development, create jobs, and save foreign exchange and enhance energy security. However, the lack of clear policies and regulations on the part of developing countries will only intensify this conflict of interest as MNCs will produce bio-fuels with the sole aim of supplying their domestic market.

This conflict of interest in the production, promotion and use of bio-fuels has already started to bring about contradictions. For instance in Zambia, the government seeks to achieve energy security and support social and economic development. On the other hand, D1 Oils, a foreign bio-fuels company is “promoting bio-fuels as a domestic energy strategy, in order to open the door to amenable legislation, whilst in actual fact it aims to produce bio-fuels for export.” Fears are further aggravated by the fact that Zambia has no bio-fuel refining facilities and D1 Oils are building a refinery in Durban, South Africa. It is feared that once these bio-fuels are refined abroad, it is most unlikely that they will be brought back for domestic consumption and will definitely end up in European markets. It is likely that Tanzania will also face the same fate, as the foreign investment companies engaged in bio-fuels production are also targeting international markets and have “no plans to invest in infrastructure in Tanzania to process agro-fuels for local use.” Had there been clear policies and regulations in the bio-fuels sector, contradictions would be minimised as investors would have to abide by the set rules, of first meeting the policies of the host state before exporting bio-fuels to other international markets.

Should Tanzania only be reduced into a place of growing the feedstock and it being processed in the importing country, then potential benefits of bio-fuels production will not be realised. This is happening in Malaysia and Indonesia, where palm oil is usually exported and processed in the importing country. Obviously the country will not gain much financially

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374 Kojima and Johnson (2005) 1  
376 Ibid  
377 Ibid  
378 Ibid  
379 Dufey A (2008) 85
as what is exported is only raw material with little or no added value. Likewise, the transfer of technology, one of the perceived benefits of FDI will also not materialise. This is the same picture emerging in Tanzania. As OXFAM notes in a report:

However, as yet, there is no discernible strategy regarding this flood of investment or how to regulate it: the emerging picture is one of investment for export with seemingly no requirements on companies to maximise value-addition within country, supply national markets, form links with local companies, adopt production models likely to maximise opportunities for poor people, or work with local communities to increase access to energy.\(^\text{380}\)

Tanzania should clearly state the policy objectives it wishes to achieve out of bio-fuels production. Is it for greater energy security, rural development, climate mitigation, export development or all these? Should it be for greater energy security, then policies and regulations should say so. If the objective is to enhance energy security then there should be mandatory blending requirements put in place. Likewise, should the policy be rural development, there should be clear policies of how the rural areas will be involved in bio-fuel production. The country should focus on making sure small scale producers are involved in the production of bio-fuels either through cooperative farming, partnerships, joint ventures and out-grower schemes to ensure that small scale farmers will not be displaced from their land and reduced to casual labourers on large scale bio-fuels plantations. Tanzania is also faced with the challenge to ensure that labour standards are adhered to in the plantations. The policies behind bio-fuels promotion must be clear and transparent as this will enable policies to be achieved in a balanced manner and will do away with confusing and negative outcomes.\(^\text{381}\)

**4.4 Socio-economic challenges**

Large scale production of bio-fuels feedstock generally has very little positive impact on rural labour and the poor.\(^\text{382}\) This is due to the fact that large scale production tends to be highly mechanised with time thus reducing the workforce as was noted in chapter two. Furthermore, large scale production may lead to social tensions such as landlessness where it is not regulated, food insecurity and poor labour conditions to mention a few negative consequences.

\(^{380}\) OXFAM (2008) 23  
\(^{381}\) IRGC (2008) 21  
\(^{382}\) Jull *et al* (2007) 22
4.4.1 Access to land

Access to land is one of the challenges that will be faced by the government in regulating FDI in bio-fuels production. Friction has started to emerge, particularly with small scale food producers in affected areas. These small scale farmers are being evicted out of their land to give way to large scale bio-fuels production. There is the threatened eviction of about 1000 small scale rice farmers in the Wami Basin to give way for sugar cane plantations for bio-fuels production. The eviction of these small scale rice farmers will impact negatively on the food security of the country. It is also alarming as this area is highly fertile and suitable for food production but is about to be handed over to foreign investors to produce bio-fuels in a country that is a net food importer. Large scale bio-fuels production has continued to threaten people’s access to land not only in the Wami Basin but also in other parts of the country such as the Rufiji Delta. The government needs to pay special attention to this question of access to land as thousands of small scale farmers will be evicted from their land and turned into casual labourers on these bio-fuels plantations thus heightening social tension. This growing phenomenon is acute, bearing in mind that a majority of people in Tanzania have no formal titles to the land they farm, hence making it easier for the government to evict them. It is currently estimated that only 150,000 land parcels are registered in Tanzania. Large scale bio-fuels production tends to increase the value of land and as a result, poor people without a clear title to land may be shoved off their land and access to water.

4.4.2 Land allocation for investment

In Tanzania, land allocation for investment is done by the Tanzania Investment Centre (TIC). The Centre in coordination with government institutions and agencies is to identify investment sites, estates or land together with other associated facilities for investors and

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384 Knaup, H ‘Africa Becoming a Bio-fuel Battleground’, “On the Rufiji River, thousands of residents are being forced to move to make way for the Swedish company Sekab’s plans to grow sugarcane, a highly water-intensive crop, on at least 9,000 hectares (22,230 acres) and then distill it into ethanol. Five thousand hectares (12,350 acres) have already been approved,” at http://www.spiegel.de/international/world/0,1518,576548,00.html (accessed on 21-10-08.)
386 FAO/GBEP (2007) 39
investments generally.\textsuperscript{387} In response to this, the Centre has established a ‘Land Bank’ of about 2.5 million hectares for investment purposes. The TIC holds derivative rights over the land.\textsuperscript{388} After the end of the investment project the land reverts back to the TIC.\textsuperscript{389} It is not clear on what basis the TIC ear marks land for investment and to what extent the local communities’ interests are taken into consideration. Local communities’ interests under Mozambique’s land law are taken into consideration in an interesting manner. Under the law, community consultations must be undertaken by investors regardless of whether the land has been registered or not.\textsuperscript{390} This is to ensure that land area is “free” and “has no occupants.”\textsuperscript{391} The purpose being to negotiate benefit sharing agreements between the local groups and the investor.\textsuperscript{392} In Tanzania the Land Act has been amended\textsuperscript{393} to encourage the formation of joint ventures between the local groups and the investor, with the investor obtaining lesser land rights.\textsuperscript{394} It is doubtful how practical and beneficial these joint ventures will be since the investment law as noted in chapter three does not provide elaborately on how joint ventures are to be implemented within the investment regime.\textsuperscript{395}

\subsection*{4.4.3 Human rights abuses}

It is estimated that about 60 million indigenous people worldwide face clearance from their land to make way for bio-fuel plantations.\textsuperscript{396} FDI in Tanzania has in the past led to human rights violations on indigenous peoples’ rights to access to land and natural resources. Indigenous peoples’ rights have been violated on the pretext of fostering economic growth in the country through FDI in the past.\textsuperscript{397} This problem seems to affect most African countries, where the right to natural resources such as land and water are weak.

\textsuperscript{387}Section 6(c) of TIA and Regulation 55 of IR
\textsuperscript{388}Section 19(2) of the Land Act 1999
\textsuperscript{389}Section 20(5) of the Land Act 1999
\textsuperscript{390}Cotula L and Toulmin C (2008) “Investment promotion agencies and access to land: Lessons from Africa” in Dufey A et al (Eds) in Responsible enterprise, foreign direct investment and investment promotion: Key issues in attracting investment for sustainable development London: IIED, pp 125-126
\textsuperscript{391}Cotula and Toulmin (2008) 125-126
\textsuperscript{392}Cotula and Toulmin (2008) 125-126
\textsuperscript{393}Section 19(2)(c) of the Land Act 1999
\textsuperscript{394}Cotula and Toulmin (2008) 128
\textsuperscript{395}See Peter and Mwakaje (2004) 27
\textsuperscript{397}See generally Nchalla BN (2008) ‘The impact of foreign direct investment on socio-economic rights of indigenous peoples: A case study of the Barabaig of Tanzania and the Basarwa of Botswana,’ LL.M Dissertation of the Faculty of Law, University of Pretoria, South Africa. See also: Centre for International
Where local resource rights are weak, investment projects may undermine the ability of local groups to access the resources on which they depend. This may take the form of expropriation or otherwise loss of resource access without adequate compensation; or of environmental degradation such as the pollution of water and other resources essential to the local population. Weakness of local resource rights may also undermine the position of local resource users in their negotiations with incoming investors; and therefore limit their ability to benefit from investment projects through negotiated benefit-sharing arrangements.398

In Tanzania, the management of local resources in village land399 is vested in the Village Councils, which are elected by the people. Though these councils are vested with the power to manage local resources in village land, these have been prone to pressure from the central government as seen in chapter three. Village councils must stand their ground in dispelling any pressure from the central government, by ensuring that the procedures of acquiring land in the villages is followed and they are not hurried to make decisions. Any law on bio-fuels production must emphasise the need to follow the laid down procedures in acquiring land in villages in order to ensure access to natural resources. The proposed law must emphasise the need of consultation and benefit sharing between the affected communities and the investors.

The proposed law must clearly indicate that it will protect the rights of indigenous peoples as the Mexican law, which provides for their rights and their protection and encourages the production of bio-fuels in economically disadvantaged areas.400 FDI should not lead to disruption of livelihoods but rather complement livelihoods.

4.4.4 Participation of local producers

The realisation of the benefits of bio-fuels production to local producers is important in ensuring sustainability. Tanzania must make efforts to ensure that local small scale producers rip benefits from this new and emerging sector. Brazil has made considerable strides in this

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399 “Village land” is defined as including land within the boundaries of the village as a local government body; and “land […] which the villagers have been […] regularly occupying and using as village land” during the 12 years preceding the Land Act, with the exception of “reserve land” (e.g. forest and other reserves; section 7 of the Village Land Act).
400 Jull et al (2007) 43
area by introducing the Social Fuel Stamp.\textsuperscript{401} This initiative attempts to encourage socially sustainable bio-fuels production through tax incentives. To be eligible for the scheme, producers must purchase feedstocks from small family farms in poorer regions of the country.\textsuperscript{402} Producers must agree to:

- purchase minimum percentages of raw materials from family farmers, 10 percent from regions North and Mid-West, 30 percent from the South and Southeast and 50 percent from the Northeast and the Semi-Arid Region; and they must enter into contracts with family farmers establishing deadlines and conditions of delivery of the raw material and the respective prices, and to provide them with technical assistance.\textsuperscript{403}

By adhering to these, such producers receive total or partial tax reduction of federal taxes.\textsuperscript{404}

Another challenge facing Tanzania is to ensure that bio-fuels contribute to rural development. This is possible as it was contended in chapter two that both large scale and small scale producers can peacefully co exist, provided there are sound policies to govern the two. Rural economies could be revitalised by encouraging contract farming, partnerships, marketing cooperatives, outgrower schemes, certification and joint ventures. It is for the government to ensure that small scale farmers benefit by any of the ways suggested above.

In a draft law presented to the Honduras National Congress, for bio-fuels producers to enjoy tax incentives under the law, they will have to purchase at least 51 percent of feedstock from domestic farmers.\textsuperscript{405} Such tax exemptions include exemption from tax on the purchase of any equipment related to the production of bio-fuels for 15 years, corporate tax exemption for 10 years and excise tax exemptions for imports of machinery and equipment.\textsuperscript{406} Likewise, in an attempt to ensure the participation of small farmers in Panama, the draft law stipulates that companies will be exempted from import tariffs on machinery used in the production or storage of bio-fuels provided the bio-fuels to be produced or stored will have been made from national feedstock.\textsuperscript{407} In Paraguay, their law on bio-fuels production and use requires producers of bio-fuels to purchase feedstock from domestic farmers and they are only

\textsuperscript{401} FAO/GBEP (2007) 46-47
\textsuperscript{402} FAO/GBEP (2007) 46-47
\textsuperscript{403} FAO/GBEP (2007) 46-47
\textsuperscript{404} FAO/GBEP (2007) 46-47
\textsuperscript{405} Jull et al (2007) 41
\textsuperscript{406} Jull et al (2007) 41
\textsuperscript{407} Jull et al (2007) 49
allowed to import feedstock in times of scarce domestic supply declared by the Ministry of Agriculture and Livestock.  

4.4.5 Public awareness campaigns

People have a right to information. The general public and those that will be affected by bio-fuels production in terms of evictions from their land have to be duly notified and consulted. It is clear that the people in Tanzania are not fully aware of events. People have not been given the opportunity to air out their views on large scale bio-fuels production in the country as orders are just being given from the government down to the people. For instance, villagers in Mtamba were belatedly informed by district authorities of Sun Bio-fuels’ intentions of investing in their village in a meeting hastily convened in 2006. They were invited after the meeting between the investor and district authorities had taken place. The district land officer “urged them to make a quick decision, sparking a hastily convened meeting at which the investment was agreed in principle.” The villagers did not even know the size of the project or how much of their land they had hurriedly conceded.

There was not much opposition to the investment but people were uncertain of the investment and their fate. The compensation to be paid to the people is also not clear as the project involves 11 villages and initially the local press had reported that the 11 villages would get a compensation of about $630,000, equating to about $77 per hectare. However, Sun Bio-fuels has only confirmed compensation of about $220,000 which will be shared between 152 people with trees on their land and a further $10 per hectare. The people are also not clear on the procedure of getting their compensation. This is less than what was initially announced in the local press. The amount is still small bearing in mind that the people relied on this land for their livelihood and this compensation is only paid once.

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408 Jull et al (2007) 50
410 OXFAM (2008) 22
411 OXFAM (2008) 22
412 OXFAM (2008) 22
414 OXFAM (2008) 22
415 OXFAM (2008) 22
416 OXFAM (2008) 22
The success of bio-fuels in any country is dependent “on the balance between negative perceptions among rural and urban citizens.” Therefore it is imperative that the citizens are informed and their opinion sought by the government. It should be a process that begins from the grass root levels of the society. It should not be imposed by the government upon the people for its success will surely be limited. Continuous and informed dialogue of all stakeholders is the key to ensuring equitable distribution of benefits of bio-fuels production and other elements of sustainability.

4.4.6 Food security

Another challenge facing Tanzania is how to ensure that bio-fuels production will not affect the country’s food security. This is a serious concern bearing in mind that Tanzania is a Low Income Food Deficit Country (LIFDC). Therefore, food security is an important consideration for Tanzania which requires due weight. Food security should take precedence over bio-fuels production. The current trend is not pleasing as fertile land that is suitable for food production is being given to investors for bio-fuels production. It was recently revealed that:

A Swedish company, SEKAB Bio-energy Tanzania, was among seven foreign firms out to acquire large chunks of fertile land along the Rufiji Delta. The firm is looking for about 400,000 hectares for the production of ethanol from sugarcane. It has already put 20,000 hectares under the crop and a further 50,000 hectares yet to be developed. Both tracts are in Rufiji District, one of the areas believed to be ideal for food crop production. Experts say that, if put to optimal use, the district could pump enough stocks of foodstuffs into Dar es Salaam Region and surrounding areas.

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417 Dufey et al (2007) 42  
419 The list of low-income food-deficit countries (LIFDCs) was developed by FAO in the late 1970s to assist in analysing and discussing food security issues. LIFDCs are currently defined as nations that are:  
- poor -- with a net income per person that falls below the level used by the World Bank to determine eligibility for IDA assistance. At present, that means that their net income amounts to less than US$1,395 per person.  
- net importers of food -- with imports of basic foodstuffs outweighing exports over the past three years. In many cases, particularly in Africa, these countries cannot produce enough food to meet their all their needs and lack sufficient foreign exchange to fill the gap by purchasing food on the international market. Available at http://www.fao.org/food/c/specspr/lifdcs.htm (accessed on 8-4-2009)  
Any proposed law on bio-fuels production should ensure that food security is ensured before bio-fuels are produced in order to prevent social upheavals. Should it threaten food security, it might even be wise for the government to suspend further expansion of bio-fuels. The Prime Minister declared in parliament that the government was in no position to halt the ongoing projects, but it would defer projects that are yet to start. This is not new and is a welcomed step, as the government in Malaysia in 2006 temporarily suspended the awarding of new licences for biodiesel production projects as there were fears that “the large number of bio-fuels project applications could deprive the food market of palm oil, which is widely used in cooking.” However suspension on its own is insufficient. The government should proceed further to formulate policies and enact laws that will govern the sector in a sustainable manner, ensuring that food security is the first consideration.

To ensure food security, the regulations should encourage the production of dual use feedstocks to provide for both food and fuel simultaneously in order to ensure food security.

4.4.7 Labour standards

Agricultural jobs in large scale plantations are often of poor quality and conditions and mainly targeting low skilled seasonal agricultural workers. Production of bio-fuels feedstock in developing countries has been associated with unfair conditions of employment, health and safety risks, child labour and forced labour. Women have tended to be disadvantaged and vulnerable in large scale bio-fuel production compared to men in terms of employment benefits and exposure to occupational safety and health risks. Bio-fuels producers tend to prefer women as they are dependent, docile and easy to exploit and they tend to do work that may result to health problems such as spraying of pesticides and herbicides without proper training or equipment.

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422 Dufey et al (2007) 89
425 Rossi and Lambrou (2008) 14
426 Rossi and Lambrou (2008) 14
427 Rossi and Lambrou (2008) 14
The government has a challenge to ensure that safety and health standards are adhered to in bio-fuels plantations. The rules set down in the Employment and Labour Relations Act 2004 and the enforcement mechanism established under the Labour Institutions Act 2004 will have to ensure that core labour standards are adhered to by the investors. This implies that the workers will be entitled to decent work and corresponding wages. Workers right to form or join trade unions will have to be respected. The government will have to ensure that workers are not treated inhumanely by being subjected to long hours of work and that they get adequate health and safety training on the use of dangerous equipment and pesticides, in order to avoid occupational diseases and safety hazards.428

4.5 Environmental challenges

Bio-fuels have the potential to greatly contribute to environmental welfare in terms of GHG emissions, but it also has great potential to cause harm if not produced in an appropriate way.429 The sustainability of bio-fuels greatly depends on land use and climate implications of large scale bio-fuels production. It is argued that feedstock is the most important factor in determining sustainability of bio-fuels production as it will determine inter alia the level of soil erosion, depletion of soil nutrients and the use of agro chemicals and fertilisers.430

The greatest risk posed by large scale bio-fuels production is the destruction of virgin ecosystems which will greatly affect carbon emissions. Countries are called upon to ensure policies are strong in order to prevent destruction to virgin ecosystems. This poses a great challenge to Tanzania with weak environmental enforcement mechanisms. Under the Environmental Management Act (EMA),431 environmental impact assessment (EIA) is required for certain projects.432 EIA is an essential tool for identifying the environmental, social and economic impact of a project in advance, so that damage can be prevented or mitigating action taken. Such assessments are required to be undertaken “prior to the commencement or financing of a project or undertaking,”433 failure of which amounts to a criminal offence.434 Having a permit or licence to undertake any project does not exempt an

428 OXFAM (2008) 24
429 FAO/GBEP (2007) 36
430 FAO/GBEP (2007) 36
431 Act no. 20 of 2004
432 Section 81 of EMA
433 Section 81(2)
434 Section 81(4)
individual from carrying out an EIA. Projects that involve *inter alia* major land use change and those that are forestry related, require an EIA. Clearly large scale bio-fuels production leads to major land use change and is subject to IEA. However this has not been done in some of the on going bio-fuels projects. In those that EIAs have been conducted, their propriety is doubted. In an EIA conducted by Bioshape in the Kilwa region, there were widespread concerns over the propriety of the EIA. The report described the area as degraded miombo woodland, while the said area has intact miombo woodland. The EIA did not also mention that part of the land acquired by Bioshape is in fact East African Coastal Forest, containing endemics and threatened species. Most bio-fuels projects in Tanzania have started without approvals of EIAs. This is a failure on the part of the National Environmental Management Council (NEMC), a body that is charged with ensuring environmental compliance in Tanzania. However, not all the blame can be put at NEMCs door, as the government in the past has ignored suggestions made by NEMC and gone on to endorse projects that were declared environmentally destructive. In one instance, a company wanted to establish a prawn farm in the Rufiji Delta, which is the largest block of mangrove forest (mangroves) on the eastern African coast, and plays a crucial role in the coastal ecosystem. An EIA was conducted for the project, but this proved to be detrimental to the environment and the well being of the people. The NEMC advised the government to reject the project and carry out a proper land use plan in the Rufiji Delta in order to harmonise competing land uses and to stop all commercial marine culture in the country until it established proper guidelines for the development of commercial aquaculture in the country. Despite the advise by the NEMC, the government went on to endorse the project. This is attributed to the fear that EIAs are mere obstacles in attracting FDI and just add to the cost of doing business in these poor countries that are in need of FDI. Collusion between

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435 Section 81(3)
436 Section 1(c) of the Third Schedule of EMA
437 Section 7 of the Third Schedule of EMA
438 Songela and Maclean (2008) 44
439 Songela and Maclean (2008) 44
440 Songela and Maclean (2008) 44
443 Katima (date unknown) 189
444 Lissu (1999) 3-4
some government officials and investors for personal gain is also another reason that EIAs are ignored.\textsuperscript{445} It is difficult to comprehend how such dubious EIAs are sanctioned by NEMC despite an elaborate checking mechanism. This is so because NEMC is duty bound to review these assessments once they are completed by the project developer (the investor). NEMC is to judge the quality of the information received and even require additional information if it is unsatisfied with the assessment.\textsuperscript{446} Furthermore, should NEMC consider that it lacks the necessary expertise to evaluate the information contained in the EIA, they may engage experts to advise them or nominate qualified persons to form a team of experts for the evaluation process. Upon completion of the review, NEMC may also recommend to the Minister to either approve or disapprove the assessment.\textsuperscript{447}

The matter is even made worse by the fact that the TIA does not even impose an obligation on investors to protect the environment should their ventures affect it. It is also a shame that this important need to protect the environment was incorporated into the bill which preceded the act but was sadly removed for unknown reasons.\textsuperscript{448} There is need for EIA to be conducted on all large scale bio-fuels production projects and conducted diligently and in good faith. The government should also follow the recommendations and findings of NEMC and not be a party to subverting the law by implementing projects that are doubtful as to their environmental sustainability. In Paraguay, a set of administrative measures have been put in place to ensure all new bio-fuel production sites undergo an EIA.\textsuperscript{449} Tanzania should insist on the same.

In regulating bio-fuels production, the government should ensure that production is environmentally sustainable, by ensuring that feedstock is not grown in environmentally sensitive areas and that forests, soil, water and biodiversity are protected.\textsuperscript{450} Regulations should ensure that competition for such resources as water is addressed by the water law in order to avoid disputes between different users of water. South Africa’s National Water Act 1998 imposes a statutory duty to “reserve water resources for ecological purposes and for the

\textsuperscript{445} Lissu (1999) 14
\textsuperscript{446} Songela and Maclean (2008) 29
\textsuperscript{447} Songela and Maclean (2008) 29
\textsuperscript{448} Lissu (1999) 6
\textsuperscript{449} Jull \textit{et al} (2007) 50
\textsuperscript{450} Jull \textit{et al} (2007) 21
purposes of supplying water to satisfy human needs.\textsuperscript{451} Any proposed law should also take this into account.

4.6 Features of bio-fuels legislation from different jurisdictions\textsuperscript{452}

As noted earlier on in the chapter, Africa has the least number of policies and regulations in the bio-fuels sector. Tanzania lacks any policy and regulations in this sector. This part of the research tries to examine basic features that are found in bio-fuels legislation in other parts of the world. This will act as an inspiration to Tanzania in enacting bio-fuels legislation as it will provide the basics. It is not an attempt to create a comprehensive legislation for Tanzania, but rather a basic guideline of what should be considered in a legislation governing the production of bio-fuels. Bio-fuels legislation normally contains an institutional structure, which establishes an agency responsible for promoting investments in bio-fuels, provisions on market regulations and standards, incentives, trade regulation and bio-energy research and development.

4.6.1 Institutional structure

Bio-fuel legislation normally contains an agency that is charged with promoting and steering national bio-energy programmes. In Peru, there is a statutory technical committee charged with the duty to formulate technical specifications for bio-fuels and environmental safeguards and to promote the use of bio-fuels by the public.\textsuperscript{453} In some instances, a ministry is normally charged with the duty to oversee the bio-fuels programmes in the country, such as in Colombia, where the Ministry of Mines and Energy is the implementing authority for policies and legal instruments to promote the use of alternative sources of energy to fossil fuels.\textsuperscript{454} In Nicaragua, the Ministry of Agriculture and Forests is the body entrusted with the formulation and promotion of the National Programme on Bio-fuels and Bio-energy in order to promote private initiatives in the sector.\textsuperscript{455} In Malaysia, the Ministry of Plantation Industry and Commodities regulates the bio-fuel industry.\textsuperscript{456} In 2006, the Bio-fuels Industries Act of

\textsuperscript{451} Jull \textit{et al} (2007) 21-22
\textsuperscript{452} This part relies heavily of the study conducted by Jull \textit{et al} (2007) of national bio-energy laws in Latin American countries and two African countries, Namibia and South Africa.
\textsuperscript{453} Jull \textit{et al} (2007) 26
\textsuperscript{454} Jull \textit{et al} (2007) 36
\textsuperscript{455} Jull \textit{et al} (2007) 48
Malaysia was passed though it was still not gazetted as of August 2008.\textsuperscript{457} Under the act, the Malaysian Palm Oil Board would become the implementing and licensing agency.\textsuperscript{458} Previously, the Ministry of Water, Energy and Telecommunication was the ministry charged with coordination and implementation of the energy sector, but under the new act, the ministry is no longer responsible for the National Bio-fuel Policy.\textsuperscript{459} In Philippines, the Department of Energy coordinates bio-fuels programmes in the country.\textsuperscript{460}

In order to ensure compliance, the legal framework will normally have an enforcement mechanism providing penalties for non compliance by the actors in the sector. For instance in Malawi, as part of regulation, Malawi’s Liquid Fuels and Gas (Production and Supply) Bill 2004 bars any person from producing ethanol and biodiesel without a licence.\textsuperscript{461} In the Philippines, the Bio-fuels Act 2006 prohibits, the diversion of bio-fuels, whether locally produced or imported, to purposes other than those envisioned in act, the sale of bio-fuel-blended gasoline or diesel that fails to comply with the minimum bio-fuel-blend by volume in violation of the requirements of the act and false labeling of gasoline, diesel, bio-fuels and bio-fuel-blended gasoline and diesel.\textsuperscript{462} Failure to comply with the act attracts penal sanctions. Once convicted, the offender is liable to imprisonment for a period between one and five years and a fine ranging from one million pesos to five million pesos and the bio-fuel may be confiscated. The Department of Energy may also impose administrative fines and penalties for any violation of the provisions of the Act.\textsuperscript{463}

Legislation should also ensure that there is coordination between the different government agencies and ministries involved in bio-fuels production. This is to ensure that policies and legislation are consistent with other policies and international commitments. In the Philippines, the Department of Energy implements the law, but also works with the Sugar Authority Administration to ensure a sufficient supply of sugar.\textsuperscript{464}

\textsuperscript{457} Lopez and Laan (2007) 25
\textsuperscript{458} Lopez and Laan (2007) 26
\textsuperscript{459} Lopez and Laan (2007) 25
\textsuperscript{461} Jumbe C et al (2007) 23
\textsuperscript{463} Section 13 of the Bio-fuels Act 2006
\textsuperscript{464} Jull et al (2007) 26
In Tanzania there is the Energy and Water Utilities Regulatory Authority (EWURA), responsible for the regulation of petroleum products and water utilities companies. The authority together with the EWURA Consumer Consultative Council, lays down rules relative to powers and functioning of the Authority and the Council, and provides for the resolution of disputes in relation to regulated energy and water services and goods, including the supply of water and sewage services. The functions of the authority include inter alia the issuance of licenses, establishment of standards for goods and services and monitoring of regulated sectors. This authority could be used in regulating bio-fuels as well in the country. However, this would entail the necessary amendments in order to take into account the bio-fuels sector.

4.6.2 Market regulations and standards

Bio-fuels legislation normally contains provisions that regulate the market and set standards. The law may require a certain percentage of bio-fuels to be blended with conventional fossil fuels. This is important as it helps to create a domestic market for bio-fuels. For instance, the Malawi Energy Policy 2003 provides for mandatory blending of ethanol with petrol and the proposed new legislation will also make petrol ethanol blending mandatory. In Argentina, the law mandates a 5 percent mandatory blending requirement of petrol with ethanol and in Peru, there is a 7.8 percent blending requirement. These mandatory blending requirements are essential if a country hopes to establish a domestic market. This will ensure investors of ready and reliable market for their products. Recently in South Africa, the government was requested to provide mandatory blending levels in order to ensure that there will be a market for the bio-fuels they produce.

It is encouraging to note that in Tanzania, there is the Revised Petroleum Act 2008, which is yet to be assented to by the president before it becomes a law. The new law addresses blending requirements. The minister responsible for energy is given the authority to propose blending ratios and targets. This power when exercised will ensure a market for bio-fuels in

465 Established under the Energy and Water Utilities Regulatory Act 2001 (Act No. 11)
466 GTZ (2005) 27-28
467 GTZ (2005) 28
469 Jull et al (2007) 27
the country and will act as an incentive for producers to produce for the local market. However, simply requiring blending ratios without having the requisite processing, distribution and storage facilities will not go far in creating a domestic market. Tanzania should ensure there is a well developed infrastructure to cater for bio-fuels, and that the people are educated on the benefits of using bio-fuels as opposed to conventional fuels. The government should also encourage the use of flex fuel vehicles (FFVs) that can run on either conventional fossil fuels or on bio-fuels. The government may also set an example by mandating all government vehicles to use bio-fuels.471

4.6.3 Incentives
Bio-fuels production has generally required government subsidies or other types of incentives in order to make it competitive with fossil fuels.472 Incentives play an important role in the early development of the industry, as they encourage greater production and consumption and as a result, stimulate further research and development of technology.473 In Argentina there are exemptions "to promote investments" in bio-energy, including exemptions from value added taxes, corporate tax for three years and excise tax.474 In order to encourage the growth of the industry in Brazil, the government provided financial incentives to Petrobras, a state owned oil company.475 Incentives included low interest rates, a two billion dollars loan to ethanol producers, encouraging consumers by selling ethanol at 60-80 percent of the price of gasoline and a price policy to ensure effective remuneration to alcohol producers.476

In Tanzania, there are both fiscal and non fiscal incentives provided for investors in the TIA. These are general incentives that are applicable to all registered investors. Such incentives include inter alia investment allowance on capital expenditure, infrastructure allowance and preferential tax rates.477 These incentives are general and not sector specific. Some other incentives such as tariff structures, duty draw back schemes, non tariff measures such as quotas and import licensing, trade defence mechanisms such as subsidies and antidumping measures, trade promotion instruments such as export processing zones, bilateral trade agreements featured in national trade policies may be applied to bio-fuels production.478

471 Jull et al (2007) 27
472 GTZ (2005) 76
475 GTZ (2005) 106
476 GTZ (2005) 106
477 Peter and Mwakaje (2004) 32 and www.tic.co.tz
478 Jumbe et al (2007) 19
However, countries will have to address barriers that hinder the smooth operation of these policies such as reducing the time needed to process incentives and inefficient institutional frameworks.479

4.6.4 Trade regulation
It is also important for the legislation to contain trade regulation measures. In order for small scale bio-fuel producers in the country to benefit, there must be regulatory measures to safeguard their interests. In Paraguay, the law provides trade incentives to farmers by requiring bio-fuels producers to purchase feedstock from local farmers in order to protect them foreign competition.480 Similarly, Brazil’s Social Seal initiative requires bio-fuels producers to purchase their feedstock from families in underdeveloped areas. In doing so, such producers become eligible for total or partial tax exemptions. Likewise, in the Philippines, the law requires the use of locally sourced bio-ethanol and biodiesel.481 Countries are cautioned to ensure that the measures imposed do not conflict WTO and other regional and international trade commitments such as the local content requirement under the TRIMs agreement.482

4.6.5 Bio-energy research and development
It is also advisable that the law contains provisions on research and development. Research is important, as it will contribute towards development of better yields and innovation of new and efficient technologies. In Peru, the government has undertaken to provide funding for research and development of renewable energy.483 In India, the state government of Andhra Pradesh has given a sum of 9.85 million rupees to research and development institutions for taking up bio-fuel related research activities.484 This underscores the importance of research and development. The proposed law in Tanzania could also contain provisions that encourage bilateral cooperation in research and development from countries with long experiences in bio-fuels production such as Brazil. This would not only contribute to sharing of knowledge, but will also strengthen South-South cooperation and encourage the transfer of technology. Recently, Brazil established joint research and development ventures with various Latin
American states and sub-Saharan Africa.\textsuperscript{485} Brazil agreed to construct a bio-fuel plant in Nigeria and it is also planning to establish an agricultural research centre in Ghana.\textsuperscript{486} It is contended that:

The cooperation is mutually beneficial because the cost of technology exchange is lower and the results are more easily shared. Technology is no longer superimposed onto developing nations as a finished product, but it is introduced in the form of a joint development project--thereby encouraging domestic innovation at a low cost and establishing a symbiotic relationship.\textsuperscript{487}

Therefore such cooperation is highly encouraged in countries that are just embarking on bio-fuels production like Tanzania with no prior experience. Research is crucial as it will help identify crops that are best suited to Tanzanian conditions and climate and produce the best yields under the conditions.

These are some of the legislative features that have been incorporated into most of the national legislations surveyed by Jull \textit{et al} (2007). They provide some useful considerations that are well noting to other countries aspiring to embark on large scale bio-fuels production.

### 4.7 Conclusion

Tanzania lacks specific policies and legislation to cater for bio-fuels production in the country. Current global trends show that countries either start bio-fuels programmes without specific legislation to cater for the industry or put in place legislative measures followed by comprehensive bio-fuels programmes. Nevertheless, Tanzania does not have any of these in progress and is faced with a myriad of challenges. These range from legal, socio-economic to environmental. Despite these regulatory challenges facing Tanzania, there have been some positive changes taking place. The government has established the NBTF to come up with bio-fuels production policies, guidelines and a bio-fuels law. Tanzania also has the legal capacity to face these challenges particularly environmental laws and policies, though lacking in enforcement, she has even gone as far as enacting the Revised Petroleum Act 2008 and established the EWURA to regulate the energy sector. What is needed is to coordinate these different laws in order to properly regulate bio-fuels sector. The government has even been so


\textsuperscript{486} Yuana (2008)

\textsuperscript{487} Yuana (2008)
bold as to halt any further investments in bio-fuels production in order to put its house in
order, however, for this to have a real and lasting impact, there must be a law in place that
will ensure that bio-fuels are produced in a sustainable manner and the benefit associated
with bio-fuels are reaped to the maximum and the risks reduced. This can only be achieved
by properly regulating the industry through laws and policies. The next chapter summarise
the research findings and makes recommendations in order to improve the current state of
affairs and provide a way forward.
CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
FDI is recognised as the engine for economic growth in both the developed and developing world. If properly harnessed, it may bring about employment opportunities, transfer of skills and technology and capital. Between 1996-2006, 2344 new projects were registered by the TIC, 1150 rehabilitated and expanded projects were registered providing all providing a total of 570364 jobs and valued at USD 1641188 million.\(^{488}\) As recognised by the middle path theory of foreign investments, for FDI to have a positive impact on the economy of the host state, it must be regulated and aligned to the wider development goals of the country. Therefore, regulation of any type of FDI is crucial if it is to have any meaningful contribution towards the development of the host state.

5.2 Conclusion
FDI in bio-fuels production is recognised as a new form of investment. Bio-fuels are also highly controversial as they offer opportunities and pose great risks if not properly regulated. The risks are high due to the socio-economic and environmental impacts that bio-fuels may exert on the lives of people such as loss of access to land, food insecurity and environmental degradation. They also provide opportunities such as greater energy security, rural development, export development and climate change mitigation.

Bio-fuels have also been blamed for increasing food prices, though they are not solely to blame as higher food costs are also attributed to weather conditions, increased fuel prices and increasing demands of agricultural crops from newly industrialising economies. Bio-fuels have also been blamed for marginalising the poor by perpetuating land grabbing and causing social upheavals. Even the assertion that bio-fuels are a renewable source of energy has been disputed, since bio-fuels also require a certain amount of non renewable energy inputs to produce. Their potential as renewable sources of energy highly depends on the energy balances. This can only be ascertained by conducting a full life cycle (wheel to wheel) of the production of bio-fuels, though it is generally agreed that bio-fuels have the potential to reduce GHGs.

Tanzania is endowed with arable land and the right climatic conditions to grow bio-fuels. However an examination of the investment regime has placed serious doubts on the regime in attracting FDI in bio-fuels production. The role of the government as a promoter and facilitator of investments by providing clear policy guidelines and regulatory frameworks is also lagging behind in bio-fuels production. The investment law as it stands has placed the duty of attracting FDI on TIC the government’s official IPA. The functions of IPAs include image building, investment generation, investor facilitation and investor servicing and policy advocacy. It was also noted that investment promotion does not only cover dissemination of information and image building of the investment sites, but in its wider context, it also includes policy advocacy which denotes lobbying for key policy and legal reforms. Specific duties of the TIC are enumerated in section 6 of TIA and among them is the duty to advise the government on investment policy and other related matters.

It was noted that the TIC has failed in its duty as the advisor of the government on investment policy as far as bifuels are concerned and it has also failed in discharging its duties as an IPA by failing to lobby for key policy and legal reforms in the bio-fuels sector. Instead of creating a conducive investment climate for bio-fuels production by ensuring there are policies and laws in place to govern the sector, it has gone on to attract investments in this sector notwithstanding the lack of clear policies and regulations, hence undermining the investment climate in the country.

Similarly, the government has not discharged its duty of a promoter and facilitator of investments in the country by failing to provide an enabling legal framework for the bio-fuels sector. The government has also not shown its unwavering commitment to promote investments in the energy sector generally and more particularly renewable energy, which bio-fuels is part of. There is no explicit mention of bio-fuels in energy policies and other related policies. There is only occasional reference to renewable energy. The closest the government has come to mentioning bio-fuels is when it advocated for the need to switch to other forms of fuel such as ethanol in the Energy Policy 2003. There is no clear manifestation of intention to attract investment in renewable energy sources and this is evidenced by the failure to promoting renewable energy as a priority area of investment in the investment regime. Energy does not feature as a priority area of investment.
It was also found that there is currently no policies or legislation in regulating the production and use of bio-fuels in Tanzania. It was only in March 2007 that the NBTF was established to formulate policies and guidelines in the production of bio-fuels in Tanzania. Despite the lacuna in the law, there are already investments in bio-fuels production. Challenges facing Tanzania in bio-fuels production were also highlighted with examples provided of how other countries have dealt with these challenges through legislation. These examples are hoped will inspire Tanzania in formulating legislation to address the challenges.

5.3 Recommendations

It is recommended that the Tanzania Investment Act 1997 (TIA) be amended in order to enhance the overall investment climate. The TIA should clearly define joint ventures. The law should clearly stipulate how these joint ventures are to be formed. The law should also encourage joint ventures by providing incentives to foreign investors that form joint ventures with local investors. Joint ventures will ensure that the spill over effects of FDI such as technology transfer and skills are quickly felt as local investors will get first hand access to such technology and skills. Local investors will also gain the technical know how in this new sector. This will also mean that the profits realised by local investors in the joint venture remains in the country and is not repatriated, hence contributing positively to the national economy by avoiding capital flight.

The TIA should also be amended to impose duties on investors, both local and foreign. Investors currently enjoy rights and benefits but with no corresponding duties. At the minimum, investors should be required to adhere to the laws of the land. Investors should also be required to ensure that their activities do not negatively affect the environment. Should their activities result into environmental degradation, investors should be required to remedy the situation.

In order to encourage more investments into the country, the law should be amended to make provisions of double taxation avoidance as it may discourage prospective investors. As matter of convenience, the investment law should not be contained in two separate laws, i.e. the Tanzania Investment Act 1997 and the Financial Laws (Miscellaneous Amendments) Act 1997. The law should be contained in one comprehensive investment code.
Energy generally, and renewable energy in particular should be given priority in the investment regime. Renewable energy should be made a priority sector of investment so that it receives due attention. The different policies touching on energy should be amended in order to emphasise the promotion of renewable energy.

The Tanzania Investment Centre (TIC) should perform its function of policy advocacy, which was seen in chapter three to include legal and policy reform in order to enhance the business environment. This goes hand in hand with the statutory duty of advising the government on investment policy and other related matters. By attracting investments in a sector that is unregulated is a failure on the part of the TIC as it must have advised the government to enact laws and formulate policies before embarking on attracting FDI in bio-fuels production. Therefore, the TIC is called upon to perform its statutory duties in the future.

The National Bio-fuels Task Force (NBTF) created by the government to oversee the development of policies and regulations to govern bio-fuels production should speed up the process and quickly make recommendations to the government on how to govern the sector. The recommendations provided by the NBTF will form the basis of the laws and policies to govern bio-fuels production. The government should also come up with a comprehensive law, which clearly articulates the policy goals that the government seeks to achieve by embarking on bio-fuels production. Such a law should also address the social, economic and environmental challenges presented by bio-fuels production.

The law envisaged must establish/designate an agency that will oversee bio-fuels production in the country. The established or designated agency must be entrusted with the duty of formulating and reviewing the policies from time to time in order to ensure that policies reflect changes taking place in bio-fuels production as knowledge on bio-fuels expand. Importantly, the agency must have enforcement powers in order to ensure that the laws and policies are adhered to.

It is also recommended that the law proposed should strive to create a domestic market in bio-fuels. This may be done by establishing mandatory blending ratios and targets requirements. Fortunately, blending ratios and targets have been taken care of by the new Revised Petroleum Act 2008 though the Act is not yet law as the President is yet to assent to it. It is recommended that the President quickly assents to it so that it becomes law, thus fast
tracking the process of creating a domestic market. The people should also be educated on the advantages of using bio-fuels as opposed to conventional fossil fuels.

It is further recommended that the law envisaged must make use of incentives in order to attract further investments in bio-fuels production. General incentives provided for under TIA may be used and other sector specific incentives may also be introduced.

The proposed law should also specifically provide for research and development of the bio-fuels industry. The proposed law should seek to create a fund that will fund further research in order to better the production and use of bio-fuels. Part of the revenue collected from bio-fuels production may be paid into the fund and the government may also give grants to the fund. The law should also encourage South-South cooperation in research and development with countries such as Brazil that have experience in bio-fuels production.

As noted, any FDI must be regulated if it is to have any meaningful effect on the economy of the host state. The need for regulating FDI in bio-fuels production is even more urgent due to the social, economic and environmental threats that bio-fuels production pose. If the industry is not carefully regulated and managed, it may have dire and grave consequences. Therefore, regulating this new emerging sector is of utmost importance and urgency.


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