Published as: Azadi, H., Houshyar, E., Zarafshani, K., Hosseininia, G. & Witlox, F. (2012).
Agricultural Outsourcing: A Two-Headed Coin? *Global and Planetary Change*, vol. 100(2013),
20-27.

Agricultural Outsourcing: A Two-Headed Coin?

Hossein Azadi^{a1}, Ehsan Houshyar^b, Kiumars Zarafshani^c,
Gholamhossein Hosseininia^d, Frank Witlox^a

^a Department of Geography, Ghent University, Belgium.

^b Department of Farm Machinery and Mechanization, College of Agriculture, Shahid Chamran University, Ahvaz, Iran.

^c Department of Agricultural Extension and Rural Development, Razi University, Iran.

^d Department of Entrepreneurship in Technology, Faculty of Entrepreneurship, Tehran University, Iran.

Abstract

Since two decades ago, when China's economic strength has made this most populated country as a leading global agricultural outsourcer, there have increasingly been hot debates on whether such outsourcing is destructive or constructive, especially for host countries. Some critics pessimistically call it 'land grabs' or 'neo-colonialism' that should be prevented while others optimistically appreciate it as a development opportunity that should be promoted. The first group interprets the outsourcing as a win-loss process while the second considers it as a win-win deal. This study tries to show the possible gains and losses of both outsourcers and host countries. Accordingly, this paper introduces four different situations; i.e. loss-loss; win-loss; loss-win; and win-win. The first situation is understood as a 'red-deal' which should urgently be stopped. The second and third situations are called 'yellow-deal' which should be adjusted to come up with the last situation which we call 'green-deal' that addresses the benefits of both outsourcers and outsourcees. The paper concludes that in order to understand the main impacts

¹ Corresponding author. Email: hossein.azadi@ugent.be. Tel. +32 (0)9 264 46 95. Fax +32 (0)9 264 49 85.

28 of such deals, we still need to create more evidence for each situation in the framework of a
29 series of risk assessment studies on the bases of both “country-case” and “crop-case”.

30 **Keywords:** land deal, land grab, neo-colonialism, agricultural investment, agricultural
31 development.

1. Introduction

A secure and sustainable food production system is needed for surviving human being societies. The world is making only slow progress in reducing food insecurity, according to the Global Hunger Index (GHI)² (Ackello-Ogutu, 2011). Some regions—in particular South and Southeast Asia, the Near East and North Africa, and Latin America and the Caribbean—have made significant headway in combating hunger and malnutrition since 1990, but in South Asia and Sub-Saharan Africa, the GHI still remains high (Grebmer et al., 2008). While one billion people currently suffer from hunger (UN, 2009), the Food and Agriculture Organization (FAO, 2009a) of the United Nations estimates that by 2050, the world’s population will exceed 9 billion, most of which will be inhabitants of the developing world.

At the same time, the majority of the world’s remaining cultivatable land lies in developing countries (Cotula et al., 2009). Many large land areas in the developing world are in fact cultivated by indigenous communities, but return very low yields. This limits the capacity of the developing world to meet the world’s demands without outside investment (Hallam, 2009). Most of Sub-Saharan African nations suffer from food insecurity. Among all, according to the latest GHI scores (in 2011), three countries³ stay at “extremely alarming” and 13 countries⁴ at “alarming” mode (Wünsche, 2011). Consequently, it seems that they need a great help to produce enough food for their own and also other countries with insufficient cultivable land. Yet, the food and fuel scarcities push some countries, especially capital-rich and natural resources-poor nations like China, South Korea, Japan, Saudi Arabia and Kuwait (STWR, 2012) to buy or lease huge quantities of foreign lands mainly for the production of food and biofuels for domestic consumption (Haralambous, 2009).

² The GHI is a multidimensional statistical tool and measures progress and failures in the global fight against hunger.

³ Democratic Republic of Congo, Eritrea and Chad.

⁴ Ethiopia, Central African Republic, Comoros, Sierra Leone, Madagascar, Mozambique, Zambia, Angola, Tanzania, Malawi, Sudan, Niger, Liberia.

Since about 95 percent of Asia's croplands have already been used, Africa and Latin America are seen as the most likely places where foreign investors will seek arable land (Kersting, 2011). The cheap and abundant farmlands in developing nations, particularly in Africa, drive capital rich nations to outsource their food productions (Cotula et al., 2009). Among agricultural outsourcing (AO) scramblers, some of the most populated countries; i.e. China and India, have put serious attempts to drive global AO due to domestic shortages in land, energy and natural resources (Friis and Reenberg, 2010). Yet, the scarcity of land and sprawling overpopulation in those countries have led to political backlashes that prompted the central government to turn its attention to Africa at the beginning of this decade to fill its people's rice bowl (Horta, 2009). Since the 1990s, in order to accommodate the food and energy growing demand, China, the most populated country in the world, has come into this picture as the main feature. In Latin America, overall Chinese direct investments have been small but on rise. Currently, China's interest in this region has focused on oil and metals, not agriculture (Davies, 2009). By 2011, 26 Chinese companies have been actively in negotiation with Latin American and African countries especially Argentina, Brazil, Mozambique, Nigeria, Angola, Malawi, Sudan, Ethiopia, Madagascar and Zimbabwe to invest on agriculture, food, forestry, fishery and biofuels (Saturnino et al., 2011; Afripol, 2010; Cobo et al., 2011).

Much of the AO is taking place in developing countries with weaker governance and less developed civil societies (Grindle, 2002). Among others, the most AO is taking place in Africa. Although foreign nationalities have been engaged in agriculture in this continent for many years, the scale of such deals has increased significantly in recent years. Consequently, the contentious issue of 'land grabbing' has become the subject of numerous media reports since the global food crisis worsened in 2008 (FIAN, 2012). The latest wave of land grabbing began towards the end

of 2008 when the global food crisis generated a serious concern over supplies in countries that consume more food than what they produce (STWR, 2012).

Across Africa, governments are already leasing large areas of land that are traditionally used by small-scale farmers to transnational companies for industrial agriculture or for planting trees as carbon sinks so as to gain carbon credits. Pearce (2011) asks whether such a lease will accelerate if the soil itself becomes a carbon commodity. According to him, the high costs of employing scientists, consultants, and practitioners to monitor the carbon uptake of farm soils will make it unfeasible for poor farmers to pocket any income from the sale of the carbon absorbed by their soils. He believes that only rich farmers are able to lessen these transactions costs significantly to profit from the carbon markets. Consequently, a new phase of land grabbing—called “soil grabbing” is taking place in this continent.

Another essential issue is that the desire to use water resources is embedded in many land deals (Woodhouse and Ganho 2011; Skinner and Cotula, 2011). In many cases water itself is the target of deals, not only for agricultural purposes but also for other purposes like mining which could result in “water grabbing” (Mehta et al., 2012).

Concurring with the liberalisation of trade, competition for AO is more and more played out directly between local land users, national economic elites, and transnational investors (Oxfam, 2009). As a result, land acquisitions are on the increase in Africa and other continents, raising the risk or opportunity that poor people will be evicted or lose access to land, water, and other resources, if not made properly (FAO, 2009b), or gain some benefits to promote their socio-economic and ecological services and facilities. Correspondingly, some believe that AO has generated some envisage economic opportunities for local communities while others see it as a serious threat to the livelihoods of local poor people (Friis and Reenberg, 2010; Madebo, 2011; Smaller and Mann, 2009; Ezra, 2010; Mihretie, 2010; Smith, 2010; Grau and Aide, 2008).

Although indicative evidence has started to emerge, there is yet very little systematic monitoring of these trends, research into the impacts, or exploration of the opportunities that may be created for rural development. These trends pose both a threat and an opportunity to the rural poor, who are increasingly losing their land rights and the future food production security. Particularly, dispossession is likely to occur where their land tenure rights are weak and unrecognized. Most at risk are groups such as women, pastoralists, indigenous people and others dependent on customary and common-pool resource rights that are insecure and undocumented (Quan, 2006). The vulnerability of these groups is often compounded by corruption that can accompany large-scale land transfers. There is already evidence of the displacement of poor resource-users by agro-fuels production, while others may lose access to resources, such as rangelands and forests, which may constitute an important safety net and livelihood source for marginalized groups. However, where poor people have secure land use rights, these trends may actually offer opportunities for development.

Hence, the question surfaces whether AO has an entirely negative impact as critics posit, or whether it might also carry some potential benefits. Furthermore, there remain some other crucial questions as follows: what are the main subsequent of global AO? Are the consequences destructive or constructive and for whom? Will the AO be a win-win or a win-loss deal? And what are the main gains and losses of such deals?

2. A two-headed coin: win or loss?

AO can be considered as a two-headed coin since it can lead to win and/or loss. It is clear that investors and investees both expect to win the most and loss the least. Undoubtedly, the investors come to developing countries to earn something, i.e. food and energy security. But the big question is that what they would bring to the host (mostly poor) countries. It is essential to

125 regulate the conditions that can direct AO to win for both sides of the deal. However, apparently,
126 as a consequence of investors' power and investees' weakness, the most so far AOs have led to
127 win for the guest and loss for the host countries. AO must reduce, and not expand, the number of
128 hungers and communities that struggle to survive. Leaseholders might push the host
129 governments for better tax situations for farmers, while host countries could insist on the local
130 hiring. Some empirical studies of the past few years clearly indicated that foreign investment
131 companies are profiting from "land grab", and AO in developing countries has failed to deliver
132 its promise of jobs, infrastructure, schools, and health facilities (Madebo, 2011). Large land deals
133 also carry big risks. Local people can end up with losing the land, water and other resources that
134 have supported their livelihoods for generations, while the jobs created in return may be few,
135 short-lived and low-paid (Cotula, 2011). Cotula (2012) believes that the global "land grab"
136 reflects profound economic and social transformations in agriculture and if it sustained over the
137 next few years, will have profound implications for the future of world agriculture. Yet, some
138 organisations think this could be a chance for poor countries to trade land and labour for the
139 technology and investment vital for developing their own food and energy production systems
140 and should not generally be condemned (Mackenzie, 2008).

141 One of the main opportunities for the host countries is that the investors need to import a
142 portion of their own technologies to produce crop and construct the needed or promised
143 infrastructures to reach a successful production or goods transportation. For instance, they import
144 farm machines, equipments and irrigation systems (Grain, 2009). Also, they would set up
145 warehouses and buildings to repair and maintain farm machines and irrigation systems.
146 Additionally, proper roads and railways must be constructed to export products and import all
147 needed things like farm machines and equipments, irrigation systems, chemicals, fertilizers and
148 seeds (UN, 2007; Meentzen, 2010; Ullenberg, 2009). As seen, constructing some infrastructures

can facilitate the host countries to approach development. However, the contribution of local people is essential to learn how to build such infrastructures. If investors fairly allow local people to participate in establishing infrastructures and train them, at least a portion of successful technology transfer becomes guaranteed (Maskus, 2004). Such a situation can surely be expected as a development opportunity for host countries and considered as a win-win deal.

Nations must understand the motivations of foreign investors in farmland acquisition. Most investors are leasing land in Africa because they suffer already from some irreversibly depleted natural resource stocks in their home nations (Robertson and Pinstup-Andersen, 2010). If the deals are properly regulated, genuine agricultural investments by operators with a strong track record can create opportunities for recipient countries and local people, bringing capital, know-how, jobs, market access and infrastructure development (Kugelman and Levenstein, 2009). To make a properly regulated deal, political, socio-economic and environmental aspects with respect to local conditions especially in the host countries should be considered. Otherwise, there may be severe environmental, economic, political and social losses for investees. Thus, it is very crucial to realize which deals can be seen as “land grabbing” and in what conditions it can cruelly be “land grabbing” or friendly be a “development opportunity”. Accordingly, this paper discusses that AO could be a “two-headed coin” and has some win and losses for both sides (investor and investee). Therefore, one can expected four different statuses for the host and guest countries as shown in Fig. 1. The statuses are discussed in the following.

[insert Fig. 1]

2.1. Loss-Loss: red deals (destructive; should be stopped)

We start with the worst situation where transnational land deals are destructive for both outsourcers and outsourcees. We call such loss-loss deals as “red deals” because the deals cause

some losses to both investors and investees. In such a situation, both the land dealers mostly loss and hardly gain any benefits. The potential losses for outsourcers are capital, time, and some possible social conflicts with the local people and political conflicts at the international level (Songwe and Deininger, 2009). The main losses of the outsourcee could be more severe than the outsourcer. These losses could be seen from political, socio-economic and environmental points of view. Internal conflicts and riots against the governmental policies might be the main political losses in the host countries (Safransky and Wolford, 2011).

The lack of enough job opportunities, no public self-confidence, no suitable land tenure system and non-secure food production system are the main socio-economic losses in such deals (Behrman et al., 2011). Unsustainable land tenure system would cause many social conflicts not only between the outsourcers and outsourcees, but also within the local community (FAO, 2004). Consequently, an unsustainable food production system (Azadi et al., 2011a) is expected. Hence, “red deals” are destructive and should be stopped. In other words, such deals can end to an unsustainable agricultural system and therefore unsustainable development as shown in red color as a warning color to stop the deals. The unsustainable situation means that the outsourcees’ agricultural system will be damaged by different drivers mainly caused by the outsourcer. Destroyed potential agricultural farms and depleted water resources may stop the outsourcees’ food production system (DEXIA, 2010). Indeed, environmental losses can affect the host countries in such a way that they can hardly live and survive (Nayak, 2004).

2.2. Win-Loss: yellow deals (neo-colonialism; should be adjusted)

We call win-loss deals “yellow deals” since these deals may bring some benefits (e.g. infrastructures, schools or food and biofuel) only for one side. In win-loss deals the investors

gain and the investees loss. Therefore, these “yellow” deals should be adjusted to reach a win-win situation.

Many commentators warn that investors will grow food in host countries with their own labours and technologies, and then ship the food back to the guest countries for their local consumption (Montenegro, 2009). If this habit of selling fertile land continues, there will soon be no fertile land left for the coming generations. Instead, the future generation will become serfs in the land of their own country. Such a policy should be adjusted in a way that can bring some benefits for local people (Ali, 2009). Otherwise, purchasing or long-run leasing farmland in a region with fertile soils and potential water resources is unsustainable and can easily lead to a great loss for the host countries. The commentators worry also that the investors will not bring jobs to investees, and will instead carry land deals to the firms and labourers of guest countries. Given this stark assessment, many see AO nothing more than a grab for cheap, underutilized land. Some (e.g. Jacques Diouf, director of the FAO) have gone so far as to specifically label this type of aggressive land-leasing as “neo-colonialism” (Rubinstein, 2009).

In win-loss deals, the same problems as the loss-loss deals would happen for the host countries. In this case, the outsourcer’s investments in the outsourcee would cause some gains for the former and mainly losses for the latter. However, it seems that there is no absolute win for investors in such situations. For instance, a guest country may gain proper food and biofuel, but miss its political position in the host country. To raise a secure food production system, what is worrisome is that the global food production and distribution channel is in the hands of a few international agribusiness companies with ties to hedge funds. Additionally, the motivation and role of big agricultural outsourcer like China, South Korea, Saudi Arabia, Qatar, and United Arab Emirates should be evaluated more in details. Also, the consequences of their foreign land deals especially in main poor AO recipients, i.e. Sudan, Ethiopia, Madagascar and Mozambique

(Hong, 2011) should be analysed more sensitively. For instance, the role of China, as the largest global land dealer, needs a more subtle analysis (Smith, 2009) to avoid win-loss deals especially in the South countries. Without such measures, however, developing countries simply risk to sell out their resources (Hartwich, 2009). Because if China's ambitious plans are not carried out with proper regulations for the environment and its impact on Africa's agricultural land, the continent may one day find itself in a similar predicament to the one confronting China today (Horta, 2009).

Amongst the host poor countries, Ethiopia is one of the most reckless countries that denies ownership of land to its own poor peasants (Azadi et al., 2011b) and sells the nation's top level fertile land to foreign investors. In this country, between 2004 and early 2009, farmlands were bought or leased on an immense scale (1.48 million acres). The country has further approved 815 foreign-financed agricultural projects since 2007 and land is being leased for approximately \$1 per year for 2.5 acres (Globalvoices, 2011). Another deal between the Ethiopian government and the South Korean company Daewoo allowed the firm to export as much as it likes to produce (Ezra, 2010). Ethiopia is in the midst of a severe food crisis and is heavily dependent on food aid to feed its people (Hobbelink, 2011). Such aforementioned deals with low income could exacerbate the poverty in the country and may be ended to much internal riots against local governments and foreign investors. Another report reveals that Daewoo Logistics was in negotiation with Malagasy's government to lease 1.3m hectares of farmland – about half of all arable land in Madagascar – in 4 coastal regions for 99 years. It planned to produce 500,000 tons of palm oil in the eastern parts of the country and 4,000,000 tons of corn in the western parts and export most of the production back to South Korea (Hong, 2011). Such long-run large-scale land deals may cause the country to a disastrous future seeking for food especially if the investors export much of their productions and make no job and income for indigenous people.

An unfair win-loss deal reported by Oxfam (2010) explains that one African delegate, from Ethiopia, explained how companies have been making quite indecent proposals to his government to grab their lands for 10 years, for free and no taxes. Ethiopians, in return, earn nothing else than some of the foods they produced but sold by guests. It seems that such deals resulted in a new version of the 19th century scramble for Africa (Rudi et al., 2012), a real neo-colonialism.

All these are evident examples of such win-loss deals which we called yellow deals. Most African economies are heavily reliant on agriculture and natural resources for a significant share of Gross Domestic Production (GDP), national food needs, employment and export revenue (Mutangadura, 2007; Rudi et al., 2012). Since, most of the host countries are African with a lot of poor and hungry people, such win-loss deals are considered as the “land grabs” (Saturnino et al., 2010) and have sparked accusations of neo-colonialism and fears that the practice could exacerbate the poverty and lead Africans to a catastrophic future. According to the World Bank, the global land grab is very real and moving along faster and further than what was previously understood. Therefore, some benevolent regulations are expected to modify “yellow deals” in such a way that can come up with win-win deals.

2.3. Loss-Win: yellow deals (aid; should be adjusted)

In loss-win deals the investors would gain nothing, or at least, not as much as they were expecting while the investees receive infrastructures, new technologies, health centers and so forth. Similar to win-loss deals, we call loss-win deals “yellow deals” since they may bring some infrastructures and services for the host countries but no significant wins for the investors. This status would happen in wide deals with establishing a lot of infrastructures (e.g.) like the “Varun Agriculture Sarl” (VAS) contract in Madagascar. VAS leased or purchased 232,000 ha to grow

rice, corn and pulses in 13 different plains in Sofia region, Madagascar (Rowden, 2011). In exchange for the rights to the land, VAS undertook to establish health centers, schools, training sites, road infrastructure, drinking water, houses and equipment for security guards in the region where it is necessary for the project (TopManda, 2009). This deal is based on a contract farming and hopefully will end to a win-win deal. In addition to obtaining infrastructures, a loss-win deal would be a great opportunity for the local people to grab and absorb the imported technologies from guest countries, especially if they contribute to produce crops or set up the infrastructures. Actually, providing these situations help host (poor) nations produce and establish crops and infrastructures. Therefore, in spite of the investors' losses, loss-win deals would bring some noticeable opportunity to the investees. Although some governmental or private investors help the poor nations to get developed, most of investors would not simply spoil their capitals or spend them for nothing else than an aid. Consequently, loss-win deals can be cited as "aid" to host countries.

2.4. Win-Win: green deals (constructive; should be promoted)

Despite the potential pitfalls, outsourcers' investments in outsourcees might have the potential to significantly promote the agricultural sector of host countries. Unprecedented improvements to infrastructure, increases in education and available technology, and an influx of invested capital could bring sustainable solutions to investees' food troubles (Haralambous, 2009). For instance, while China may primarily be motivated by its need to meet its rising food demand, the modernization of the African agricultural sector is also likely to benefit the people of that continent. For example, Ugandan government thanked China for its support in developing the

country's agricultural industry (UGPulse, 2007)⁵. In Kampala, China is funding projects to increase awareness of sustainable fishing practices in an effort to ease the over fishing of Lake Victoria – the source of much of the fish-heavy diet in Uganda (Rubinstein, 2009). After serious food shortages last year that degenerated into violent riots, the Senegalese government was eager to attract Chinese investments (Horta, 2009). Nigerian economist; Jonas Chianu looks at China's agricultural strategy in Africa as an unprecedented investment in agricultural sectors of many nations. He believes that trading land rights for overall development is a way forward. Without the Chinese, under-utilized farmland would remain unproductive, benefiting no one. Chianu stated that instead of allowing the resources to lie unexploited, it is better to embark on lease arrangements (Namibian, 2012). China is also promised to share information with the Latin American farmers, as it has done in Africa, to improve crop productivity. China has therefore promised to invest billions of dollars in infrastructure in the region, which would improve the flow of goods to international markets (Ewing, 2009). Accordingly, we called win-win deals "green deals" because they end to gain for both sides and would hopefully result in sustainable food production systems though all this must be tracked by a continuous risk assessment study. Such systems would be much constructive and eradicate hunger and poverty in both host and guest countries, feeding current and the next generations. A sustainable agri-rural development is therefore expected especially for host (poor) countries as a consequence of green deals. "Green grabbing" is another term which refers to the appropriation of land and resources for environmental ends. Appropriation' implies the transfer of ownership, use rights and control over resources that were once publicly or privately owned from the poor into the hands of the powerful (Fairhead et al., 2012). Seemingly, land appropriation interacts with other forms of appropriation, financial speculation in commodities, and entry barriers to erode smallholder

⁵ <http://www.ugpulse.com/uganda-news/government/china-offers-30million-us-dollars-to-uganda/4313.aspx>

livihoods (Amanor, 2012). “Green grabbing” could be a “red”, “yellow” or “green” deal based on who wins and who losses.

As discussed earlier, the investors need to built some infrastructures such as roads and railways and import some technologies like farm machines and equipments. To get a real win-win deal and sustainable development, investors should allow local people to contribute and learn how to construct the infrastructures, or how to repair and maintain farm machines and irrigation systems. Nonetheless, the inherent talent and ability of the local people are essential to absorb the imported technologies, even if the investors banned them to collaborate.

3. What should be studied?

Land deals have some small or big aftermaths with regard to political, socio-economic and environmental issues especially for host countries, and remarkably in the large-scale, long-run deals. It seems that it is a governmental responsibility to analyze the deals’ consequences and make a wise decision about dis/agreement. A series of risk assessment studies is needed to evaluate all political, socio-economic and environmental situations that end to “red”, “yellow” and “green” deals. Although the FAO suggests some measures to be taken in order to regulate land acquisitions and guarantee a minimum benefit for investees to reconcile the investors’ interests (Godoy, 2009), blindly signing the deal would result in red and yellow deals that bring irreversible losses and disastrous future, mostly for host countries. The main essential aspects from political, socio-economic and environmental points of view to be considered in each deal are discussed in the following sections.

3.1. Political aspects

The main question here could be addressed to whether AO can influence political relations of guests and host countries. In other words, could AO ameliorate or deteriorate the dealers' political relationships? To what extent it could be destructive or constructive? How will be the status of land tenure systems? Could the dealers already extend their cooperation in other sectors successfully? Or is it mostly destructive so that the dealers would not promote their cooperation? Which dealer will gain more bargaining power?

It is essential to find the accurate answer for each question to establish a successful "green deal". However, for political aspects, two layers of dis/satisfaction can be expected: one at the governmental and the other at the public level.

Although countries that lease or sell their land often suffer from weak governing institutions (Simon, 2009), it seems that some stronger governments inspect the performance of investors carefully. Consequently, investors and investees can protect their leases with the investor protection provisions of international trade pacts⁶. Since securing land rights is central to ensuring equitable agricultural development (Rota, 2009), farmers' land tenure rights must precede land deal negotiations. Furthermore, rights to land are the basis for social relationships and cultural values, and a source of prestige and often power and political status (FAO, 2002).

Purchasing or long-term leasing of fertile land would result in dissatisfactions and even internal riots in host countries. The deals frequently set one group against another in host countries and the question is how those conflicts get resolved⁷. For instance, Peru's government used deadly force against indigenous people that protested petrochemical and logging interests' access to traditional land (Simon, 2009). In Madagascar, the South Korea's Daewoo wanted to

⁶ www.foodandwaterwatch.org

⁷ <http://www.economist.com/node/13692889>

secure 1.3 million hectares to grow corn, but the deal collapsed for political reasons (Smith, 2009). Such actions show that purchasing or long-term investments on a desired region are not reasonable, because in cases like riots or even revolutions investors' rights cannot be guaranteed. Therefore, as the aftermath of such deals the "red" end, from political point of view, is expected. However, respecting customary rights, sharing benefits among locals and increasing transparency (current deals are shrouded in secrecy) would terminate the conflicts.

At last but not least, since investors purchase or lease the potential lands (e.g., those with irrigation potential or closer to markets) (Von Braun and Meinzen-Dick, 2009), from a pessimistically point of view, selling fertile land continuously may lead to a serious threat to host countries' independency and territorial integrity.

3.2. Socio-economic aspects

The main social issues here are food security, displacement of indigenous people, loss of income opportunities, social inequities, and conflicts. The main concern here would be the current and future situation of small-scale farmers. Are their conditions better than before? Or they are more deprived? Do they have more bargaining power? Do they gain more job opportunities? Or they are more marginalised as a simple worker? How about their social welfare? To what extent the guest would offer and construct infrastructure/facilities for the host communities? Do local people have now an easier access to more and better foods? Are the foods cheaper than before? Do the local people produce and earn more than before? Do the local people have more access to market? How about the land price fluctuation in the host countries? How about the governance? What would be the position of the governance?

Poor countries' central governments usually have neither the capacity nor the local knowledge to implement a just, large-scale national land registration system (Clover and Eriksen, 2009). With

such a high proportion of land being unregistered, the risks of dispossession for the poor majority from a major land-grab are very high (Toulmin, 2008a). Most cultivable land is already used or claimed by local farmers, herders and gatherers with no formal documentation (Toulmin, 2008b). For instance, up to 90 percent of rural land is under customary tenure in Africa (Gerlach and Liu, 2010). It is expected that local poor and vulnerable people displacement is the main negative social impacts of AO in this continent. Gender is critical to understanding the impact of land deals because ‘men and women have different social roles, rights, and opportunities and will be differentially affected by any major change in tenure, especially land transfers to foreign investors (White and White, 2012). The challenge is that these people have little access to the law and are excluded from formal land rights (Rudi et al., 2012). This problem would therefore worsen land tenure conflicts between the investors and local people. The investors would grab a part of the political, social and economic governance besides the land grabbing. From the governance point of view, land grabs violate the position of governance at all levels of human life: accountability, predictability, adherence to the rule of law, and human rights (Simo, 2011). It seems that to avoid this, the investors’ activities should be well organized by the governments of host countries (Daniel, 2012).

The extent of the technology that must be or can be transferred from guest to host countries is essential since there would be some socio-economic, political and environmental side effects. For a green deal, indigenous people must contribute to the process of crop production and constructing infrastructures. The contribution of the local people is essential since by creation more jobs and income for men and women, it helps them absorb and accept needed technologies more eagerly (Behrman et al., 2011). Consequently, such conditions ameliorate people’s self-confidence for successful food productions after the departure of investors. Consistently, it would be a green deal from social and political points of view. Also, the local people’s

contribution results in job creation and is important from both the social and economic aspects (Saturnino et al., 2010). However, the uneven development can be expected in different regions of the host countries, between where the investors' technologies are imported and where are not. Such an uneven development may cause a socio-economic problem, mainly increasing gap between the rich and the poor.

Some case studies observed that land deals projects are labour intensive during the initial phase but become increasingly mechanized later on, thus reducing future income opportunities (Gerlach and Liu, 2010). Nonetheless, it is expected that as a consequence of green deals, the host countries will be gained a more sustainable economic growth. Land and agricultural production have been highlighted as critical for economic growth and poverty reduction (Clover and Eriksen, 2009). As a consequence of technology transfer, infrastructures construction and capital flow from investors to investees, agricultural output and productivity will be increased. Additionally, employment creation upgrades domestic production (Hallam, 2009) and boosts the economic growth.

As discussed earlier, a worrisome issue is that all the produced foods in host countries may be shipped to guest countries for their local consumptions. In this situation, poor people do not have access to enough food to survive and it may therefore exacerbate the poverty. To avoid such insecure situations where job creation and food security are threatened, investors should contribute to the local people's food security as well.

3.3. Environmental aspects

Environmental impacts are also one of the main issues that need to be addressed when assessing the consequences of AO. Many of the land buyers, especially from arid and import dependent countries, are essentially seeking access to water as much as they buy land (Woodhouse and

430 Ganho, 2011) which is already referred to as “water grabbing”. The problematic issue is that the
431 volume of needed water for large-scale agricultural projects is not explicitly mentioned in many
432 land deal contracts (Woodhouse, 2012). Thus, there is a need to assess available and required
433 water for the specific period of each deal (Mehta et al., 2012).

434 Since most of the investors buy or lease lands to feed their own nations, seemingly, they
435 produce a few numbers of crops for several years. This may cause a significant loss in
436 biodiversity due to the introduction of monoculture (Bazuin et al., 2011). Also, most likely,
437 investors choose some types of agricultural systems to reach the higher yields especially in the
438 short-run leases. For instance, most conservation tillage systems have lower outputs than the
439 conventional ones (Coughenour and Chamala, 2000), but they are much more sustainable.
440 Capital-intensive agricultural practices, typical of the current land acquisition, use large amounts
441 of fresh water resources and depend heavily on fertilizers and pesticides (Spielloch and Murphy
442 2009). The investors will want a quick return. They will practice an industrial model of
443 agriculture (Azadi et al., 2011c; Rudi et al., 2012) that in many parts of the world has already
444 resulted in poverty, environmental destruction and farm-chemical pollution (Nayak, 2004). In
445 this case, over use of pesticides and fertilizers can lead to soil and water contamination.
446 Although purchase or long-run lease have more political and socio-economic effects on host
447 countries, the environmental damage is more severe in short-run leases since investors may put a
448 pressure on land and water resources to reach a higher yield as much as possible (Azadi et al.,
449 2011d). Consequently, there would be nothing for local communities at the end of the contracts.
450 In fact, land and water grabs; due to investors’ recklessness and lack of control from host
451 countries may lead to huge environmental problems in outsourcees. To avoid this situation, some
452 sorts of crops and rotation schedules, agricultural and irrigation systems, the quantity and quality

of inputs, i.e. farm machines, fertilizers and pesticides should be clearly regulated before signing the deal.

4. Conclusion

This study showed that AO can be resulted in four different statuses, i.e. loss-loss, win-loss, loss-win, and win-win. The first and the last deals are introduced as “red” and “green” deal since they result respectively in loss and gain for both the investor and investee. The two other deals are called “yellow” since one side gain much and the other less. The “red deals” are destructive and should be stopped because both sides gain nothing and would face unsustainable and insecure food production systems. The “yellow deals” should be modified in such a way that results in a “green” deal to profit both the investors and investees. To reach a beneficial “green deal”, political, governance, socio-economic and environmental effects of each deal should be studied. Since rights to land are a basis for social relationships and cultural values, and a source of prestige and often power and political status in developing countries, farmers’ land tenure rights must precede land deal negotiations. Furthermore, as a result of high proportion of unregistered land in poor countries, the risk of dispossession through a land grab for the majority of poor is very high. Indeed, only where poor people have secure land use rights, AO can actually offer a platform for development. Additionally, the duration and the size of investment (Hall, 2011) are critical factors that affect the future of the deals. It is also important to note that large size purchasing or long-run land leasing may be understood as a win-win “green deal” for the first years but due to the social dissatisfactions and probable riots, such deals may be realized unsustainable and would result in a “yellow” or “red” end.

Unfortunately, the majority of host countries lack basic data on the size, nature, and the location of land acquisitions through land registries or other public sources (Cotula et al., 2009),

477 and that researchers needed to make multiple contacts to access even superficial and incomplete
478 information. Also, many details of land deals are still hidden (FIAN, 2012) that inhibits a series
479 of risk assessment studies to find what will happen and how will be the future of host countries.
480 A challenging issue is that the losses in host countries would be much more severe than in the
481 guests. Appropriately, the World Bank has launched some relevant studies on the basis of the
482 projects that have been reported by the media and captured by the farmlandgrab organization⁸,
483 LDPI⁹, ICAS¹⁰ and PLAAS¹¹. The Bank's most significant findings, however, are about the
484 social impact assessment of these projects on local communities. Environmental impact
485 assessments are rarely addressed, and people are routinely booted off their land, without
486 consultation or compensation. For that reason, the host governments have to evaluate the
487 consequences of deals very prudently. The political, socio-economic and most essentially
488 environmental impacts of each deal must be studied continuously. The consideration of
489 environmental effects are emphasized in the fact that most environmental losses like depleted
490 and eroded water and soil resources are irreversible and could not be simply compensated.
491 Particularly, the availability and needed water for a specific deal should carefully be investigated
492 to prevent the "water grabbing" phenomenon. For all this, we still need to create more evidence
493 for each of the situations, i.e. "red", "yellow" and "green" deals by conducting more case studies
494 in different regions. Most essentially, an "authorized continuous monitoring system" is needed to
495 inspect the performance of the investors in host countries to come to a green deal. Such a system
496 should help both the host and guest countries to make a "continuous" monitoring system on the
497 consequences of the deals. Both the countries should therefore not be difficult to let third parties

⁸ farmlandgrab organization, <http://farmlandgrab.org/>

⁹ LDPI, http://www.iss.nl/research/networks_and_projects/land_deal_politics_ldpi/

¹⁰ ICAS, http://www.iss.nl/research/networks_and_projects/critical_agrarian_studies_icas/

¹¹ PLAAS, <http://www.plaas.org.za/>

make an investigation on the consequences but also they should intentionally ask the third parties to make such investigations continuously. Accordingly, the monitoring system should formally be mentioned in the contract as an imperative article of the regulations.

It should be emphasised that not in every poor country, AO can be practiced, because it can easily end to a “red” status. Therefore, we need a series of risk assessment studies on the bases of both “country-case” and “crop-case”. Such assessments should comprehensively address the “political”, “governance”, “socio-economic”, and “environmental” aspects of land deals. Given the long duration of land deal contracts, such assessments should be regarded incessantly both beforehand and when running the project while phasing out might never be the case.

Acknowledgement

The corresponding author is a beneficiary of a mobility grant from the Belgian Federal Science Policy Office co-funded by the Marie Curie Actions from the European Commission.

References

- Ackello-Ogut, C., 2011. Managing food security implications of food price shocks in Africa. *Journal of African Economies* 20(1), 100-141.
- Afrapol, 2010. Following China-US and India plan food security in Africa. <http://www.afrapol.org/afrapol/item/184-following-china-us-and-india-plan-food-security-in-africa.html>, Accessed October 2011.
- AliAbdalla, A., 2009. Sudanese Chinese partnership in agriculture. <http://www.sudantribune.com/Sudanese-Chinese-partnership-in,31862>, Accessed November 2011.
- Amanor, K.S., 2012. Global resource grabs, agribusiness concentration and the smallholder: two West African case studies, *Journal of Peasant Studies*. 39(3-4), 731-749
- Azadi, H., Schoonbeek, S., Mahmoudi, H., Derudder, B., De Maeyer, P., Witlox, F., 2011a. Organic agriculture and sustainable food production system: Main potentials. *Agriculture, Ecosystems & Environment*, 144, 92– 94.
- Azadi, H., Talsma, N., Ho, P., Zarafshani, K., 2011b. GM crops in Ethiopia: a realistic way to increase agricultural performance? *Trends in Biotechnology* 29(1), 6-8.
- Azadi, H., Verheijke, G., Witlox, F., 2011c. Pollute first, clean up later? *Global and Planetary Change* 78, 77–82.
- Azadi, H., Ho, P., Hasfiati, L., 2011d. Agricultural land conversion drivers: A comparison between less developed, developing and developed countries. *Land Degradation and Development* 22, 596-604.
- Bazuin, S., Azadi, H., Witlox, F. 2011. Application of GM crops in Sub-Saharan Africa: Lessons learned from Green Revolution. *Biotechnology Advances* 29, 908-912.

535 Behrman, J., Meinzen-Dick, R., Quisumbing, A., 2011. The gender implications of large-scale
 536 land deals. IFPRI Discussion Paper 01056.

537 Cobo, L.G., Canales, F., Jiajie, L., 2011. Can Latin America feed China?
 538 <http://www.latinbusinesschronicle.com/app/article.aspx?id=5221>, Accessed March 2012.

539 Cotula, L., 2012. The international political economy of the global land rush: A critical appraisal
 540 of trends, scale, geography and drivers, *Journal of Peasant Studies*. 39(3-4), 649-680.

541 Cotula, L., 2011. Land grabs in Africa: is there an alternative?
 542 <http://www.iied.org/blogs/%E2%80%98land-grabs%E2%80%99-africa-there-alternative>,
 543 Accessed March 2012.

544 Cotula, L., Vermeulen, S., Leonard, R., Keeley, J., 2009. Land grab or development opportunity?
 545 Agricultural investment and international land deals in Africa.
 546 www.ifad.org/pub/land/land_grab.pdf, Accessed November 2011.

547 Clover, J., Eriksen, S., 2009. The effects of land tenure change on sustainability: human security
 548 and environmental change in southern African savannas. *Environmental Science & Policy*
 549 12, 53-70.

550 Coughenour, C.M., Chamala, S., 2000. Conservation tillage and cropping innovation. Iowa State
 551 University Press.

552 Daniel, S., 2012. Situating private equity capital in the land grab debate. *Journal of Peasant*
 553 *Studies*. 39(3-4): 703-729.

554 Davies, M.J., 2009. The China monitor, issue 43. <http://www.ccs.org.za>, Accessed October 2011.

555 DEXIA, 2010. Food scarcity-trends, challenges, solutions. [sri.dexia-am.com/.../news/2010-](http://sri.dexia-am.com/.../news/2010-06/FOOD_SCARCITY_11_05.pdf)
 556 [06/FOOD_SCARCITY_11_05.pdf](http://sri.dexia-am.com/.../news/2010-06/FOOD_SCARCITY_11_05.pdf), Accessed March 2012.

557 Ewing, R., 2009. China slow to invest in expensive LatAm farmland.
 558 <http://www.guardian.co.uk/business/feedarticle/8657479>, Accessed March 2012.

559 Ezra, Z., 2010. The new way of bio-colonialism in Ethiopia.
 560 [www.anyuakmedia.com/Ethionews temp 10 1 24.html](http://www.anyuakmedia.com/Ethionews_temp_10_1_24.html), Accessed March 2012.

561 Fairhead, J., Leach, M., Scoones, I., 2012. Green grabbing: a new
 562 appropriation of nature?, *Journal of Peasant Studies*. 39(2), 237-261.

563 FAO, 2009a. On horizon 2050-billions needed for agriculture: high-level forum to weigh
 564 investment needs. <http://www.fao.org/news/story/en/item/36107/icode>, Accessed March
 565 2012.

566 FAO, 2009b. Land acquisitions in Africa pose risks for poor.
 567 <http://www.fao.org/news/story/en/item/19974/icode/>, Accessed January 2012.

568 FAO, 2004. Land tenure systems and their impacts on food security and sustainable development
 569 in Africa. www.uneca.org/eca_resources/.../sdd/land_tenure_systems.pdf, Accessed
 570 October 2011.

571 FAO, 2002. Land tenure and rural development. *Land Tenure Studies* 3, Rome.

572 FIAN, 2012. Land grabbing in Kenya and Mozambique. <http://www.fian.org>, Accessed,
 573 Accessed March 2012.

574 Friis, C., Reenberg, A., 2010. Land grab in Africa: Emerging land system drivers in a
 575 teleconnected world. <http://www.globallandproject.org>, Accessed December 2011.

576 Gerlach, A.C., Liu, P., 2010. Resource-seeking foreign direct investment in African agriculture.
 577 FAO Commodity and trade policy research working paper No. 31.

578 Globalvoices, 2011. Ethiopia: Are land grab deals a path to food security?
 579 [http://globalvoicesonline.org/2011/05/18/ethiopia-are-land-grab-deals-a-path-to-food-](http://globalvoicesonline.org/2011/05/18/ethiopia-are-land-grab-deals-a-path-to-food-security/)
 580 [security/](http://globalvoicesonline.org/2011/05/18/ethiopia-are-land-grab-deals-a-path-to-food-security/), Accessed March 2012.

581 Grain, 2009. CGIAR joins global farmland grab. [http://www.grain.org/article/entries/192-cgiar-](http://www.grain.org/article/entries/192-cgiar-joins-global-farmland-grab)
 582 [joins-global-farmland-grab](http://www.grain.org/article/entries/192-cgiar-joins-global-farmland-grab), Accessed October 2011.

583 Grau, R.H., Aide, M., 2008. Globalization and land-use transitions in Latin America. *Ecology*
 584 and *Society*. 13(2), 16. Grebmer, K.V., Fritschel, H., Nestorova, B., Olofinbiyi, T., Pandya-
 585 Lorch, R., Yohannes, Y., 2008. The Challenge of Hunger. <http://www.ifpri.org>, Accessed
 586 March 2012.

587 Grindle, M.S., 2002. Good enough governance: poverty reduction and reform in developing
 588 countries. www.gsdr.org/docs/open/HD32.pdf, Accessed March 2012.

589 Hallam, D., 2009. Foreign investment in developing country agriculture-issues, policy
 590 implications and international response.
 591 <http://www.oecd.org/dataoecd/30/39/44231828.pdf>. Accessed November 2012.

592 Hall, R., 2011. Land grabbing in Southern Africa: the many faces of the investor rush. *Review of*
 593 *African Political Economy* 38(128), 193-214.

594 Haralambous, S., Liversage, H., Romano, M. 2009. The growing demand for land risks and
 595 opportunities for smallholder farmers. Discussion paper prepared for the Round Table
 596 organized during the Thirty-second session of IFAD's Governing Council.
 597 www.ifad.org/events/gc/32/roundtables/2.pdf, Accessed January 2012.

598 Hartwich, F., 2009. When food markets do not provide enough food. *InfoResources Focus* No
 599 1/039.

600 Hobbelink, H., 2011. Time to recall the land grabbers.
 601 <http://www.commondreams.org/view/2011/12/06-0>, Accessed March 2012.

602 Hong, K., 2011. Analysis of Daewoo land deal in Madagascar.
 603 [http://www.slideshare.net/KevinHong3/analysis-of-daewoo-land-deal-in-madagascar-](http://www.slideshare.net/KevinHong3/analysis-of-daewoo-land-deal-in-madagascar-paper)
 604 [paper](http://www.slideshare.net/KevinHong3/analysis-of-daewoo-land-deal-in-madagascar-paper), Accessed March 2012.

605 Horta, L., 2009. Food security in Africa: China's new rice bowl.
606 [http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=35042](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=35042), Accessed
607 December 2011.

608 Kersting, E., 2011. Dealing with the race for agricultural land.
609 [http://www.economicinsights.eu/2011/10/landgrabbing-foreign-investments-agricultural-](http://www.economicinsights.eu/2011/10/landgrabbing-foreign-investments-agricultural-land/)
610 [land/](http://www.economicinsights.eu/2011/10/landgrabbing-foreign-investments-agricultural-land/), Accessed February 2012.

611 Kugelman, M., Levenstein, S.L., 2009. Land grab? The race for the World's farmland.
612 <http://www.wilsoncenter.org>, Accessed March 2012.

613 Mackenzie, D., 2008. 21st century land grab-rich countries snap up land in Africa and elsewhere.
614 <http://sanhati.com/articles/1199/>, Accessed March 2012.

615 Madebo, E., 2011. The impact of land grab.
616 [http://www.gambelatoday.com/ blog/Opinion and Analysis/post/The Impact of Land G](http://www.gambelatoday.com/blog/Opinion_and_Analysis/post/The_Impact_of_Land_Grab/)
617 [rab/](http://www.gambelatoday.com/blog/Opinion_and_Analysis/post/The_Impact_of_Land_Grab/), Accessed January 2012.

618 Maskus, K.E., 2004. Encouraging international technology transfer.
619 http://www.iprsonline.org/unctadictsd/docs/CS_Maskus.pdf, Accessed March 2012.

620 Meentzen, K., 2010. Resisting land grabbing in Ecuador.
621 [http://www.culturalsurvival.org/ourpublications/csqa/article/resisting-land-grabbing-](http://www.culturalsurvival.org/ourpublications/csqa/article/resisting-land-grabbing-ecuador)
622 [ecuador](http://www.culturalsurvival.org/ourpublications/csqa/article/resisting-land-grabbing-ecuador), Accessed October 2011.

623 Mehta, L., Veldwisch, G.J., Franco, J., 2012. Water Grabbing? Focus on the (Re)appropriation of
624 Finite Water Resources. *Water Alternatives* 5(2), 193-207.

625 Mihretie, K., 2010. Ethiopia on the verge of colony of many. www.farmlandgrab.org/10754,
626 Accessed March 2012.

627 Montenegro, M., 2009. Hungry for Land.
628 http://seedmagazine.com/content/article/hungry_for_land/, Accessed March 2012.

629 Mutangadura, G., 2007. The incidence of land tenure insecurity in Southern Africa: policy
630 implications for sustainable development. *Natural Resources Forum* 31, 176-187.

631 Namibian, 2012. Rush on African land.
632 [http://www.namibian.com.na/index.php?id=28&tx_ttnews\[tt_news\]=57579&no_cache=1](http://www.namibian.com.na/index.php?id=28&tx_ttnews[tt_news]=57579&no_cache=1),
633 Accessed March 2012.

634 Nayak, P., 2004. Poverty and environmental degradation in rural India: a nexus. Annual
635 conference of NEEA held at Dibrugarh, Assam.

636 Oxfam, 2010. What is land grabbing and why should we care?
637 <http://blogs.oxfam.org/en/blog/10-10-18-what-land-grabbing-and-why-should-we-care>,
638 Accessed March 2012.

639 Oxfam, 2009. Commercial pressures on land: Rethinking policies and practice for development.
640 www.commercialpressuresonland.org/wp-content/.../final-call.pdf, Accessed March 2012.

641 Pearce, F., 2011. Can 'climate-smart' agriculture help both Africa and the planet?
642 [http://e360.yale.edu/feature/after_durban_can_climate_smart_farming_help_africa_and_th](http://e360.yale.edu/feature/after_durban_can_climate_smart_farming_help_africa_and_the_planet/2477/)
643 [e_planet/2477/](http://e360.yale.edu/feature/after_durban_can_climate_smart_farming_help_africa_and_the_planet/2477/) Accessed September 2012.

644 Quan, J., 2006. Land access in the 21st century: Issues, trends, linkages and policy options.
645 <ftp://ftp.fao.org/docrep/fao/009/ah245e/ah245e00.pdf>, Accessed October 2011.

646 Robertson, B., Pinstруп-Andersen, P., 2010. Global land acquisition: neo-colonialism or
647 development opportunity? *Food Security*. 2(3), 271-283.

648 Rota, A., 2009. Livestock and land. <http://www.ifad.org/lrkm/factsheet/land.pdf>, Accessed
649 March 2012.

650 Rowden, R., 2011. India's role in the new global farmland grab.
651 http://www.macroscan.org/anl/aug11/pdf/Rick_Rowden.pdf, Accessed March 2012.

652 Rubinstein, C., 2009. Speaking freely: China's eye on African agriculture.
 653 www.atimes.com/atimes/China_Business/KJ02Cb01.html, Accessed January 2012.
 654 Rudi, L.M., Azadi, H., Witlox, F., 2012. Reconcilability of socio-economic development and
 655 environmental conservation in Sub-Saharan Africa. *Global and Planetary Change* 86-87, 1-
 656 10.
 657 Safransky, S., Wolford, W., 2011. Contemporary land grabs and their alternatives in the
 658 Americas. International Conference on Global Land Grabbing, University of Sussex, April
 659 6-8, 2011.
 660 Saturnino, M., Borras, Jr., Jennifer, C.F., Kay, C., Spoor, M., 2011. Land grabbing in Latin
 661 America and the Caribbean viewed from broader international perspectives. FAO.
 662 Saturnino, M., Borras, Jr., Franco, J., 2010. Towards a broader view of the politics of global land
 663 grab: Rethinking land issues, reframing resistance. ICAS Working Paper Series No. 001.
 664 Simo J.A.M., 2011. Land grabbing, governance and social peace-building issues in Cameroon:
 665 Case study of the roles of elites in land deals and commoditisation in the North West
 666 Region, International Conference on Global Land Grabbing 6-8 April 2011.
 667 Simon, R., 2009. Fatal clashes erupt in Peru at roadblock.
 668 <http://www.nytimes.com/2009/06/06/world/americas/06peru.html>, Accessed, March 2012.
 669 Skinner, J., Cotula, L., 2011. Are land deals driving 'water grabs'? Briefing: The global land rush.
 670 London: International Institute for Environment and Development (IIED).
 671 <http://pubs.iied.org/17102IIED>, accessed May 2012.
 672 Smaller, C., Mann, H., 2009. A thirst for distant lands: Foreign investment in agricultural land
 673 and water. International Institute for Sustainable Development (IISD).
 674 Smith, B., 2010. Golf and the great Lao land grab.
 675 www.atimes.com/atimes/Southeast_Asia/LA21Ae01.html, Accessed March 2012.

676 Smith, D., 2009. The food rush: Rising demand in China and west sparks African land grab.
677 www.guardian.co.uk/environment/2009/jul/03/africa-land-grab, Accessed March 2012.

678 Songwe, V., Deininger, K., 2009. Foreign investment in agricultural production: Opportunities
679 and challenges. [http://www.landcoalition.org/publications/foreign-investment-agricultural-](http://www.landcoalition.org/publications/foreign-investment-agricultural-production)
680 [production](http://www.landcoalition.org/publications/foreign-investment-agricultural-production), Accessed March 2012.

681 Spieldoch, A., Murphy, S., 2009. Agricultural land acquisitions: implications for food security
682 and poverty alleviation.
683 http://www.wilsoncenter.org/topics/pubs/ASIA_090629_Land%20Grab_rpt.pdf, Accessed
684 October 2011.

685 STWR, 2012. Land grabbing the end of sustainable agriculture. [http://www.stwr.org/food-](http://www.stwr.org/food-security-agriculture/land-grabbing-the-end-of-sustainable-agriculture.html)
686 [security-agriculture/land-grabbing-the-end-of-sustainable-agriculture.html](http://www.stwr.org/food-security-agriculture/land-grabbing-the-end-of-sustainable-agriculture.html), Accessed
687 March 2012.

688 TopManda, 2009. Food crisis and the global land grab, Varun-Madagascar contract.
689 <http://farmlandgrab.org/2849>, Accessed March 2012.

690 Toulmin, C., 2008a. Securing land and property rights in sub-Saharan Africa: the role of local
691 institutions. <http://www.pubs.iied.org/pdfs/G00460.pdf>, Accessed March 2012.

692 Toulmin, C., 2008b. Securing land and property rights in Sub-Saharan Africa: The role of local
693 institutions. Land Use Policy. 26, 10-19.

694 UGPulse, 2007. China offers 30Million US dollars to Uganda. [http://www.ugpulse.com/uganda-](http://www.ugpulse.com/uganda-news/government/china-offers-30million-us-dollars-to-uganda/4313.aspx)
695 [news/government/china-offers-30million-us-dollars-to-uganda/4313.aspx](http://www.ugpulse.com/uganda-news/government/china-offers-30million-us-dollars-to-uganda/4313.aspx), Accessed March
696 2012.

697 Ullenberg, A., 2009. Foreign direct investment (FDI) and land in Madagascar. Global Business
698 Review. Federal Ministry for Economic Cooperation and Development (GTZ). Eschborn,
699 Germany. doi: 10.1177/097215090000100201.

UN, 2009. The world investment report: transnational corporations, agricultural production and development. http://www.unctad.org/en/docs/wir2009_en.pdf, Accessed March 2012.

UN, 2007. Indegenous people in Cambodia. http://www.un.org/esa/socdev/unpfii/.../6_session_tebtebba_iwgia.pdf, Accessed March 2012.

Von Braun, J., Meinzen-Dick, R., 2009. Land grabbing by foreign investors in developing countries: risks and opportunities. <http://www.ifpri.org/sites/default/files/publications/bp013all.pdf>, Accessed March 2012.

White, J., White, B., 2012. Gendered experiences of dispossession: oil palm expansion in a Dayak Hibun community in West Kalimantan, Journal of Peasant Studies. 39(3-4): 995-1016

Woodhouse, P. 2012. New investment, old challenges. Land deals and the water constraint in African agriculture. Journal of Peasant Studies. 39(3-4), 777-794.

Woodhouse, P., Ganho, A.S., 2011. Is water the hidden agenda of agricultural land acquisition in sub-Saharan Africa? International Conference on Global Land Grabbing, Institute of Development Studies and Future Agricultures Consortium, University of Sussex, UK, 6-8 April 2011.

Wünsche, N., 2011. Global Hunger Index 2011: Taming price spikes and excessive food price volatility. http://www.rural-development.de/fileadmin/download/archive/2011/5/rural_2011_5_Box.pdf, Accessed March 2012.

722

		Outsourcee (investee)	
		Loss	Win
Outsourcer (investor)	Loss	LL (Destructive)	LW (Aid)
	Win	WL (Neo-colony)	WW (Constructive)

723
724

Fig. 1. Different possibilities of Agricultural Outsourcing: i) Loss-Loss (destructive); ii) Loss-Win (aid); iii) Win-Loss (neo-colonialism); iv) Win-Win (constructive).