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Interest in Land Investments?
The Asian Case**

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Unexpected and Growing Interest in Land Investments? The Asian Case

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Abstract

The aim of this paper is to provide an Asian perspective on land investments with particular reference to the European position in terms of land acquisition. At first, the paper recalls the relevance that land holds as a distinct factor of production and consumption. Then, it investigates the different ways employed to define the recent phenomenon of land-grabbing in the increasing literature review. In order to contribute to the discussion on the issue, the second part of the paper is devoted to the examination of the Asian case. Furthermore, it analyses both the direct and the indirect role played by the European Union in influencing and enhancing the phenomenon of land-grabbing in Asia. The paper concludes with observations and proposals on the impact of land-grabbing.

Keywords

Land, Natural resources, Asia, EU, Food security, Energy security, Environment, Public policies.

JEL Codes: Q15, Q24, Q42, O13, O53, P28.

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1. Introduction

The major and relatively new drivers of high food prices are the rise in oil and energy prices, which has affected the entire value chain of food production; the previous economic boom in some emerging countries, creating increased demand for cereals mainly for the diet change (higher-valued food such as meat); bad harvests due to weather-related events (floods, droughts); competition between food and fuel; policy choices (export bans in some developing countries and subsidies in biofuels in western countries); increasing urbanisation (more people are becoming consumers rather than producers); dollar depreciation; and, finally, speculation (Gilbert, 2010, Mitchell, 2008, Andreosso and Zolin, 2010a).

Due to the food crisis, developing countries, especially those dependent on imports for food security, have increased the proportion of population at risk of hunger. In these areas, moreover, a sizeable part of the population lives and works in agriculture and in rural areas and a high percentage of income is designed to meet dietary needs. One common way to tackle these problems was to obtain, especially in small farms, an increase in productivity through increased investment.

In this context, the contemporary global trend identified as land-grabbing has recently become a contentious issue: it has been increasingly described by the media as a growing phenomenon across the world¹, although it has recently lost some of its initial momentum (GRAIN, 2008, Borras et al., 2011). The phenomenon has been driven by two trends: firstly, food-insecure governments that depend on imports to provide for their people are grabbing vast areas of farmland in foreign countries for their own food production, and food corporations and private investors are making investments in farmland overseas resulting in significant high returns.

This recent phenomenon of land-grabbing is somehow classified as an investment by operators, both public and private (see for instance: GRAIN, 2008; FIAN, 2010; Cotula, 2011; Schneider, 2011). The most of these investors are wealthy and are often net food importing countries (such as China, India, Malaysia and Korea, and the Gulf States).

The trend is geographically concentrated and there are essential differences between sub regions (Borras and Franco, 2011; Anseeuw et al. 2012b). It is worth mentioning that the majority of acquisitions are concentrated in poorest sub-Saharan Africa.

The aim of this paper is to provide an Asian perspective on land-grabbing. Section 2 recalls the relevance that lands hold as a distinct factor of production and consumption. Section 3 defines land-grabbing in the increasing literature review. Section 4 examines land-grabbing in Asia (which is the second most-targeted continent). Section 5 analyses the role played by the European Union in influencing and enhancing the phenomenon of land-

¹ A variety of estimates suggest that the entire areas involved in cross-border large-scale land transactions reached 20 million ha between 2005 and mid-2009 (GRAIN 2008, Cotula et al 2009; IFPRI, 2009).

grabbing in Asia. The paper concludes (Section 6) with observations and proposals on the impact of land-grabbing . In this paper, to estimate the current state of the controversial issue of *land-grabbing*, the Land Matrix online public database is used².

2. Land as a distinct factor of production and consumption

A classification of factors of production as land, capital and labour belongs to the neoclassical theory. Land (or natural resources) may have qualitative characteristics resulting in different levels of productivity that comes from the natural fertility of the soil and the capital invested in it. Land, after great interest shown on it by the classical economists, was relegated to a marginal role by modern economists. This consideration may be due to the lesser economic importance allocated to the agricultural sector (in terms of GDP and workforce) where, however, land continues to be the main factor of production (Andreosso and Zolin, 2010b).

Land is a free gift of nature, can be sold and passed from one owner to another with different prices depending on the natural fertility. Thus, in economics, according to Marshall (Marshall, 1890), the rent is the result of a surplus above the cost of production due to the richness of nature or to the scarcity of land in relation to its demand. Ricardo (1817) defines rent as “that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil.” So that, according to him, rent is price-determined and not price-determining. The transition from an a land-based agrarian economy to a modern industrial economy requires that growing living standards depend on shifting away from a land-intensive to a capital-intensive economy. According to Malthusian theory, when population is growing land rents increase, and when population is falling rents fall, affecting the standard of living (Malthus, 1798). As is well known, after 1800 population increased, but because of the high labour productivity (and, as a consequence, a rise in real wages) did not lead to falling standard of livings. The value of farmland relative to the value of GDP and the agricultural workforce declined starting from the industrial revolution and just capital and labour were used to produce the same good.

Land, as well as commodities, has recently experienced worldwide a strong interest by investors that was previously dormant. For example, in the USA farms are still a favoured investment. Land prices increased everywhere in the USA and give rise to the fear of a speculative bubble. The USA experienced unprecedented growth with percentage increases to two decimal places in Illinois, Indiana, Iowa, Kansas, Minnesota and Nebraska. In Iowa, the increase was more than 20% in 2010³ (Neuman, 2011).

² The project started in 2000 and it is still active, and this paper covers 11 years of land deals. The web site of the project is: <http://landportal.info/landmatrix>.

³ The rapid rise in agricultural land prices have been pushed up by several factors: higher prices for corns (corn, wheat, soybeans) and low interest rates.

3. Definition of Land-grabbing Based on the Literature Review

The phenomenon of acquisition of land belongs to the history of the world. Throughout history, people have tried to acquire and expand their landholdings at the expense of others. Various terms have been used to identify the recent trend, as for instance: “land-grab”, “land appropriation”, “land investments”, “large-scale land acquisitions”, “rush for land”, “transnational corporate”, “commercial land deal”, “commercial pressures on land”, “neo-colonialism”, “agri-colonialism”, “foreign investment in agriculture” (Blas, 2008; Cotula et al., 2009; Merlet and Jamart, 2009; AGTER, 2010; Zoomers, 2010; Amanor, 2011; Daley, 2011; Deininger et al., 2011; De La Cruz, 2011; Economist, 2011; Hall D., 2011; Huggins, 2011a; White and White, 2011; Anseeuw et al., 2012a; Anseeuw et al., 2012b).

Even though a proper and established definition of the trend still lacks, several researchers have tried to delineate its main features. The phenomenon is a composite one to analyse, and this fact is mainly due not only to the multiplicity of definitions of the fact itself, but also to the intensity of the current trend and the variety of actors, driving forces and sectors of investment involved (Anseeuw et al., 2012b). Additionally, the available literature neither quantifies the amount of investment in land nor provide disaggregated data on the effect of such investments on the affected people (FIAN, 2010; Cotula, 2011; Schneider, 2011).

One of the most cited definitions is offered by researchers at GRAIN (2008), who define the global land-grab as large-scale land acquisition (purchase or lease) for agricultural production by foreign investors (countries or corporations) on a long-term basis (often from 30 to 99 years). In line with GRAIN stand several other authors, among whom Zoomers, for example, who defines the phenomenon of current global “land-grab”, or “foreignisation of space” as “large-scale, cross-border land deals or transactions that are carried out by transnational corporations or initiated by foreign governments” (Zoomers, 2010).

On the contrary, other authors observe that these kinds of definitions limit the scope and understanding of the phenomenon, since they focus mainly on international actors and ignore the role of domestic investors, national and sub-national governmental interest groups (Hall D., 2011). Borras and Franco extend the concept to the term “(trans)national commercial land transactions”, pointing out the idea that it concerns not only transnational but also domestic deals, emphasizing the commercial nature of the transactions of any scale or output markets (Borras and Franco, 2010). Ruth Hall underlines the importance of domestic deals actors too, observing that “the popular term ‘land-grabbing’, while effective as activist terminology, obscures vast differences in the legality, structure, and outcomes of commercial land deals and deflects attention from the roles of domestic elites and governments as partners, intermediaries, and beneficiaries” (Hall R., 2011a, p.1). Several authors choose more neutral definitions, as for instance “large-scale land investments” (Cotula et al., 2009; Graham et al.,

2011; Mishra, 2011; Woodhouse and Ganho, 2011) or “commercial pressures on land” (Daley, 2011). The second definition is less restrictive about the nature of actors, driving forces and sectors of investment in relation to the phenomenon. It focuses not only on farmland, but also on other forms of transfers of common property resources - such as forests or water resources - embracing all processes of land concentration and privatization targeted to economic profits (Ketsela Moulat et al., 2012).

The implications of such a trend on target countries are manifold. Two main different points of view characterize the debate on the nature of these implications. Some authors use the terms “rising interest in farmland” or “foreign investment in agriculture”, arguing that the global land-rush can represent an opportunity for poor farmers and rural people to have the access to innovation and employment opportunities through agriculture, a sector which is less productive and often ignored (Deininger et al., 2011). On the contrary, other voices (from civil society, governmental, and multinational sides) refer to the present trend as “land-grabbing”, “rush for land”, “bio-colonialism”, “agro-colonialism” etc., being critical about the various negative impacts on local communities (McLure, 2009; Mersha, 2009; Rice, 2009; Fitzgerald, 2010; Grojnowski, 2010; Mihretie, 2010).

Several authors recognise the real risk that the current global phenomenon could cause radical long-term changes in the use and ownership of land at local level (e.g. Zoomers, 2010; Wisborg, 2011). As researchers at GRAIN have stated, productive agricultural land is progressively more privatised and concentrated, and hence, if such a trend continues, it could lead to a significant shrinkage of small-scale farming and rural livelihoods in several areas worldwide (GRAIN, 2008).

With these transactions, investors do not purchase just the land, but also water, minerals and labour since they are perceived as sources of alternative food crops and energy production (GRAIN, 2008; Graham et al., 2011; Anseeuw et al., 2012a; Anseeuw et al., 2012b). As a matter of fact, it has been observed that these kinds of investments could either lead farmers off their land seeking a different kind of work, or turn them into a class of workers on large-scale cultivated areas with a high risk of human rights violations (Stephens, 2011)⁴.

⁴ The main concerns about land grabbing are connected with the way they are determined and performed, and the nature and the magnitude of their impacts on local communities (FIAN, 2010). The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) recognized the “Free, Prior and Informed Consent” (FPIC) as a specific right for Indigenous Peoples. Following this principle, a community has the right to approve or reject proposed actions or projects that may affect them or their lands, territories or resources (UNDRIP, 2007). Land deals are rarely based on FPIC and projects relying on satisfactory consultations with local communities are scarce. Furthermore, many communities receive low or even no compensation, and some of them are evicted from their land (Huggins, 2011b; Wily, 2011; Zageba, 2011). In order to confront these problems, in April 2010 the World Bank (WB), International Fund for Agricultural Development (IFAD), FAO and United Nations Conference on Trade and Development (UNCTAD) together proposed a framework to self-regulate these kinds of land deals more responsibly,

Similarly, Benjaminsen et al. describe the trend as “processes whereby smallholders are dispossessed of their land through interventions by outside actors” (Benjaminsen et al., 2011, p.2). Furthermore, the UN Food and Agriculture Organisation (FAO) Director-General, Jacques Diouf, warned that the current rush to acquire foreign farmlands leads to a form of “neo-colonialism.” According to Diouf: “The risk is of creating a neo-colonial pact for the provision of non-value-added raw materials in the producing countries and unacceptable work conditions for agricultural workers” (Blas, 2008). Additionally, since subsistence farming represents the base of many communities in poor country, the indicated phenomenon could restrict people’s access to vital resources and lead deprived populations further into poverty (Shepard and Mittal, 2009).

Without reliable data on the extent and nature of recent investments, it is hard to identify which of these positions is the right one and to advise countries on how to minimise the risks related to such investments (Deininger et al., 2011)⁵.

4. Land-grabbing in Asia

The phenomenon of land-grabbing has led to significant controversy, mostly concerning the environmental and social implications of the deals. Researchers at the Overseas Development Institute in early 2013 found that the size of the phenomenon of land-grabbing worldwide may have been exaggerated. In line with the authors, this fact can be mainly ascribed not only to the limited data availability, but also to the fact that the existing available data are associated with NGOs, which are interested in raising media attention around the issue (Holden and Pgel, 2013). Nevertheless, it is worth analysing the trend as it involves a consistent segment of people worldwide, influencing many aspects of their lives.

There are evidently differences in the estimates available nowadays, but most estimates seem to arrive at a range of 20-60 million hectares. When evaluating databases on land, a considerable amount of deals remains uncertain in terms of the size of the deals and whether they have actually been finalized and implemented. Although the data on land deals available from the Land Matrix source only reliably account for a portion of transnational deals, they do offer an indication of some recent trends. According to this data source, in the period of time 2000-2011 about 924 deals were signed worldwide, involving an area of a little less than 50 million hectares. However, considering the date of conclusion of the contracts, if we analyze the per year trends, the number is reduced

titled “Principles for Responsible Agricultural Investment”. The seven principles for responsible agro-investment are listed in Deininger et al. (2011).

⁵ The different views also vary about the scale of the phenomenon. While some authors focus their attention only on acquisition of large farmland holdings - as for example GRAIN (2008) which considers only deals over 10,000 ha - other authors broaden the definition to a reduced scale of investment - as Anseeuw et al. (2012a and 2012b) who trace deals of 200 ha or over – or even to transactions of any scale (e.g. Borras and Franco, 2010).

to 235 deals, accounting for 25.4 % of the total. Graph 1 highlights over time the evolution of the phenomenon and detects the growing trend, which seems to stop in 2011. However, the low value of deals signed in 2011 under review can be attributed to the incomplete existing updating in the 2011 Land Matrix and, therefore, it should be analyzed with caution.

A high portion of the literature on land-grabbing exclusively refers to Africa, basically because this area is the most targeted one (see, among others: Cotula et al., 2009; Borras and Franco, 2011; Deininger et al., 2011; Anseeuw et al., 2012a; Anseeuw et al., 2012b). However, the study of the Asian situation is important for several reasons. First, it is informative to raise awareness about this distinct regional area, the extent of the problem and the role of intra-regional and transnational capital in large-scale land acquisitions (Borras and Franco, 2011). Second, the assessment of the impact of this phenomenon is crucial for people living in this part of the world. Furthermore, the Asian case is also interesting because, as it has occurred in other countries, it is both the source and the target of investment flows. Finally, in the Asian region, the phenomenon seems to be constrained by current land pressures and population density (Deininger et al., 2011; Anseeuw et al., 2012a; Anseeuw et al., 2012b).

Asia is the second most targeted continent after Africa. According to the Land Matrix source, with regard to Asian countries the total investment in land (internal and external), in the year 2011, the percentage of hectares purchased from Asia amounted to 47.3 %, compared to 34.6 % purchased from African countries. In this respect, the Asian countries are also the major investor countries with 61.4 % of the total, always followed by African countries. Europe plays a marginal role with 3.6 % of land affected by land-grabbing and 15.4 % as an investor.

In the period of time 2000-2011 the top five Asian land investors were: India (more than 6,331 thousands hectares), Malaysia (about 5,698 thousands hectares), Indonesia (almost 5,488 thousand hectares), China (about 1,547 thousands hectares) and Singapore (slightly less than 700 thousands hectares) (see Table 1). It worth noting that the need for land in India derives significantly from the industrial sector, while in the other Asian countries it derives from agricultural purposes.

Table 1: Top Asian investor countries (2011)

Country	Total (Hectares/000)	Domestic (Hectares/000)	Domestic/total (%)
India	6,331	4,546	72.0
Malaysia	5,699	5,352	93.0
Indonesia	5,488	5,480	99.8
China	1,547	1,043	67.0
Singapore	700	450	64.0
Cambodia	648	648	100.0
Rep. Of Korea	573	461	78.0
Japan	483	373	77.0
Hong Kong	196	195	100.0
Viet Nam	177	127	72.0
Thailand	82	82	100.0
Bangladesh	29	29	100.0
Laos	10	10	100.0

Source: Authors' elaboration from the Land Matrix

Generally, Asian investors purchase land internally, i.e. the target of the investment is located in the same country where the investor is from. India invests in India 72% of the total amount of its land-grabbing, Malaysia 93%, Indonesia 99.8% and China 67%. This sort of "land-grabbing-patriotism" can be seen also in respect of other Asian underdeveloped countries' behaviour: for example Cambodian land investments are targeted only towards Cambodia itself. The same role seems applied also in Laos and Bangladesh. Chinese investments, outside China, are mainly private, while in domestic land deals the investors are mainly public (the government purchased 667 thousands hectares, that is equal to 72.1% of the total domestic deals). The same occurs in India: the international investments are private, but the domestic ones are public: the Indian government made deals for about 3,877 thousands hectares (87.9% of India-India deals), of which 62% were for agriculture and 38% for industrial purposes. In Malaysia, Indonesia and Singapore investments are mainly private.

China invests a significant part of agriculture-cultivated lands in the cultivation of jatropha (46.9% of the total agriculture investments) utilized for the production of renewable energy⁶. The same is true for India (70.9%). The Republic of Korea invests mostly in cassava⁷ (35.2%), mariculture (18.9%) and corn (maize)

⁶ When jatropha seeds are pressed, the resulting jatropha oil can be processed to produce a high-quality biodiesel that can be used in a standard diesel car or further processed into jet fuel, while the residue can also be used as biomass feedstock to power electricity plants, used as fertilizer or as animal fodder.

⁷ Cassava (manioc), the third-largest source of food carbohydrates in the tropics, is a major staple food in the developing world. In time of famine or food shortage, cassava is used to replace rice. In many countries, significant research has begun to evaluate the use of cassava as an ethanol biofuel feedstock. In China, under the Development Plan for Renewable Energy in the Eleventh Five Year Plan, the target is to increase the production of ethanol fuel by non-grain feedstock to 2 million tons, and that of biodiesel to 200 thousand tons by 2010. So, cassava chips have gradually become a major source for ethanol production. Cassava is used worldwide for animal feed, as well.

(17.7%). The main crop for Japanese agriculture lands is coconut (47.8%). Viet Nam plants mostly rubber (64.3%), whereas Cambodia is more focused on eucalyptus (60.3%). Malaysia and Singapore use cultivated lands mainly for oil palm (48.0% and 51.1% respectively), and Indonesia for papaya (43.5%).

The top five Asian target countries for land-grabbing are: Indonesia (total amount of land involved: 7,528 thousands hectares), Malaysia (4,819 thousand hectares), India (4,617 thousands hectares), Philippines⁸ (3,146 thousands hectares) and Cambodia (1,139 thousands hectares). The main utilization of the land is for the agricultural sector (Table 2).

Table 2 Top targeted countries in Asia (2011)

Country	Ha
Indonesia	7.527.760
Malaysia	4.819.483
India	4.616.760
Philippines	3.145.721
Cambodia	1.139.034
China	1.108.396
Laos	478.153
Viet Nam	156.540
Bangladesh	29.456
Thailand	28.912
Pakistan	5.926

Source: Authors' elaboration from the Land Matrix

In Indonesia the main non-Asian investors are Qatar (6.6%) and the USA (4.7%). For Malaysia the percentage of 'home' purchases rises up to 93.6% and for India it reaches 95.7%. The picture changes for Philippines. In fact the main land investor is still the country itself (with a 33.9% of land investments), but there are several non-Asian investors that buy land: UK with a 22.5% and Saudi Arabia with a 19.8% stake. Finally, Cambodia is the most "diversified" top five Asian target in terms of investors: it invests in itself 62.1% of the total, but there are a lot of Asian and non-Asian investors that buy its land (China bought 9.0%, Australia 8.8%, the Republic of Korea 5.7%, USA 4.0%, etc.).

China is the sixth targeted Asian country: it is a much-closed market, since the only non-Asian investor is Finland (with a 3.6% on the total of land investments for forests). There are also historical traces of post-colonialism: see, for example, the presence (albeit small) of UK investments in Asia (UK investments in Indonesia in 355,500 ha (jatropha) by oil and mining companies, in the Philippines 707,000 ha (jatropha) by oil and chemical companies, and in India 9,712 ha (jatropha) by mining and oil companies; the USA investments in Cambodia (4.0%) and Indonesia (4.7%) and the Netherlands presence in Malaysia (1.8%). The first three inbound investors are Indonesia (29.2% of the entire inbound

⁸ The largest deal in the Philippines (1,000 thousands hectares), was made by San Miguel Corp.

land market), Malaysia (28.5%) and India (24.2%). These countries were in the first three places also when we considered the inbound and the outbound market together. China stays at fourth place, but it loses a 1.5% of the total amount of land exchanged in the market. Cambodia goes up of one position, becoming the fifth actor in the inbound market. Singapore loses two positions, confirming its international land-grabbing vocation. Korea rises by one position. The other countries remain in the same positions.

China invests the main part of agriculture-cultivated lands in jatropha (64.2% of the total inbound agriculture investments). The same is true for India (95.3.9%). The republic of Korea invests mostly in cassava (manioc) (44.4%), mariculture (23.8) and corn (maize) (22.4%). The main crop for Japanese agriculture lands is coconut (62.7%). Viet Nam plants mostly rubber (65.8%), whereas Cambodia is more focused on eucalyptus (50.9%) and trees (17.7%). Malaysia and Singapore use cultivated lands mainly for oil palm (44.5% and 53.3% respectively), and Indonesia for papaya (43.6%).

5. European Union: a role in the Asian case?

In the EU-27, in 2007, agriculture utilised 172.5 million hectares of which 68 % were dedicated to arable crops, 26 % to permanent pastures and 6 % to permanent crops. As the utilisation distribution depends mainly on natural (climate, soil and topographical) conditions, there are major variations between (and generally within) Member States (Zolin, 2011).

In 2007 about 60 % of farmers relied on farming for all their income, while for more than 36 % (on average) non-farm sources are vitally important. The main source of non-farm income is farm diversification, including for example, environmental protection, landscape preservation, rural employment, and, recently, mostly renewable energy (Zolin, 2011),

The EU is the food largest importer at international level. As far as exports are concerned, final products are prevalent in EU agri-food trade. From the point of view of imports, the USA is (as well on the export side) a key partner, but its relative significance has declined in recent years and developing countries account for 72% of imports. According to Eurostat (2011), in 2011 over 40% of EU imports came from Asian countries, while in 2009 the main destination for EU exports was Asia with about one third of the total. Between 2006 and 2011, the share of primary products' imports increased from 35% to 39% while the respective share of manufactured goods declined, due to the rapid growth of imports of energy products.

In future, the European demand for cereals is expected to increase because of the growing demands of bio ethanol and biomass production. So, additional imports ordered to meet the biofuel targets support the production of renewable energy (from crops).

In reality, the involvement of the EU in land-grabbing could be mainly traced to European agro-fuels policies.

With regard to energy, the aim of the European Union is to drive forward sustainable energy processes, leaving the individual

Member States to deal with specific areas of intervention. The European guidelines and support are more complex and lengthy, and yet, at the same time, are more lenient, than national ones.

The main EU guidelines and regulations concerning energy and renewable energy can be summarized in the following documents:

1. European Parliament's directive, *Promotion of the use of energy from renewable sources*, 2009;
2. Communication from the Commission, *Second Strategic Energy Review. A EU energy security and solidarity action plan*, 2008;
3. Communication from the Commission to the European Council and the European Parliament, *An energy policy for Europe*, 2007;
4. Communication from the Commission, *Renewable Energy Road Map. Renewable energies in the 21st century: building a more sustainable future*, 2006;
5. Communication from the Commission, *Action Plan for Energy Efficiency: Realising the Potential. Saving 20% by 2020*, 2006;
6. *Green Paper on Energy Efficiency or Doing More with Less*, June 2005;
7. Directive 2001/77/CE on Electricity Production from Renewable Energy Sources.

The Communication from the Commission to the European Council and the European Parliament, *An energy policy for Europe* (January, 2007) represents a strategic review of the European energy situation and introduced a complete set of European Energy Policy measures (the so called 'energy' package). The new European energy policy includes the main topics and objectives fixed till then by the *Renewable Energy Road Map* (2006)⁹, *Action Plan for Energy Efficiency* (October 2006)¹⁰ and the *Green Paper on Energy Efficiency* (June 2005)¹¹.

Then, with the *Directive on the promotion of the use of energy from renewable sources*¹², the EU established a common framework for the promotion of energy from renewable sources and committed itself to completing the initiative "20-20-20". In particular, the 2009 Directive establishes that each Member State shall ensure that the share of energy from renewable sources, in gross final consumption of energy in 2020, is at least its national overall target for the share of energy from renewable sources in that year¹³. With regard to transport, each Member State shall ensure that the share

⁹ Communication from the Commission to the Council and the European Parliament "Renewable Energy Road Map. Renewable energies in the 21st century: building a more sustainable future", COM(2006) 848 final.

¹⁰ Communication from the Commission, "Action Plan for Energy Efficiency: Realising the Potential saving of 20 % by 2020," October, 2006.

¹¹ Green Paper on Energy Efficiency or Doing More with Less, June 2005.

¹² COM(2008)0019 – C6-0046/2008 – 2008/0016(COD).

¹³ These mandatory national targets are consistent with a target of at least a 20 % share of energy from renewable sources in the Community's gross final energy consumption in 2020.

of energy from renewable sources in all forms of transport in 2020 is at least 10 % of final consumption of energy in transport in that Member State. As far as biofuels are concerned, with effect from 2017, the greenhouse gas emission savings from the use of biofuels and other bioliquids must be 50%. After 2017 it must be 60% for biofuels and bioliquids produced in installations whose production has started from 2017 onwards. Member States are required to introduce in their building regulations and codes appropriate measures in order to increase the share of all kinds of energy from renewable sources in the building sector (Andreosso-O'Callaghan & Zolin, 2010b). More recently, the *Communication from The Commission To The European Parliament and The Council (2011) Renewable Energy: Progressing Towards The 2020 Target* explains that biomass will remain the dominant technology, with 50% of the growth up to 2020 occurring in energy produced from this source (half of that in heating, a third in transport and the rest in electricity). On 17 October 2012, the Commission published a proposal (*New Commission proposal to minimise the climate impacts of biofuel production*) to limit global land conversion for biofuel production, and raise the climate benefits of biofuels used in the EU. The use of food-based biofuels to meet the 10% renewable energy target of the Renewable Energy Directive, is limited to 5%.

In this context, the demand for land to be allocated to the production of renewable energy is expected to grow, fuelling the phenomenon of the land-rush. European countries have a direct marginal role. Indirectly, with public policies adopted and through the multinationals based in Europe, feed in a very significance of the phenomenon of land-grabbing that has as target low-income countries, better if property rights are not well defined and where political power can be more flexible in terms of foreign investment.

6. Concluding remarks

According to FAO (2012) in the period 2010-2012, 12.5% of the world population is undernourished. The majority of these are located in developing countries; nevertheless, world food production appears to be sufficient to satisfy global food needs. Since late 2010, food prices have risen to levels comparable to the 2008 food price crisis, pushing more people into hunger. If agricultural investments are fundamental to increase productivity and achieve global food security, the problem is to understand if international investment in land could be an instrument to improve yields and rural livelihoods. From this point of view, the evidence suggests only impact on land prices, with negative externalities on local population because of higher land prices.

Land is attracting a large range of interests: multinational companies involved in the production of renewable energy, foreign governments desiring to the achieve food security and speculators. Investors in land obtain a wide range of acquisitions: not only the right to produce, but to use the water (a scarce resource) and other natural resources placed in it (including mining). Some

governments are pushing for inbound investment by making land available, and negotiating with domestic investors as well as enforcing contractual agreements.

The phenomenon of land-grabbing, investigated in this paper, has become a significant global issue in recent years, and an extremely sensitive one in the context of higher global food prices and hunger. This recent trend is rapidly and extensively taking in Asia. Several elements of this trend differ from those experienced in other regions, such as Africa or Latin America. As indicated by the Land Matrix source, Asia is a big centre of activity with Indonesia and Malaysia accounting for roughly a quarter of international deals by hectares. Furthermore, India contributes an additional 10 % of land deals. The majority of investment is in the production of palm oil and other biofuels. Asian investors typically invest in land in their own countries, which means that they are simultaneously both the investors and the target of the investments.

Even though Europe does not seem to play a major role in Asia, a deeper investigation reveals its influence (Borras and Franco, 2011). An estimated 22 million hectares of land in Asian countries have been targeted by domestic and international investors. In the case of the Asian economies, the share of acquisitions by domestic investors is very high. If land-grabbing should be seen as an appropriation of land resources by international investors, then Asia appears largely undamaged by the phenomenon. In Asian countries, the land factor is extremely limited, compared to the population. In this continent the Malthusian theory seems to be applicable on growing resources (in arithmetic progression) and population (in geometric progression). The ability of small farmers to compete with large international groups or public companies will be reduced significantly, fuelling poverty.

In conclusion, growing demand (for food, feed, and biofuels as well as minerals and other commodities) is the main driver of large-scale international land investments. More precisely, from analysis of data on hand it emerges that the main driver of global land-grabbing is biofuels, partially reinforced by policy targets for biofuel production in the US and the EU. Also, countries that rely on foreign countries for meeting the needs for food try to achieve food security by buying productive foreign land are contributing to the problem. Policies to substitute biofuels for petroleum for transport in the EU and elsewhere are generating strong and unsustainable demand for oil palm, sugar cane and jatropha, thus fuelling the demand for land. The real risk is that the most fertile land will be the target of land-grabbing. The local population would retain only marginal lands and small farmers with uneconomic holdings would join the labour market, thus decreasing the amount of food produced for domestic consumption. The land-grabbing phenomenon should therefore be investigated further. The negative impacts should be quantified in order to identify the appropriate compensation needed (including technology transfer) to avoid further impoverishment of the rural population in areas already economically compromised.

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