

# **New Dynamics and Trajectories of Agrarian Change in Bolivia: Regimes of Dispossession and the Rise of Brazil<sup>1</sup>**

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## **Introduction**

New dynamics of agrarian change have emerged in Bolivia as a result of its insertion into what appears to be a transitioning ‘polycentric global food and agro-commodity regime’ (Borras et al 2012). With the onset and convergence of multiple crises (financial, food, climate, peak oil), coupled with the emerging economies of BRICS and MICs as new hubs of global capital accumulation, there has been a significant ‘rising global interest in farmland’ particularly for large-scale ‘flex crop’<sup>3</sup> plantations (Deininger and Byerlee 2011, Borras et al. 2012). These changing dynamics in the global political economy are resulting in a “spatial restructuring process” (McMichael 2013) of the global food regime, reshaping patterns of production, distribution, and consumption worldwide. With the rise of Brazil as a key factor in this process, Bolivian territory and its peoples have become subject to forms dispossession at the hand of capital accumulation in the agrarian sector. Dispossession in this context does not refer exclusively to physical displacement or expulsion of people from the land, but rather that which deprives people of their current and future access to and control over resources. Including one’s future access adds the necessary component of time, “acknowledging the sometimes long periods between acts of enclosure and dispossession and accumulation” (Kelly 2011:695).

Despite the history of dispossession in rural Bolivia carried out by both state and societal actors in what is referred to here as ‘regimes of dispossession’ (Levien, 2013); new forms of capitalist penetration in the rural sector particularly with the rise of Brazilian capital and the surging interest in ‘flex crops’ have important implications for Bolivia’s agrarian transformation. This paper situates Bolivia’s agrarian structure since the 1952 revolution within a framework of ‘regimes of dispossession’ highlighting the importance of such historical developments in shaping and re-shaping current and future agrarian

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<sup>1</sup> This paper serves as a background for the presentation which will focus on recent data collected from the field.

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<sup>3</sup> “Crops that have multiple uses (food, feed, fuel, industrial material) that can be easily and flexibly inter-changed: soya (feed, food, biodiesel), sugarcane (food, ethanol), oil palm (food, biodiesel, commercial/industrial uses), corn (food, feed, ethanol)” according to favorable market conditions (Borras et al, 2012: 851).

dynamics in the context of a rapidly growing soy complex, the rise of Brazil and the subsequent influx of Brazilian capital.

After undergoing three agrarian reform programmes since the 1952 revolution, Bolivia's rural sector remains characterized by an extremely unequal landholding structure in terms of class, geography, and access to resources. Of the roughly 660,000 farm units in the country, 87% are small farms<sup>4</sup> occupying just 14% of the total available arable land (World Bank, 2007:19). This translates into some 574,200 small farms occupying an average of only 0.7 hectares each<sup>5</sup>. Moreover the country has one of the largest rural-urban ratios in Latin America with 33.5% of the nearly 10 million people living in rural areas and almost one-third (29.1%) of the workforce employed in agriculture (INE, 2011; IFAD, 2010:254). Land-based wealth and agriculture as a livelihood and economic activity is thus still very relevant and extremely important for poverty alleviation and rural development (IFAD, 2010:254). However, the policies and programmes pursued over the last 60 years have led to an extremely rigid and entrenched agrarian structure in which a class of landholding elite maintain access to and control over land and its productive resources. These inequalities coincide with a severe poverty rate of over two-thirds (66.43%) of the rural population, while nearly half of all rural people live in extreme poverty (45.48%) (INE, 2011).

Over the course of the past six decades, a pattern has emerged regarding land-based social relations and Bolivia's unequal agrarian structure. This pattern is one of land-based concentration through the 'politics of exclusion' carried out by successive regimes which has led to a regional hegemony of landed capitalists controlling Bolivia's most fertile territory in the eastern lowlands. Tracing the historical roots of the current unequal agrarian structure reveals a pattern of what David Harvey calls 'accumulation by dispossession' (ABD) both in terms of 'purely economic processes' and 'extra-economic processes' (Luxemburg, 2003, Harvey 2003). Harvey's (2003) concept of accumulation by dispossession (ABD) is used and elaborated further to better understand the fluidity of land-based social relations over time and the patterned politico-economic power dynamics that exist in rural Bolivia. This pattern manifests itself through subsequent 'regimes of dispossession'<sup>6</sup> – defined by Levien (2013) as the "socially and historically specific constellations of state structures, economic logics tied to particular class interests, and ideological justifications that generate a consistent pattern of dispossession" (383). Despite having a common pattern of dispossession, these regimes<sup>7</sup> have unique characteristics and have developed as a result of particular state-society-capital dynamics in specific contexts.

While Bolivia's agrarian structure has been shaped by previous socio-political periods which have generated patterns of dispossession; changes in the global political economy are resulting in new forms of dispossession as new actors (transnational capitalists, financial investors), mechanisms (agro-

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<sup>4</sup> According to Law 3545 2006 Reconduccion de la reforma agrarian, small farms are less than 50 ha; medium range from 51-500ha; large 501+ (Defensor del Pueblo, 2008).

<sup>5</sup> Author's calculation based on data from INE, 2011 and World Bank, 2007: 19.  $(2,861,330 \text{ ha total arable land} \times 14\%) / (660,000 \text{ total farm units} \times 87\% \text{ smallholders}) = 0.698 \text{ ha per unit}$

<sup>6</sup> Levien (2013) uses this term in 'comparing land dispossession in industrial development under state-developmentalism and neoliberalism in India'.

<sup>7</sup> 'Regimes' in this context do not refer to a single government, but a socio-political period with a distinct pattern of agrarian change via dispossession.

financialization, joint-ventures), and drivers (multiple crises, increased global demand for farmland and 'flex crops', rise of Brazilian capital) are transforming Bolivia's agrarian structure. Brazilian capital, for example, controls an estimated 1.2 million hectares (ha) of Bolivia's 2.86 million total hectares of cultivated land with Brazilian-based corporations 'Grupo Monica', Gama Group, and UNISOYA controlling over 200,000 ha of land (Agrositio, 2004; INE, 2011). While some studies have analyzed these new dynamics through the lens of 'foreignization' (Zoomers, 2010; FAO, 2011; Urioste, 2012), this paper seeks to go beyond the nationality-based lens to a class-based analysis of capital dynamics. Processes of agrarian restructuring are therefore explored through new dynamics, alliances and struggles between diverse and competing state, societal, and capitalist forces. To this end, this paper will situate Bolivia's current agrarian structure through its historical development to contribute to a better understanding of contemporary dynamics and future trajectories of agrarian change.

First, it is understood here that structural inequalities in agrarian societies infer a degree of power imbalance between those who have access to, and control over, land and its productive resources and those who do not. How, and the extent to which, land is controlled by a certain group, or class, are important indicators of economic, social, and environmental relations. Analogous to capital's relationship to labour, capital's relationship to nature is similarly and equally as exploitative. As unequal power relations lead to the increasing exploitation of capital over labour; so too does it lead to the increasing exploitation of nature insofar as it exhausts and extracts nature's productive capacity to the maximum degree in the infinite drive towards profits and accumulation. Aside from differential class interests in highly unequal societal structures impeding the likelihood of 'collective action' required for environmental protection, "a more unequal distribution of power generally will result in less environmental protection and more environmental degradation" since the 'empowered' can often absorb, adapt, or resort to alternatives regarding negative environmental consequences, while the 'power-less' are much more vulnerable and often depend solely on land-based wealth for their livelihoods (Boyce, 2007:314).

Second, it is important to understand that land access and resource control are essential for rural livelihood viability, as well as overcoming poverty and inequalities (Borras et al., 2007:1). Since rural incomes (and livelihoods) are mostly land based, we can deduce that "land-based agricultural development has a direct role in poverty reduction in (the Bolivian) context" (World Bank, 2007:19). The question(s), however, revolve around the nature of such 'land-based agricultural development'. How, why, for whom, and to what extent should an agricultural development strategy be pursued? The current 'agricultural development' model in Bolivia is largely based on soy production and has been developed through subsequent regimes of dispossession. Thus this analysis is based on historical contexts, class relations of property and power, conceptions of nature, and the ecological limits of agricultural development. The second argumentation here is therefore that Bolivia's current model of agriculture and its inherent agrarian dynamics are the result of a new regime of dispossession that will continue to exacerbate poverty, inequalities, and the depletion of natural resources. Further, the environmental consequences of the current form of agricultural development threaten to exhaust Bolivia's limited natural resource base and could result in irreversible consequences for the landlocked republic. Three key inter-related factors are analyzed in order to better understand Bolivia's current

agrarian structure and future trajectories for land-based social relations: 'regimes of dispossession'; agro-industrial soy plantations; the rise of Brazil.

This paper is organized as follows: the following (second) section introduces the concepts of 'growth poles' and 'regimes of dispossession' used to analyze and frame land-based social relations in Bolivia over time and space. The next section traces the historical dynamics of agrarian change in Bolivia based on its agricultural 'growth pole' development strategy carried out through subsequent regimes of dispossession from 1952 to 2006. In the fourth section, the political 'Left Turn' with the election of President Evo Morales and the *Movimiento al Socialismo* (MAS) is assessed, specifically regarding the 2006 agrarian reform programme and its complementary policies concerning land use, genetically-modified organisms, and deforestation. The fifth section examines the development and expansion of soy plantations and the changing agrarian dynamics in the context of the rise of Brazilian capital and a changing global food regime. Finally, the paper concludes with an analysis of the agrarian dynamics of environmental and social change in Bolivia and argues that despite the rise of the MAS and the political 'Left Turn', a new regime of dispossession has emerged as a result of the unequal historical development of the agrarian structure and the rapidly changing international political economy of land and resources.

### **Growth Poles and the Politics of Dispossession**

The idea of the 'growth pole' was first developed by French economist Francois Perroux in a lecture delivered at Harvard University in 1949 and later published in *The Quarterly Journal of Economics* (Perroux, 1950). Initially used as an analytical tool describing abstract economic space, Perroux analyzed France's industrialization process – from Lyon's integrated industrial complex of chemical and textile industries linked to textile industries (Monsted, 1974:107) to the tyre manufacturer Michelin in Clermont-Ferrand whose "economic zone of influence...defies cartography" (Perroux, 1950:96). In a very abstract manner, Perroux describes the first working definition of a growth pole as "...centres (or poles or foci) from which centrifugal forces emanate and to which centripetal forces are attracted. Each centre being a centre of attraction and repulsion, has its proper field, which is set in the fields of other centres" (Perroux, 1950:95). In slightly more concrete terms, Perroux adds that the growth pole thus "attracts men and objects (personal and material aggregations around the firm) into its banal space, or it removes them (diverting tourist activities, land reserved for further expansion, etc.)" (Perroux, 1950:96). Later described as a "center of accumulation and concentration of human and capital resources" (Perroux, 1955:287), Perroux began to differentiate between 'growth poles' and 'poles of development' with the former having tendencies of accumulation by dispossession. Perroux differentiates between the two poles with the following: "the growth pole is a set that has the capacity to induce the growth of another set ("growth" being defined as a lasting increase in the dimensional indicator); the pole of development is a set that has the capacity to engender a dialectic of economic and social structures whose effect is to increase the complexity of the whole and to expand its multidimensional return" (Higgins, Benjamin Howard, Savoie, Donald J., Perroux, Francois, 1988:49). The key differences between these two poles are the rippling developmental effects brought on through the creation of horizontal and vertical complementary linkages of poles of development. Poles of development engender this multidimensional aspect through forms of productive inclusion and diversified growth. Growth can

certainly occur in given area, but if there is no positive dialectical relationship between the general population and the productive forces, than development will not occur.

This is where we differentiate Bolivia's soy industry from a pole of development. Soy plantations have become increasingly characteristic of Bolivia's nearly 500 year history of mineral extraction. Shortly after the first discovery of silver near Potosi's Cerro Rico in 1545, Bolivia's 'development', simply put, has been characterized by export-oriented, foreign-controlled natural resource exploitation. Failing to develop vertical and horizontal linkages with complementary secondary and tertiary industries, natural resource exploitation has benefitted a small capitalist class of domestic and foreign elites at the expense of the majority through multiple forms of accumulation by dispossession (ABD). It is therefore argued here that Perroux's concept of a 'growth pole' is characteristic of Bolivia's long history of unequal and polarized forms of natural resource exploitation – from mining to hydrocarbons and soya – but which have never developed the positive results of a propulsive unit which fosters a much broader, inclusive, and sustainable development pole. For Perroux, a development pole requires the ability of the population to access the means of production, while delivering a product which will serve that very population (Perroux 1968:248). In Bolivia this clearly is not the case. The majority of people are dispossessed from their current and future access to assets (land and its productive resources) largely due to the expansion and concentration of access/control by an economically powerful and well-connected class of landed elites.

This class of landed elites – the majority of whom are using land for large-scale soy production destined for export markets – has successfully entrenched their regional hegemony throughout the course of successive regimes of dispossession. From the MNR's agreement with the United States to implement the two-track Bohan Plan; to Hugo Banzer's dictatorship from 1971-78 where "millions of dollars of cheap credit subsidised agro-capitalists in Santa Cruz" (Webber 2008) and "hundreds of thousands of hectares of land were fraudulently distributed to political cronies for free (some up to 50,000 hectares)" (Urioste, 2010:2 quoted in Hindery, 2013). Further, the onset of neoliberal policies through the structural adjustment programme's 'New Economic Policy' (NEP) in 1985 dismantled public services and exposed vulnerable rural livelihoods to foreign competition and capital. This was followed by the second agrarian reform designed by the World Bank in 1996 and finally the election of Bolivia's first indigenous president Evo Morales and the MAS. Throughout these regime changes the fertile lowlands of Santa Cruz have been continuously opened up for large-scale agro-industrial expansion – a regional 'growth pole' development strategy which started with the MNR's adoption of the US Bohan plan's 'Marcha al Oriente' (March to the East). In effect, the development of an unequal agrarian structure arose through policies favouring landed agro-capitalists in the east. Building off Michael Lipton's (1977) Urban Bias Thesis (UBT), but more-so on Kay's (2006, 2009) UBT critique and subsequent 'landlord bias', I use the term 'eastern-landlord bias' to understand and explain processes of differentiation brought about by policies which favour the landed agro-capitalists, most of which are located in the eastern lowlands.

This 'eastern landlord bias' led to a polarizing development strategy which unravelled throughout subsequent regimes of dispossession. The resulting outcome has been the solidification of a regional hegemony of capitalist landed elites in Bolivia's eastern lowlands which has gone unchallenged, facilitating favourable conditions for territorial access and control by a landed capitalist class. As both

state and social actors reinforce the eastern lowlands as a 'growth pole' through agro-industrial investment and favourable policies, the rural majority has been excluded from the means of production and dispossessed of their current and future assets through processes of accumulation.

### **Bolivia's Regimes of Dispossession: 1952-2006**

Expanding Marx's original formulation of 'primitive accumulation' (PA) defined, in short, as "the historical process of divorcing the producer from the means of production" and thus that "which creates the capital-relation", Harvey's ABD helps conceptualize capital's means of adapting to crises of overaccumulation by dispossessing people of their access to assets – including, but not limited to, land (Marx 1990:874-5). As Harvey explains, "what accumulation by dispossession does is to release a set of assets (including labour power) at a very low (and in some instances zero) cost. Over-accumulated capital can seize hold of such assets and immediately turn them to profitable use." (Harvey 2003:149). But forms of ABD do not necessarily occur after there is a crisis of over-accumulation, or when capital is lying idle. Rather, ABD can be the result of facilitating expanded reproduction for capitalist development internally driven and/or externally imposed by both state and social forces. State policies designating and favouring particular industries and territories as 'growth poles' can also result in accumulation by dispossession as is the case in Bolivia's eastern lowlands.

Harvey's ABD sought to expand on Marx's PA since "the predatory practices of 'primitive' or 'original' accumulation" are ongoing processes and therefore should be rearticulated beyond their 'primitive' or 'original' nature (Harvey 2003:144). Thus, accumulation by dispossession functions as the modern, ongoing process of 'primitive accumulation' which does not 'create the capital-relation' but facilitates expanded reproduction through new 'under-capitalized', 'marginal', or non-commodified productive forces. As a result, capital penetrates into new areas for accumulation and thus dispossesses – or deprives – people's current and future access and control over land resources, property, and/or possessions. Unlike Levien (2013) however, it is still maintained here that ABD occurs through both 'purely economic' and extra-economic means. As Harvey explains, "[T]he formal distinction between extra-economic and economic power does not work in practice. We are surrounded at every turn with 'public-private partnerships' and an incredible interpenetration of state and capital practices (institutionally, politically and even ideologically)" (Harvey 2006:159). The inseparability of the economic and extra-economic is evident in the unequal power relations in society and the "policy of spheres of interest" which may appear on the surface to be of a "purely economic process" but which distinctly lacks "peace, property and equality" (Luxemburg. 2003:Ch.31). In Bolivia, for example, the appropriation of public, private, and forested lands has occurred through both extra-economic coercion and purely economic processes but has consistently been determined by the nature of the power relations in society. While it is in this context that this paper employs Harvey's concept of ABD within regimes of dispossession to understand the historical development of Bolivia's unequal agrarian structure, the changing political economy of land and agriculture in the contemporary period is leading to a new regime of dispossession with new forms of capitalist penetration and the growth of the soy complex.

Bolivia's first agrarian reform programme of 1953 achieved much success in redistributing landholdings to a large number of households. According to Thiesenhusen (1989), 83.4% of the total arable 'forest

and agricultural surface' was redistributed to 74.5% of the total number of 'farming families' (Thiesenhusen, 1989:10). This was largely due to the dismantling of the hacienda regime which restored original indigenous territories back to the indigenous and dismantled *latifundia*<sup>8</sup> system. In 1950, for example, 0.72% of properties (615 estates), with an average size of 26,400 hectares, controlled roughly 50% of the owned land; while 60% of landholdings, with an average size of less than 5 hectares, controlled only 0.23% of the land (Kay and Urioste, 2005:12).

While the agrarian reform of the *Movimiento Nacionalista Revolucionario* (Nationalist Revolutionary Movement, MNR) did restore indigenous territorial claims, freed the labour force of a highly exploitative work environment, and gave the indigenous population the right to vote, the failure to implement complementary agricultural support programs and extension services for small farm beneficiaries led to reform failure. This is partly due to the broader two-track agricultural development strategy heavily influenced by the United States through the \$25 million agreement with the U.S. Export-Import Bank to promote Bolivian economic development (Malloy and Thorn, 1971:165). Known as the 'Bohan Plan', State Department official Merwin L. Bohan "recommended that the population be shifted from the poor lands of the Altiplano to the fertile lands of the east (Malloy and Thorn, 1971:165). The ensuing migration referred to as '*la marcha al oriente*' ('march to the east') resulted in 'highland colonists' accounting for 41% of the population of Santa Cruz by 1980 (Valdivia, 2010:69). Peasants from the Altiplano received plots of land between 20-50 hectares to produce for the domestic food supply (Ibid). This coincided with the distribution of large-scale landholdings between 500-50,000 ha – known as 'enterprises' not latifundium<sup>9</sup> -- to capitalist entrepreneurs, local elites, the politically well-connected to encourage export agriculture. (Valdivia, 2010:69). This two-track agricultural development strategy was largely designed by the United States after the U.S. Export-Import Bank signed an agreement worth \$25 million to promote Bolivian economic development and set up several joint Bolivian-American '*Servicios*' (services) through which to channel the funds (Malloy and Thorn 1971:165,188). These included joint services for health, education, agriculture, and road development. This intentional uneven distribution of land is an important historical feature of the geographically located bundles and webs of power<sup>10</sup> that dominate the eastern Bolivian lowlands today. Massive resource transfers and state support also created a polarized development strategy which has led to an agro-industrial 'growth pole' in Santa Cruz (Perroux, 1950).

This dual agricultural development model managed to dissolve the latifundia in the western Andean region, redistributing small plots to landless peasants; while it created a new regime of latifundia in the east distributing huge tracts of 'public lands' (Kay and Urioste, 2007:55). However, driven by the interests of the Inter-American Agricultural Service, an 'eastern landlord bias' emerged, favouring large-scale export-oriented agriculture. As an export-oriented agricultural development model was pursued, technology, low-interest credit, and infrastructure investment policies were directed towards modernizing large-scale agriculture (Valdivia, 2010; Ormachea, 2007; Kay and Urioste, 2007). Despite

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<sup>8</sup> Large, landed estates

<sup>9</sup> For Kay and Urioste (2007), "the 1953 law legitimated disguised forms of neo-latidfundism, under the generic heading of 'enterprise'."

<sup>10</sup> See Ribot and Peluso 2003

distributing 83.4% of the total available arable land to 74.3% of the total number of 'farming families', the lack of supportive policies and extension services such as technological assistance, training, access to credit, marketing and distribution services resulted in internal contradictions in the reform process, forcing those with little resources to abandon their land as they struggled to maintain viable and productive farms. In fact, many small farmers were forced to work as wage labourers to supplement their household farm income (Ormachea, 2007: 26). While the agrarian structure in the western Andes became plagued with "economically and technically unsustainable" *minifundios*; the eastern lowlands were characterized by an increasingly dominant agricultural 'enterprise' regime (Kay and Urioste, 2007:58).

Moreover, as the construction of new highways connected the western Andes to the eastern plains, the 'eastern-landlord bias' became further entrenched as investment was directed to the highly productive eastern lowlands in infrastructure for agricultural and livestock production, forestry, sugar and oil refineries (Kay and Urioste, 2005:4). The military dictatorships of 1971-78 and 1980-82, solidified the reversal of the progress made during earlier reform period as hundreds of thousands of hectares of land were freely distributed to political allies (Webber 2008; Urioste 2010). This period marks the process of the contemporary differentiation of the peasantry in Bolivia as the 'middle peasantry' was squeezed of its resource-access and a stark divide between landlord class and landless or near landless emerged (Lenin, 2004). This 'conquest of the east' (Kay and Urioste, 2007:44) has characterized Bolivia's agrarian structure to the present-day. Class divisions were solidified by means of the 'Bohan Plan' and subsequent processes in not only the eastern lowlands but also the entire country. The Altiplano was largely ignored in the plan – only being viewed as a region of surplus labour available to serve the labour needs of the 'modern' export-oriented agriculture in the east. As agriculture became more mechanized, many landless labourers were either forced to find rural non-farm employment, migrate to the cities, or return to the Altiplano. This surplus labouring population formed a disposable reserve army for agro-industry's capitalistic accumulation – "a mass of human material always ready for exploitation" (Marx 1990) This continued the process peasant differentiation and class structure in Bolivia, both within the eastern lowlands and the broader national territory. As many of the middle peasantry became 'squeezed out of existence' in Bolivia's lowlands, others went back to the Andean highlands or resisted dispossession through community-oriented farming practices based in the traditional 'ayllu' model and the principles of 'ayni' and 'minka'. 'Ayni' refers to 'reciprocity' and, while 'minka' refers to 'community-oriented trade in kind'. This type of 'moral economy' arranges their socio-economic relations on the basis of a kind of 'subsistence ethic' – what James Scott refers to as a moral principle based on 'safety first' and "rooted in the economic practices and social exchanges of peasant society" (Scott 1976:6,15, *passim*). According to Fabricant (2012), these types of socio-economic and collective land tenure arrangements "ensure some form of community protection...to guarantee the survival of the collective" (119). Although economic polarization is indeed causing social differentiation, it is not the sole causal mechanism since the majority of farm units in Bolivia today are based on peasant agriculture. Nonetheless, the specific region of Santa Cruz became largely characterized by a dualistic agrarian structure of rural bourgeoisie and proletarians which was further exacerbated in the following neoliberal period of structural adjustment.



Prior to the implementation of World Bank imposed structural adjustment programs in 1985, Bolivia's internal supply of food was able to meet the demand of the Bolivian population (Kay and Urioste, 2007:53). With trade liberalization, privatization, deregulation, and a slash in social spending, Bolivia's peasant economy was unable to compete with subsidized crop inflows from foreign countries<sup>11</sup>. During this period, regional discrepancies increased as the Altiplano region was further neglected with the 'eastern-landlord' bias prioritizing export-oriented agro-industry. As indicated in this table, from 1950-1997 the growth index for agricultural production in the Altiplano region went from 100 to 130; while in the eastern plain area of Santa Cruz the index went from 100 to 2,478 (Kay and Urioste, 2007:54).

**Table 1: Regional evolution of principle crops in Bolivia (in hectares), 1950-1997**

Crop/Year	1950	1972	1991	1997
Andean Region				
Maize	94.291	157.500	180.625	166.144
Potato	111.680	107.200	135.881	121.914
Onions	61.194	101.111	95.297	86.508
Wheat	82.950	61.066	77.933	81.536
Quinoa	18.998	15.000	38.791	38.680
Broadbeans	9.226	21.000	27.210	27.649
Alfalfa	6.325	15.200	17.705	20.880
TOTAL	384.664	477.966	573.442	543.311
<b>Growth Index</b>	<b>100</b>	<b>122</b>	<b>140</b>	<b>130</b>
Department of Santa Cruz				
Maize	19.177	57.940	43.500	99.300
Wheat	1.755	2.097	38.493	76.860
Rice	10.151	34.220	72.318	83.776
Sugar cane	10.548	37.500	67.458	75.120
Cotton	109	68.222	16.523	52.000
Soya	0	1.100	183.865	513.190
Sunflower	0	150	10.217	89.000
Sorghum	0	0	28.000	45.000
TOTAL	41.740	201.229	460.374	1.034.246
<b>Growth Index</b>	<b>100</b>	<b>482</b>	<b>1.103</b>	<b>2.478</b>

Source: Kay and Urioste, 2007:54

The crisis of agriculture in the Altiplano, severe class and geographical inequalities, emergence of economically and technically unsustainable *minifundios*<sup>12</sup>, and widespread corruption<sup>13</sup> eventually led to

<sup>11</sup> For more on the 'economics of Bolivia's adjustment' under neoliberal policies, see Petras and Veltmeyer (2005)

<sup>12</sup> Extremely small plots of land caused by subdividing property due to population growth and land constraints.

<sup>13</sup> According to Kay and Urioste (2007), in 1992 a Minister of State attempted to appropriate 100,000 hectares of prime arable land for soy cultivation in the eastern lowlands. Also see Hernaiz, 1993.

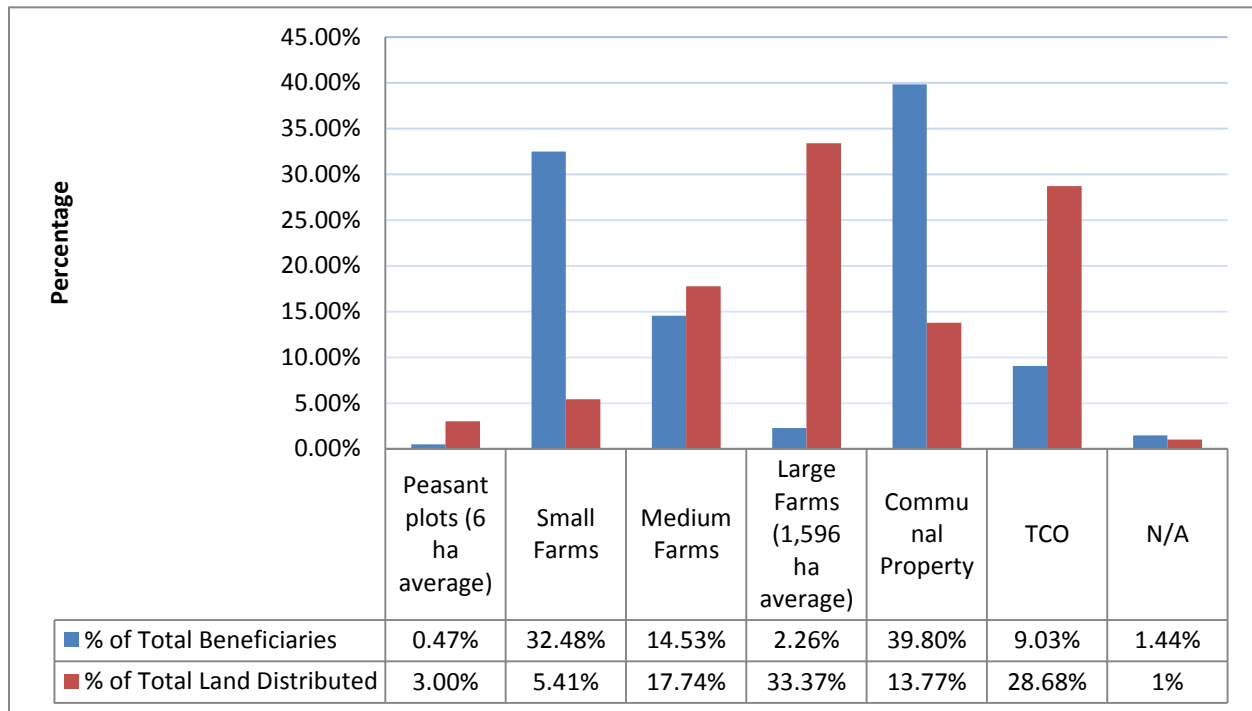
the official demise of the agrarian reform programme in 1992. With the new Administration headed by President Gonzalo Sanchez de Lozada (1993-1997) a new land law -- the INRA (*Instituto Nacional de Reforma Agraria*) Law 1996 -- was drafted with the World Bank (Kay and Urioste, 2007:59). The 1996 INRA Land Law initiated a process of '*saneamiento*', or land formalization and titling, to increase property rights legibility and transparency. This was an attempt to 'make society legible' and simplify "the classic state functions of taxation, conscription, and prevention of rebellion" (Scott, 1998:2).

This process attempted to assess all landholdings and apply property titles accordingly. The concept of *Tierra Comunitaria de Origen* (Community Lands of Origin, TCO) was also established to give ownership of indigenous territories to their original inhabitants. TCO entitlements grant collective property rights over historically owned/occupied indigenous lands back to the indigenous peoples. Land was to be evaluated and 'regularized' to ensure all property fulfilled a 'Social and Economic Function' (FES), as assessed by the State. According to the INRA Law, small and communal landholdings must fulfill a social function by supporting the reproduction of households and the economic development of individuals. If land is abandoned or not visibly occupied, it is subject to expropriation (Valdivia, 2010: 73, but see Article 2 INRA LAW). Medium-sized and large landholdings must fulfill a socio-economic function: "sustainable use of land for the development of agri-business, forestry, and other productive activities, as well as for the conservation and protection of biodiversity, research, and ecotourism, and according to its best use capacity, for the benefit of society, the collective, and its owner" (Article 2 INRA LAW). However, the right to land includes both present and future uses, meaning that if producers have plans for 'future production', but are not producing at present, they maintain the rights to that land. (Valdivia, 2010: 73). Moreover, tax payments are also considered fulfilling a socio-economic function, according to Article 52. On the condition that the SEF is not met, land is subject to expropriation and redistribution by the state. (Kay and Urioste, 2005: 17).

As of 2004 however, only 10.7% of the land subject to '*saneamiento*' had been formalized, 32.6% were in 'the process of regularization', and 56.7% had not yet been surveyed (INRA, 2006). In other words, after nearly 10 years, close to 90% of Bolivia's total land area (excluding urban areas, water areas and salt flats) failed to be 'regularized' and were therefore subject to the local and regional power relations governing society based on the aforementioned unequal agrarian structure. Moreover, only 11.1% of the land in Santa Cruz had been titled (INRA, 2006).

From 1953-2002 peasant plots and smallholders (6-18 ha average) represented 32.95% of total agrarian reform beneficiaries, while receiving just 5.44% of total land distributed. Enterprise, or large-scale landowners, and medium-sized (132-1,596 ha average) represented 16.79% of beneficiaries, receiving 51.11% of total land distributed (Kay and Urioste, 2007:55).

**Figure 1: Land distributed by agrarian reform according to type of beneficiary and property in Bolivia, 1953-2002**



Source: Kay and Urioste, 2007

The failure to challenge the unequal agrarian structure by allowing the existence of large-scale landholdings to maintain land and resource control did not address the problems of poverty and inequality. Instead, the period marked by neoliberal reforms and political discontinuity<sup>14</sup> allowed existing capital to increase its exploitation over resources and labour. Further, as previously mentioned, much of the land is still not 'regularized' and is therefore subject to context-specific socio-economic relations of power and control. As such, Bolivia's agrarian structure underwent subsequent rural development processes marked by a continuation of territorial hegemony in Santa Cruz facilitated through a regional 'growth pole' strategy and carried out through successive regimes of dispossession – a revolutionary regime; a dictatorial regime, and a neoliberal regime.

**Figure 2: Bolivia's Regimes of Dispossession**

Regime of Dispossession	Period and Description
RoD I: The Revolutionary Regime	<b>1952-1971</b> Bohan Plan and 'la marcha al oriente' Large-scale landholding of 500-50,000 ha distributed in the eastern lowlands An agro-industrial growth pole strategy

<sup>14</sup> From 1996-2006 Bolivia had seven different Presidents.

	Lack of support for small farmers and an 'eastern landlord bias' exacerbated rural inequalities
RoD II: The Dictatorship Regime	<b>1971-1982</b> Millions of dollars funnelled to agro-industrial allies in Santa Cruz (Webber, 2008) Hundreds of thousands of hectares of land fraudulently distributed to political allies, some up to 50,000 ha (Urioste, 2010)
RoD III: The Neoliberal Regime	<b>1985-2006</b> 1985 SAP World Bank's \$56.4 million 'Eastern Lowlands Project' and its Land Use Plan (PLUS) 1991-97
	1996 INRA Land Reform 'saneamiento', or land formalization and titling to increase property rights legibility and transparency Allocation of indigenous territories to original inhabitants (Community Lands of Origins, TCO) Social and Economic Function (FES)
	2004: only 10.7% of land subject to 'saneamiento' had been formalized (INRA, 2006) Over 50% of land distributed from 1953-2002 were given to medium-large farms (1,596 ha average) representing just 17% of total beneficiaries (Kay and Urioste, 2007) 8.41% of total land was distributed to peasants/small farmers (6-50 ha) representing 33% of total beneficiaries

### The Rise of the MAS: A "New Left" Turn?

In June 2006, President Evo Morales officially launched the "Agrarian Revolution" in Santa Cruz by immediately presenting over 7.5 million hectares of land to 60 indigenous communities (Fabricant, 2012:140). These land titles had actually been processed but inactive in the INRA database for the past ten years. Further, Morales also promised that an additional 20 million hectares would be distributed to Bolivia's 2.5 million rural poor over the next five years (Ibid: 140).

This 2006 Ley de Reconduccion 3545 (Extension Law) redefines natural resources as state property, and puts more emphasis on state control and oversight over land consolidation and labour relations (Valdivia, 2010: 74). Law 3545 seeks to end exploitative labour relations. Landowners must register salaries, length of hire, and benefits for their wage-labourers. If exploitative behaviour by a landowner over labourers is present, land is subject to expropriation. Further, the State can also draw on historical land tenure records to ensure no fraudulent activity has previously taken place. Any previous fraudulent activity is also subject to expropriation.

The new agrarian reform is characterized by four main policy aims (1) distribution of state-owned land and redistribution by expropriation of land not in compliance with FES to indigenous peoples and

peasant communities; (2) mechanization of agriculture; (3) subsidized credits for small-scale producers; (4) markets for the products of peasant origin (Urioste, 2010).

The first policy aim is the land regularization process, or '*saneamiento*'. This process involves formalizing land titles according to the new FES standards which include: appropriate land use according to the Land Use Plan (PLUS); productivity of land (minimum 50% for plots of 50-500 ha and 67% for plots of 501-2000); land ceiling for individuals of 5000 ha; forestry, conservation, biodiversity, agro-tourism is considered appropriate; land clearance must have registered permit; exploitative labour conditions are prohibited; peasants and indigenous communities are exempt from property tax (Defensor del Pueblo, 2008). Moreover, tax payments as a 'social function' are eliminated and field assessments by INRA personnel every two years are mandatory (Ibid). Further, medium-sized and large landholdings are subject to continuous re-assessment to verify their socio-economic function and can be expropriated if rendered 'unproductive'.

Within this first pillar, two specific components of the FES have led to unintended consequences which, to a certain extent, undermine the agrarian reform. First the land ceiling of 5,000 hectares is per *individual owner*. Article 398 states that "In no case may the maximum surface exceed five thousand hectares", while Article 315 (II) states that if a corporation has several 'owners' or 'partners' each can have up to a maximum of 5,000 hectares, making land-size limits virtually non-existent (Constitution, 2009). Moreover, "the new limits of zoned agrarian property will be applied to pieces of land that have been acquired after this Constitution enters into force" (Article 399), meaning that all *latifundistas* over 5,000 hectares prior to 2009 are unaffected. This will essentially leave the landholding structure unchanged as large-scale landowners who acquired land prior to 2009 are able to legitimately maintain control over their territory. Thus, two shortcomings – that of landholding 'partners' and the pre-2009 'grandfather' clause – fail to challenge the unequal basis of the agrarian structure and the inherent power relations producing inequalities and exploitation.

Secondly, a fear of expropriation due to the apparent ambiguity of the "socio-economic function" policy has led to increased deforestation as farmers seek to prove the productivity/usage of their lands. Despite Article II, section VIII and XI of Law 3545 which state that the SEF *includes* forest conservation, biodiversity protection, and ecotourism; and that illegal clearing does not constitute a 'socio-economic function', the lack of awareness, understanding, and/or confidence in INRA as an institution has led to increased deforestation (Redo et al., 2011:238; Pellegrini and Dasgupta, 2009:17-18). According to Miguel Urioste of Fundacion TIERRA, "during the decade from 2000 to 2010, Bolivia was one of the 10 countries in the world with the greatest net annual rates of deforestation, with this process only increasing at every higher rates" (2012:444). Furthermore, Bolivia's Regulatory Agency for the Social Control of Forests and Lands (ABT) estimates that 3.3 million hectares have been illegally deforested from 1996-2009 (Urioste, 2012:443). Moreover, of the country's 60,087,800 ha of total forest, recent studies estimate that 330,000 hectares are cleared every year, representing an annual deforestation rate of 0.55% (UN-REDD: 6; INE, 2011). Land clearing by massive burning is also common practice in Bolivia to remove vegetation and/or clear lands for oilseed plantations (mainly soy). According to a recent study, fines for intentional burning are only \$0.25 per hectare – but land could also be subject to expropriation according to Law 3545 (Redo et al, 2011: 238). However, "as long as global demand and

price for oilseeds remain high, farmers will continue to remove vegetation by burning the forest (the only means available) as the high crop returns outweigh the cost of fines” (Redo et al, 2011:239).

The most recent piece of legislation – Ley 337 de Apoyo a la Producción de Alimentos y Resitución de Bosques” (Support for Food Production and Forest Restitution), January 11<sup>th</sup>, 2013, aims to allow landowners who have illegally cleared their land between 1996 and 2011 to reduce their fines by either developing ‘productive agriculture’ or reforesting the land (Ley 337). Essentially, this new law attempts to encourage farmers to recover previously cleared lands for productive use instead of extending cultivation elsewhere. However, if regulatory mechanisms are weak the new law could set a detrimental precedent by pardoning illegal land clearings. Although the policy encourages and rewards desirable actions, policies discouraging and penalizing undesirable behaviour should be equally, if not more strictly enforced. This would require enforcing much stricter and harsher laws/fines on land clearing and deforestation. A policy pardoning past deforestation does not necessarily convey the right message for future behavioural change.

As of 2010, the agrarian reform appeared to be one of the most successful in Latin America – titling more than 31 million hectares and distributing over 100,000 titles to 174,249 beneficiaries since 2006 (INRA, 2010; Redo et al., 2011). However, in the Department of Santa Cruz – where over two-thirds of total cultivated land is located including 98% of large-scale soy plantations – a mere 12% of the territory has been regularized (Redo et al., 2011: 234). In addition, 91% of titled lands “have been endowed by the State and are composed entirely of forest reserves” (Redo et al., 2011:237). Thus, the seemingly impressive “*saneamiento*” fails to not only challenge the prevailing unequal agrarian structure, but has also led to widespread deforestation as new frontiers expand into Bolivia’s rich biodiverse areas of Amazonian, Andean, and Chaco forests (Hecht, 2005:377).

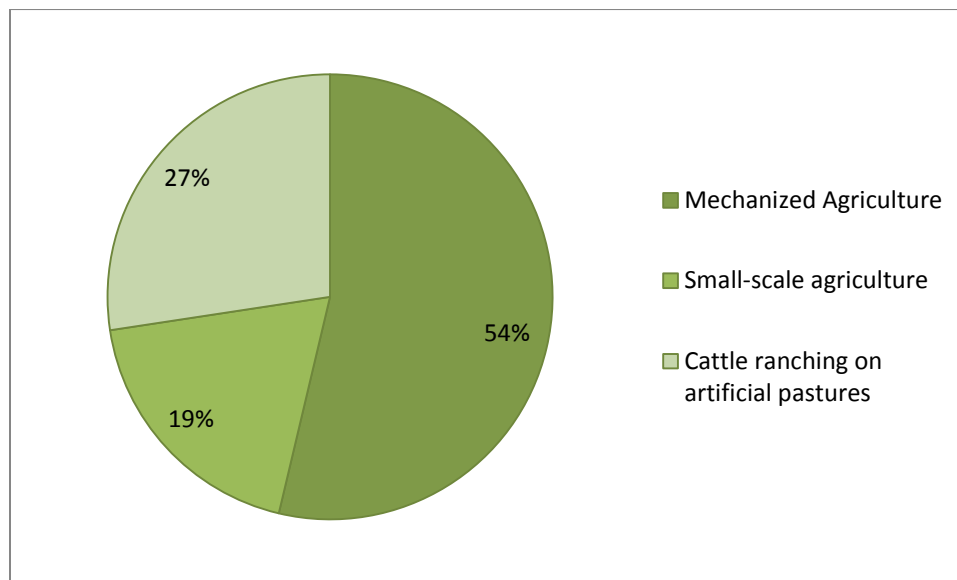
The second pillar of the agrarian reform programme is the mechanization of small-medium scale agriculture. The Credit for Agricultural Mechanization Programme (*Programa Crediticio para la Mecanización del Agro* – PCMA) was established to promote the ‘modernization’ of small-scale agriculture by offering collective use of tractors and other equipment to municipal governments and peasant unions payable over five to ten year periods with no interest (Enzinna, 2006). With a US\$35 million credit from the Brazilian government in 2007, the PCMA serves to foster the growth mechanized agriculture which could have disastrous results for small farmers (Supreme Decree 29350). First, one must question the interests of the Brazilian government given that Brazilian soy producers control approximately 40.3% (~ 500,000 hectares) of Brazil’s most fertile land (Urioste, 2012:447). Second, promoting mechanized agriculture requires an increased dependence on external inputs (chemical, oil-based), and puts pressure on farmers to become indebted. Third, over half a million family farmers occupy, on average, just 0.7 hectares of land each and produce using labour-intensive techniques<sup>15</sup> (Urioste, 2010:9; INE, 2011; World Bank 2007). The ‘mechanization’ of agriculture is not appropriate for the majority of farmers in Bolivia’s agrarian society. Promoting such a production system could therefore lead to yet another ‘squeeze of the middle peasantry’, inadvertently forcing farmers to

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<sup>15</sup> Author’s calculation based on data from INE, 2011 and World Bank, 2007: 19.  $(2,861,330 \text{ ha total arable land} \times 14\%) / (660,000 \text{ total farm units} \times 87\% \text{ smallholders}) = 0.698 \text{ ha per unit}$

become agricultural entrepreneurs, join the rural wage-labour force, or migrate elsewhere (Lenin, 2004; World Bank, 2007). Finally, the expansion of mechanized agriculture has been the main cause of deforestation and soil erosion in Bolivia (Barber et al., 1996; Muller et al., 2013).

**Figure 3: Three proximate causes of deforestation -- estimated total contribution to lowland deforestation in Bolivia**



Source: Data from Muller et al, 2013

Instead of promoting a pathway for agricultural development based on external-input dependency, a much more progressive, inclusive, and sustainable agrarian revolution based on principles of ‘food sovereignty’ (Article 309, 2009) and the ‘Rights of Mother Nature’ should be rooted in a system of agroecological production (Altieri and Toledo, 2011). This however, is beyond the scope of this paper.

In 2007, the Agriculture and Rural Development Bank (BDP) was established to offer low-interest credit to ‘micro and small production units’ and cooperatives/associations (BDP, 2013). The BDP replaced certain functions previously provided by the Fund for Financial System Development and Support to the Productive Sector (FONDESIF) established in 1995 (Supreme Decree 28999, 2007). Under a neoliberal framework in the 1990s, the FONDESIF distributed over US\$60 million to micro-finance schemes at an interest rate of 8% -- which was loaned out to small farmers at a rate 21% (Urioste, 2007:2). The BDP now offers individual and collective credit at 6% interest over 12 years with a two year grace period (BDP, 2013). Despite the substantially lower interest rate, 6% is still extremely high for small producers. In Brazil, for example, the National Programme for Strengthening Family Farming (Programa Nacional de Fortalecimento da Agricultura Familiar – PRONAF) offers a variety of credit lines for small producers, women, agroecological farmers, land reform beneficiaries, etc., at interest rates ranging from 0.5% to 3% annually, with the majority around 1% per annum (MDA, 2013). As practiced in Brazil, credit lines can

be used to target certain groups or encourage certain types of production. In this respect, Bolivia still falls short of providing small producers with adequate credit access.

The fourth and final policy pillar of the ‘agrarian revolution’ is the creation of markets for products of peasant origin. In 2007, the state-run company to support food production EMAPA (Empresa de Apoyo a la Producción de Alimentos) was established with the following aims: to develop domestic food production, support small farm agriculture with input-supply and procurement, and supply markets. In design, EMAPA is similar to Brazil’s Food Acquisition Programme (*Programa de Aquisição de Alimentos* - PAA) which has been quite successful in strengthen local food systems but still needs to be scaled-up and expanded (see Nehring and McKay, 2013). However, instead of functioning as an effective public food procurement agency which connects small farmers with local markets, replacing private intermediaries and simultaneously strengthening small farmers’ productive capacity while ensuring food security, EMAPA has been plagued with management flaws and a lack of implementation capacity. In an attempt to ensure food security, export restrictions were placed on staple crops until domestic supply was satisfied. However, food shortages in 2010 resulted in uncontrollable inflation and EMAPA was forced to increase its prices, causing widespread protests (BBC News, 2011). Moreover, it is estimated that only 2% of targeted small farmers in Bolivia receive support from EMAPA (Wanderlay, 2011: 18). Despite these shortcomings, EMAPA does procure wheat, maize, rice, and soy from roughly 13,000 family farmers for strategic reserve stocks and/or local markets EMAPA, 2013). Before continuing the analysis of the new agrarian reform programme and the new dynamics and trajectories of agrarian change under Evo, it is important to have a deeper understanding of the political economy and ecology of soya throughout these processes.

### **Political Economy and Ecology of Soy Plantations**

Much of the discussion and analysis thus far has focused on Bolivia’s landholding structure so as to understand how this structure has evolved and the extent to which it has become entrenched in societal relations. The regional dominance of a landed class of capitalist elites has emerged in the eastern lowlands and their control over land-based wealth has been explored. Equally as important, however, is how they are using this land and for what purposes. This section focuses on *the* most important crop in the eastern lowlands – in terms of export revenues and plantation area – for the landed elite.

Commercial soy production was first introduced in the mid-1980s by Mennonite farmers from Mexico, Belize, Brazil and Canada (Hecht, 2005:380). During this period of structural adjustment and the ‘eastern-landlord’ bias, a massive expansion of soy plantations emerged by means of deforestation. Trade liberalization, financial deregulation and the World Bank’s \$56.4 million “Eastern Lowlands Project” and its ‘*Plan de Uso de Suelos*’ (Soil Use Plan, PLUS) implemented from 1991-1997 facilitated this large-scale land expansion for export-oriented industrial agriculture, namely for soy production (World Bank, 1990; Redo et al., 2011). The main objectives for the World Bank’s Eastern Lowlands Project were to transfer financial and technical resources to mainly support large-scale farmers increase their productive capacity for export-oriented development.<sup>16</sup> The ‘eastern-landlord’ bias and ‘growth

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<sup>16</sup> See Appendix I for list of project objectives.

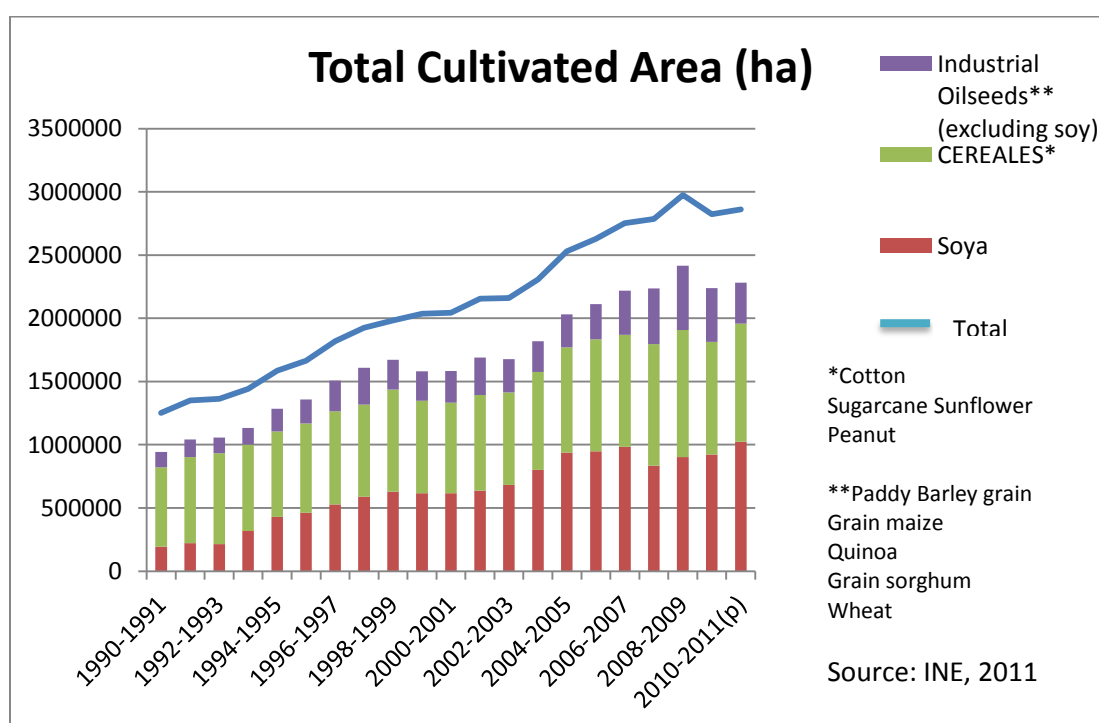


'pole' strategy for agro-industrial soy plantations was further solidified with a large resource transfer directed at this 'propulsive' economic unit. From 1990-1996 agricultural exports from Santa Cruz increased 400%, while the gross value of agricultural output almost doubled from US\$ 350 million to US\$ 685 million during the same period. Further, transportation linkages were improved with 410 km of road maintenance and improvements.

This led to the expansion of the 'soya frontier' as vast areas of land were cleared for large-scale soy plantations. These policies also further solidified the concentration of land and resource control in the hands of *latifundistas*, reinforcing and increasing existing unequal power relations among rural classes and the environment. As a result, the entrenched agrarian structure has led to the exploitation of a landed elite class over both labour and the environment.

In 2010-2011, a total of 2,861,330 hectares were cultivated for crop production in Bolivia, of which 1,023,960 were devoted to soy plantations (INE, 2011). This represents 35.8% of the total cultivated land, while wheat represented the second largest cultivated area with just 189,736 hectares, or 6.6% (INE, 2011). Further, since 1990, soy plantation area has increased 530%, from 193,289 hectares to 1,023,960 hectares in 2010-2011 (INE, 2011).

**Figure 4: Bolivia's cultivated land area by select crops**



Government support facilitated this expansion “by providing (soybean producers) credit at negative interest rates and access to foreign exchange funds to purchase inputs and machinery” (Austin, 2010:520). However, the mechanized nature of the production process has led to soy production almost exclusively controlled by large-scale landowners (Austin, 2010). In 2009/2010 it is estimated that just 2%

of soy producers controlled 52% of total soy plantations (Catacora-Vargas, 2012:ii)<sup>17</sup>. With the majority of this expansion occurring in the eastern lowland region of Santa Cruz, which accounts for over 2 million hectares of Bolivia's total cultivated area, distinct geographical and class divisions become apparent (Urioste, 2012: 440).

Moreover, soy is one of Bolivia's top 4 exports which account for over 70% of total export revenue (CAINCO, 2009). These include natural gas (37.1%), zinc (13%), silver (11.5%), and soy (10.6%).<sup>18</sup> In 2011, soy exports were worth US\$ 309 million – making it the most important agricultural export (in terms of export revenue) (ISAAA, 2011). However, the fruits of this economic growth – or growth pole – is distributed to a very small percentage of landed oligarchs who have secured their access and control over land and its productive resources through the politics of exclusion. With a relatively high degree of autonomy, landed capitalist agro-entrepreneurs in Santa Cruz have been able to continuously accumulate land and expand their control into new frontiers through forms of dispossession. Such forms of (capital) accumulation by dispossession occur through both economic and extra-economic processes – or through what Rosa Luxemburg describes as a “purely economic process” and “policy of spheres of interest” (Luxemburg. 2003:452). Accumulation by dispossession in rural Bolivia is occurring through both purely economic and extra-economic processes. The former materializing where dispossession is ‘voluntary’ in the sense that people are not forcibly coerced or legally obliged to leave their land (willing-seller willing-buyer principle) and the latter through expropriation of unmarked/unregulated public/private land, illegal deforestation, and forced displacement (Redo et al., 2011; Pellegrini and Dasgupta, 2009; Mackay, 2011; Urioste, 2012). The ‘eastern landlord bias’ that has persisted through multiple regime changes since 1952 has created favourable market conditions for the capitalist landed class, strengthening their economic power and facilitating ‘purely economic processes’ of accumulation by dispossession. As processes of ABD expand into new frontiers, there is not only a concentration of access and control over land and its productive resources, but also an acute degradation of soil, forests, and water resources as well as severe social exclusion. Since nearly one-third (29.1%) of the workforce depends on agriculture as a primary source of livelihood (INE, 2011; IFAD, 2010:254) being dispossessed of land/resource access has drastic effects for the large majority of the rural population. It is estimated that soybean production displaces 11 agricultural workers for every one it employs (Fearnside, 2001:27). Moreover, the highly mechanized nature of production requires a high degree of investment and inputs which are conducive to large-scale agro-industrial development. This excludes the majority of farmers, displaces/occupies fertile land with food crop potential, applies massive amounts of transgenic crops and chemical inputs to the soil, and causes rapid and vast deforestation.

Bolivia's Regulatory Agency for the Social Control of Forests and Lands (ABT) estimates that 3.3 million hectares have been illegally deforested from 1996 to 2009 (Urioste, 2012:443). Of the country's 60,087,800 ha of total forest, it is estimated that 330,000 hectares are cleared every year, representing an annual deforestation rate of 0.55% (UN-REDD)(INE, 2011). According to Urioste (2012), “During the decade from 2000 to 2010, Bolivia was one of the 10 countries in the world with the greatest net annual rates of deforestation, with this process only increasing at ever higher rates” (444). A recent study by

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<sup>17</sup> See Figure 7

<sup>18</sup> See Figure 2

Muller et al (2013) reveals that mechanized agriculture (predominantly soy production) and cattle ranching on artificial pastures are the main proximate causes for deforestation in the country, accounting for an estimated 81.1% of total deforested area. Further, the loss of large areas of Bolivia's unique forests which combine Andean, Amazonian, and Chaco biotic elements threatens its rich centres of biodiversity (Hecht, 2005: 377). UNDP-Bolivia recently reported that 65% of the area occupied by large-scale soy producers from 1993-2002 were previously forested areas (Catacora-Vargas, 2012).

In the first few years after forested land is cleared, soil fertility is high and delivers very large yields (Kaimowitz et al. 1999; Fernside 2001). However, due to soil erosion and compaction, overgrazing, and high levels of chemical inputs used in large-scale intensive industrial agriculture, soil fertility declines rapidly (Barber et al., 1996). As a nitrogen-fixing crop, soybeans transmit nitrogen from the air to the soil, which allows the crop to grow comparatively better in depleted soils than other crops (Austin, 2010:518). It is estimated, however, that "it takes a thousand tons of water to produce one ton of soybeans" (Austin, 2010, 518). This obviously requires a vast amount of resource inputs, not only intensifying land degradation but also using limited (freshwater) resources available in Bolivia.

Despite Bolivia's recent passage of Ley Corta de Derechos de la Madre Tierra (Short Law of the Rights of Mother Nature) and the Morales Administration's 5-year plan to completely eliminate genetically-modified (GM) crops, Roundup Ready (RR) soybean was planted on 910,000 hectares in 2011 – representing 89% of the total soy plantations (ISAAA, 2011; INE, 2011). GM crops are supposed to simultaneously increase yields and reduce pesticide usage, but recent studies show the opposite (Shiva, 2011; Benbrook, 2012; Altieri and Penguem 2006; Meyer and Cederberg, 2010; Altieri, 2000). These studies show, as do many others, the positive correlation between increased GMOs and increased chemical-based pesticide use due to insect resistance and new 'super weeds' adapting to chemical-based inputs (Meyer and Cederberg, 2010; Altieri, 2000). In Bolivia, pesticides usage has more than doubled since the introduction of GM soy in 2005 (Catacora-Vargas, 2012)<sup>19</sup>. This creates a spiraling dependence on the increased use of patented GM seeds and their complementary pesticides. This is not only detrimental to crops and soil fertility, but more importantly to human health from GM and pesticide-dependent crop consumption, pesticide handling by farmers, and water contamination. Aside from the social and environmental effects, a recent study shows that the average productivity levels in Bolivia have actually decreased since the introduction of GM crops in 2005, as productivity (tons/year) averaged 1.94 from 1991-2004 and just 1.77 from 2005-2010<sup>20</sup>.

Furthermore, as soy plantations continue to expand and occupy Bolivia's most fertile soil, the country becomes increasingly dependent on food imports. In 2011, Bolivia imported 503,000 tons of food – a 69% increase from 2010 (IBCE, 2011). In a country that has the concept of food sovereignty in their constitution, and has been an international advocate for the environment, enacting the first Law of Rights of Mother Earth, discrepancies between policy discourse and practice are widespread. Instead of promoting the development of an agricultural base that is sustainable, inclusive, and culturally sensitive, Bolivia is pursuing a model of agricultural extraction similar to that which has characterized their mining

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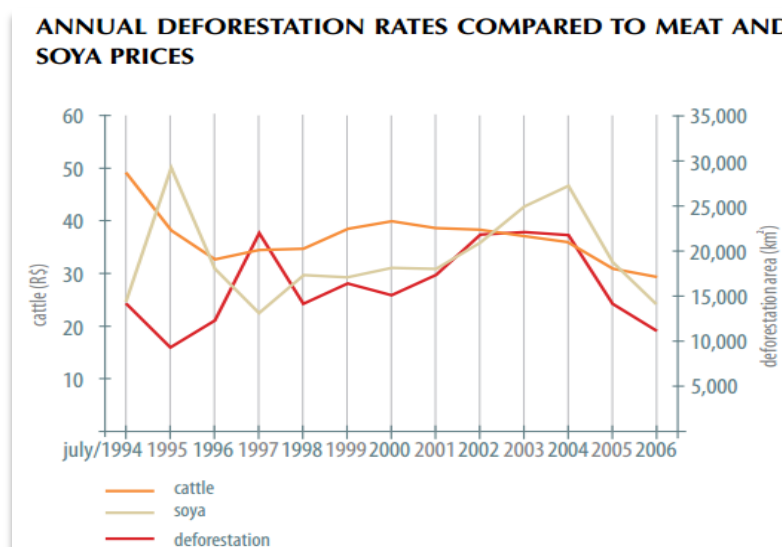
<sup>19</sup> See Figure 8

<sup>20</sup> See Figure 6

industry over the last 500 years. The expansion of soy plantations and its direct and indirect environmental impacts, as well as its export-oriented nature, simultaneously contradicts Bolivia's apparent pursuit of food sovereignty and the Rights of Mother Nature. As the metabolic rift unravels in the country, divisions both within and between nature and society are produced, reproduced and amplified.

Nature in Bolivia is increasingly becoming a manageable productive resource for economic 'development' based on its extraction for international marketable commodities – be it minerals, hydrocarbons, or soy. Continuing along this development pathway increases the country's dependency on international markets and the concentration of transnational corporations controlling the majority of the global food value chain. Positive correlations therefore become apparent between land-use change, natural resources exploitation and resulting livelihood dispossession and international commodity prices. The following graph shows the relationship between cattle, soy, and deforestation in the Amazon.

**Figure 5: Annual deforestation rates compared to meat and soy prices**



Source: Greenpeace, 2009

This positive relationship threatens both rural livelihoods and the environment in Bolivia as agriculture remains dependent on international market signals. With the large majority of soy harvest being fed to livestock and the simultaneous global increases of meat production and consumption per capita<sup>21</sup>, the Bolivian model of agriculture is following a destructive path of global dietary dependency. As a result of this rising demand for soy – with China's soybean imports increasing from 2 to 45 million tonnes from 1990 to 2009, for example – large-scale capitalist soya farmers have strengthened their economic

<sup>21</sup> See Appendix II (Weis, 2013:69-70)

position and relative power through their exclusive and concentrated access and control over Bolivia's most fertile territory. Over the last 60 years, subsequent regimes of dispossession have only reinforced their land-based power as they have maintained the ability to exploit labour and 'nature' in search of increased profits.

### **The Rise of Brazil and New Trajectories of Agrarian Change**

The rise of Brazil as now the world's sixth largest economy and one of the leading agricultural producers in terms of output worldwide presents new challenges for Bolivia's already deep-rooted land-based social imbalances. As the world's leading producer of sugarcane accounting for 25% of world production and 50% of world exports, Brazil is an agro-industrial powerhouse seeking to spread its model around the world (Unica, 2012) (see Mackey, 2011:26). In 2011, Brazil was the world's second largest producer of soybeans, accounting for 27.9% of total world output and 40.2% of world exports (USDA, 2013). As an increasingly influential regional hegemony in Latin America and amongst the countries of the 'Global South', Brazil has used a 'soft power' strategy through south-south cooperation initiatives, solidifying its position as a major influential player in the global political economy (Dauvergne and Farias, 2012).

Unlike traditional forms of hegemonic influence through 'development assistance' or 'foreign aid', the Brazilian strategy is centred around Technical Cooperation (TC) agreements which are based on the exchange of information, know-how, technical expertise, and innovative practices. The majority of these TC agreements are based in agriculture through partnerships with the Brazilian Agricultural Research Corporation (EMBRAPA) which now collaborates with over seventy countries worldwide (ABC, 2013). With the number of TC projects rapidly increasing every year – from just 23 new projects in 2003 to 413 in 2009 – Brazil has been extending its spheres of influence mainly through south-south cooperation initiatives (Cabral and Weinstock 2010). However, Brazilian involvement in Bolivian agriculture is not, by and large, the result of TC agreements. Rather, it has developed through old and new capital alliances between landed Bolivian and Brazilian agro-industrial soy producers, through joint venture initiatives and land appropriation by means of illegal deforestation (Urioste, 2012; Muller et al, 2013). Due largely to the high degree of territorial hegemony resulting from the subsequent regimes of dispossession since 1952, landed capitalists have secured a substantial amount of autonomy and capacity to control Bolivia's eastern lowlands in Santa Cruz.

Despite there being no regulation for foreign land ownership prior to the 1996 INRA Law, it has been during the last 15 years that foreigners – specifically Brazilians – have rapidly increased their control and access over Bolivian agricultural land and resources. In 2006/07, for example, Brazilians controlled 40.3% of total soy plantation area in Bolivia, up from 19.6% in 1994/95 (Urioste 2012). Although no official data exists on the total amount of land controlled by Brazilians, the most reliable and recent study conducted by Miguel Urioste of Fundacion Tierra suggests that "in oilseeds alone, Brazilians own approximately half a million hectares of the best agricultural lands, both category I (intensive agricultural use) and category II (extensive agricultural use), without counting those that are in fallow or rotation, nor those that are directed towards other crops or ranching, which usually comprise larger areas". It is therefore extremely likely that Brazilians control much more of Bolivia's land than actually recorded.

Brazilian corporation Grupo Monica, for example, led by Brazilians Ricardo and Rodrigo Cambuzzi and Sergio and Francisco Marchett, own three major agro-industries in Bolivia (Semillas Mónica, Cereales del Este, Granorte y Faro) and control over 56,000 hectares in Santa Cruz with 84 harvesters, 110 tractors, 58 seeders, 15 sprayers, 4 planes, and storage facilities capable of holding 280,000 tonnes of grain (Agrositio, 2004). While Brazilian Ricardo Cambuzzi is known as the head of Grupo Monica and is economically and politically well-connected, partner Francisco Marchett is the director of FUNDACRUZ (Fundacion de Desarrollo Agricola Santa Cruz) which is an organization comprised of Bolivia's most powerful agro-entrepreneurs and seeks to "contribute to the scientific-technical development aimed at increasing agricultural production in Santa Cruz and other productive regions in Bolivia" (FUNDACRUZ, 2013). Another Brazilian group comprised of the Sojima and Tierra Azul companies is the Gama group which controls approximately 90,000 to 100,000 hectares of land in Santa Cruz (Urioste, 2012:451). UNISOYA which is comprised of a diverse range of producers but with the majority being Brazilians, controls around 50,000 hectares (Ibid.). While these companies represent the largest agro-industrial groups fueled primarily by Brazilian capital, other forms of land control including illegal appropriations, leases and purchases have resulted in what is estimated to be an additional 300,000 hectares of soy plantations and 700,000 of land of cattle ranching controlled by Brazilian agro-capitalists (Urioste, 2012:451). As new capital alliances are formed, new actors and forms of accumulation continue to deprive the majority of Bolivia's (small) farmers from their ability to access land and its productive resources.

However, this data is largely based on reports published by the Association of Oilseed and Wheat Producers (*Asociación de Productores de Oleaginosas y Trigo*, ANAPO) which is made up of large-scale agro-industrial capitalists and even includes two Brazilian soy producers serving on its board of directors (Urioste, 2012:446). In addition, ANAPO's publications in recent years no longer include specific information on producer nationality (Urioste, 2012:447). However, it is clear that some actors within ANAPO are facilitating Brazilian investment and access to Bolivia's resources through the formation of capital alliances. In fact, Urioste suggests there is a general acceptance and desire for Brazilian investment so Bolivians can have access to "sources of capital, technology, employment, business, market knowledge, inputs and genetically-modified seeds" (Urioste, 2012:450).

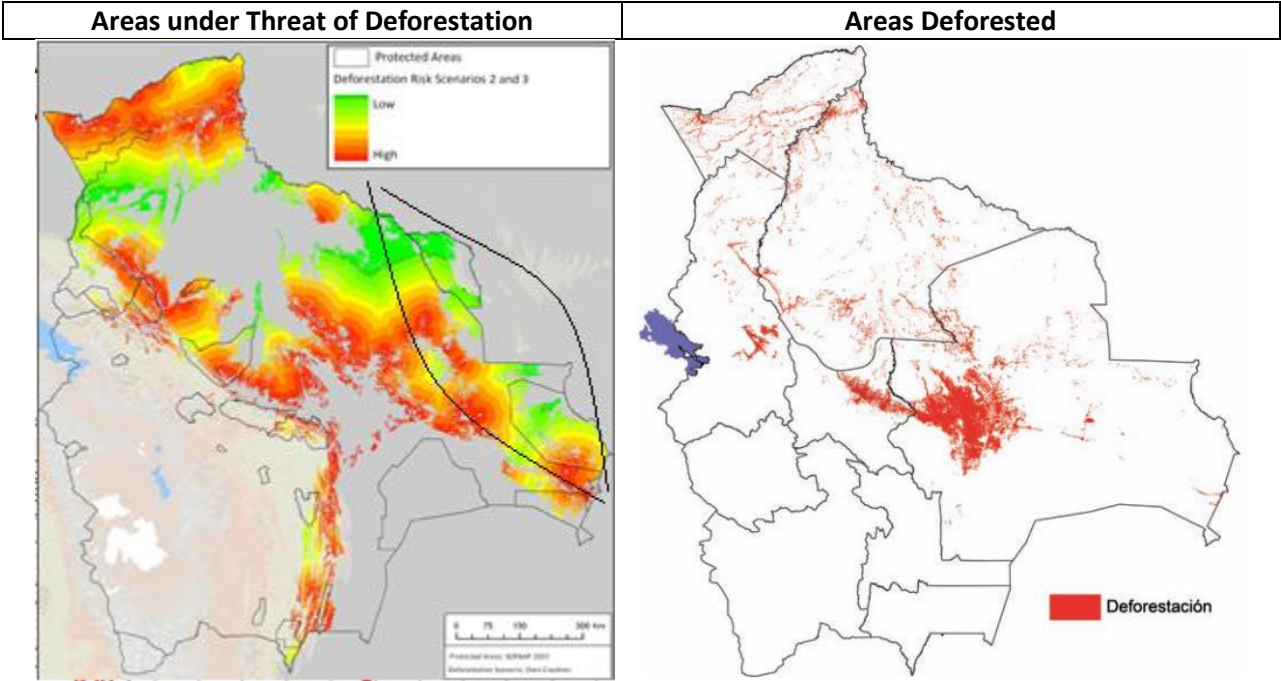
But this general acceptance and desire is among landed capitalists, not the large majority of farmers (87%) who, on average, control just 0.7 hectares of land each (INE, 2011; World Bank, 2007). In fact, this model and its inherent capital alliances for accumulation processes are systematically dispossessing people from access to land and resources through agro-industrial expansion. As shown in the figure below, areas approaching the Brazilian border are becoming increasingly under threat of deforestation. Areas under high risk of deforestation are also those allocated or in the process of being titled to indigenous populations as *Tierra Comunitaria de Origen* (Native Community Lands – TCO). With the majority of Bolivia's 7 million heads of cattle in the northern Department of Beni and 98% of soy plantations in Santa Cruz<sup>22</sup>, new frontiers of forests, indigenous lands, and fertile areas are increasingly threatened on multiple fronts. Further, the impact of large-scale agro-industrial soy producers already in

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<sup>22</sup> Total soy plantations in Santa Cruz: 1003690 (Urioste, 2012:440)/Total soy plantation area:1023960 (INE, 2011) = 98%

Bolivia and the new wave of agro-capitalists (particularly cattle ranchers) migrating to Bolivia in search of ‘available’, cheap, and unregulated lands adds a new threat of encroachment from the eastern border(Urioste, 2012:451).

Figure 6: Maps of Deforestation in Bolivia



Source: UNDP-Bolivia, 2008

Furthermore, cattle ranchers and the expansion of pastures cannot be ignored as key drivers of deforestation (Muller et al., 2013). Since the soil fertility of deforested areas often declines relatively rapidly, cattle ranchers, coffee growers, and other farmers often move to new areas so as to maintain high yields (Austin, 2010:519). As cattle ranchers move to newly deforested areas, the nitrogen-fixing capabilities of soybeans are able to use the degraded land formerly used for cattle grazing, which in turn allows cattle ranchers to expand into new frontiers while selling their land to soy farmers. Thus, soy plantations directly and indirectly contribute to deforestation by creating a demand for cattle pastures (Fearnside, 2001).

According to the Land Use Plan (PLUS) of the Department of Santa Cruz land appropriate for intensive agriculture, particularly soy plantations, has reached its limit (Urioste, 2012: 452). However, with the 330,000 hectares of forested land being cleared every year (UN-REDD: 6; INE, 2011) as well as new highway developments through the *Iniciativa para la Integración de Infraestructura Regional Sudamericana* (Initiative for the Integration of Regional Infrastructure in South America, IIRSA), soy and cattle ranchers are pushing their activity into new frontiers. In fact, Bolivia has only completed two main projects through IIRSA, but 51 remain in the phase of ‘execution’, ‘profiling’, and ‘pre-execution’ with a projected investment totalling US\$ 7.176 billion, largely from loans provided by the Brazilian Development Bank (BNDES) (IIRSA, 2012; (Dijck, Pitou van.,van Barneveld, Bert., 2013). Furthermore,

among the leading private construction and engineering companies involved in IIRSA projects are the Brazilian companies OAS and Odebrecht – facilitating another avenue of Brazilian migration (Dijck, Pitou van., van Barneveld, Bert., 2013).

However, these apparent capital alliances do not fully explain the causal mechanisms driving Brazilian migration and investment in Bolivia. Locating these developments within the changing ‘polycentric global food and agro-commodity regime’ as well as the global land rush provides a better understanding of why Brazilians control an estimated 1.2 million hectares (and likely more) of Bolivia’s 2.86 million hectares of total cultivated land (Urioste, 2012; INE, 2011). In the past decade, farmland prices appreciated 278% in Brazil, out-pacing the cumulative inflation of 88% (Bonato. 2012). This average annual inflation of 14% in farmland prices is indicative of the ‘rising global interest in farmland’ where “over the past two decades, Brazil’s cerrado experienced the world’s fastest expansion of the agricultural frontier” (Deininger 2011:17) combined with increased domestic and foreign land grabs (Borras et al. 2012, de L.T. Oliveira 2013). With the cerrado now accounting for over 50% of Brazil’s soybean area, land use change has adapted to international demand and ‘new geographies of meat consumption’ in the context of a food regime in transition (Weis 2013). For example, China’s 23-fold increase in soybean imports from 1990-2009 has coincided with its rapid increases in both meat production and consumption during this same period (Weis 2013). These increasing demands from China have been met with Brazilian supply – with Brazilian soy exports to China increasing an average of 30% per year and projections that by 2019-2020, 86% of Brazil’s total soy production will be sent to China (Brown-Lima et al. :21).

These changing global patterns in the production and consumption of food have reverberating effects. As demand and prices for Brazilian farmland continues to increase rapidly, the expansion and accumulation of land and resources becomes much more difficult. Thus, I argue that the effect of such changing dynamics in the global food system is resulting in an escalation of agrarian capitalists seeking new areas for agriculture expansion in order to continue processes of capital accumulation. Consequently, alliances have been formed between Bolivian and Brazilian capitalist agro-entrepreneurs, creating new forms of dispossession for expanded accumulation. This new regime of dispossession is therefore rooted in the historical developments of Bolivia’s agrarian structure, as previously discussed, but also due to new capitalist alliances with trans-latina (primarily of Brazilian origin) capital.

Furthermore, in a recent study on the “Agrarian structure, foreign investment in land, and land prices in Brazil”, Sauer and Leite found that “the expansion of agribusiness activities, along with the increase in foreign investments, resulted in a strong process of appreciation of land price and jeopardized the situation and demands of many social sectors (family farmers, peasants, indigenous people, etc.) that lived in these areas” (Sauer and Leite 2012:891). With the rapid increases in land prices in Brazil (Bonato. 2012) Bolivia has a relative comparative advantage in terms of attractiveness of investment due to the lack of regulation and monitoring of land deals as well as the ability to acquire much cheaper factors of production (labour power, raw materials, low-cost land, etc.) for capital accumulation in ‘less developed capitalist territories’<sup>23</sup>. Indeed, this is the logic of capital – that new, un(der)developed factors of

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<sup>23</sup> Instead of ‘less-developed capitalist territories’, Harvey uses the term ‘non-capitalist territories’.



production (*land*, labour, capital) should be “continuously opened up” (Harvey 2003). Further, the Bolivian government’s diesel subsidy of approximately \$0.5 per litre provides an additional incentive of lower production costs. According to Miguel Urioste of Bolivian NGO Fundacion Tierra, the average diesel consumption per hectare of soy is approximately 40 litres which would mean that the total subsidy for Bolivia’s 1 million hectares of soy plantations is over US\$20 million per harvest (2012: 448).

The unequal land-based social relations which have emerged through the successive ABD regimes have secured a high degree of control and access over the eastern lowland territory in which they have been able to expand into new frontiers and continuously open up and release new assets (land, forests). Through a ‘politics of exclusion’ capital alliances have been formed through extended ‘webs of power’ (Ribot and Peluso, 2003) to secure land control for expanded reproduction and control over supply chains. Preliminary research suggests that Bolivia’s agrarian oligarchs welcome Brazilian capital for increased access to capital for investment, innovative technologies, and other inputs (Mackey, 2011; Urioste, 2012). However, further empirical research is necessary to understand the tensions, conflicts, and alliances that exist between and among classes of capital, wage labourers, smaller scale/subsistence producers, and the landless.

The UN Food and Agriculture’s (FAO) seventeen country case study on the state and trends of ‘land grabbing’ in Latin America concluded that despite the ‘high’ presence of recent large (foreign) investments in land in Bolivia, such land and resource control does not constitute ‘land grabbing’ nor does it have a negative impact on food security. However, for the FAO, the definition of a ‘land grab’ is limited to the following: (i) large-scale land acquisition; (ii) involvement of foreign governments; and (iii) negative impact on food security of the host country (Borras et al. 2012). This narrow definition of ‘land grabbing’ misses many dimensions of the changing land-based social relations in terms of the concentration of land/resource control and access. The definition proposed by Borras et al. (2012), on the other hand, provides a much more nuanced characterization of contemporary ‘land grabs’ by delving deeper into land-based social relations of control and access, the multiple dimensions of scale, and the broader changing dynamics of the global political economy. As such, this study employs this characterization for contemporary land grabs in Bolivia, specifically referring to the following three interlinked features: (i) the power to control land and its productive resources (ie. ‘control grabbing’); (ii) large-scale, in terms of either land size or capital involved; and (iii) a response to the convergence of multiple crises and the emerging needs for resources by ‘newer hubs of global capital’, particularly BRICS and MICs (Borras et al. 2012).

Therefore, regardless of national origin, it is argued here that ‘land grabbing’ is indeed occurring in Bolivia, facilitated by a powerful landed class of agro-industrialists.. Brazilian encroachment is therefore not the root of the problem, but it is facilitating and exacerbating capital accumulation and rural dispossession. It therefore appears as though new forms of capital penetration and the rise of the soy complex is shaping a new regime of dispossession in Bolivia. However we cannot grasp the extent of the changing land access and control relations by focusing on Brazilian capital as the ‘foreignisation of space’ (Zoomers, 2010; Urioste, 2012). Undoubtedly, this approach provides valuable insights, but it does not give primacy to the underlying land-based social relations of access and control, of production and reproduction, and of property and power in agrarian formations (Bernstein 2010, Ribot and Peluso

2003). The 'foreignization' discourse gives too much primacy to the foreignization of land, without taking into account the foreignization of capital and the alliances forged between national and international capital which result in new processes of accumulation by dispossession. The relatively narrow 'foreignization' lens therefore assumes that the "exploitation by foreigners is not socially acceptable, but exploitation by national classes of capital is tolerable" (Borras et al., 2012: 863). Broadening the scope to understand processes of agrarian restructuring in terms of the logic of capital and the tensions within the state-society-capital nexus concerning political legitimacy and capital accumulation offers a more encompassing framework (Fox, 1993). This preliminary analysis has attempted to show the importance of going beyond one's nationality, to a class-based analysis rooted in the historical developments of what has been framed here as 'regimes of dispossession' (Levien, 2013).

Re-framing the issue through concepts of access and control relations and as a consequence of the changing international political economy of food and land therefore leads to different conclusions. While these new dynamics appear to be developing into another 'regime of dispossession' a deeper inquiry into the 'politics of the politics' and the 'politics of society' -- in terms of the relations of power within and between state and social actors is necessary to understand the causal mechanisms and the social, economic, and environmental outcomes to date and future trajectories.

## **Conclusions**

While the Morales regime has 'regularized' and distributed land titles to many beneficiaries in comparison with the past two agrarian reform programmes, the lands have largely been state-owned and forested areas. This fails to transform the existing agrarian structural dynamics and power relations that exist between classes and the environment. Instead, the prevailing structure is maintained while 'new frontiers' become 'regularized' and distributed to new land beneficiaries. Apart from the majority of these distributed lands being forests, the forest code is extremely weak concerning fines and regulatory enforcement for deforestation which actually creates incentives to clear one's land for soy mono-crop plantations. Further, in order for an 'agrarian revolution' to achieve pro-poor outcomes and redistribute productive resources, transformative changes which reverse historical processes such as the 'eastern landlord bias' and the growth pole development strategy must be reversed. Ultimately, this would require supporting, largely through land-based wealth transfers, landless rural workers and smaller-scale, peasant farmers through bias-like policies. It would also require re-orienting the rural development model from one based on mono-crop industrial extraction for export (soy), which largely resembles an isolated 'growth pole' benefitting few and existing in isolation of other domestic industries to a 'pole of development which "has the capacity to engender a dialectic of economic and social structures whose effect is to increase the complexity of the whole and to expand its multidimensional return" (Higgins, Benjamin Howard, Savoie, Donald J., Perroux, Francois, 1988:49). This entails fostering the development of productive activities which can benefit the majority of society through employment, vertical and horizontal productive integration, and food supply. While these are difficult challenges to overcome, structural problems require structural solutions and therefore require both state and social actors to engage pro-actively to dismantle structural barriers.

This paper has attempted to shed light on the structural dynamics of resource control in Bolivia and the newer challenges posed by Brazilian capital and expanding soya complex. Social and environmental problems are inextricably linked to larger agrarian structures which encompass the unequal social relations within societies. Therefore, without altering the structural dynamics of resource, land, and ultimately power control, exploitative tendencies on labour and the environment are likely to persist. The underlying mechanisms through which social, economic, and environmental exploitation and domination over nature and society are driven must be identified and targeted in policy design, implementation, but more importantly the class struggle. As such, a relational approach to such problems is much more equipped to identify and target the multi-dimensional mechanisms driving the processes (Bernstein et al., 1992:24-5).

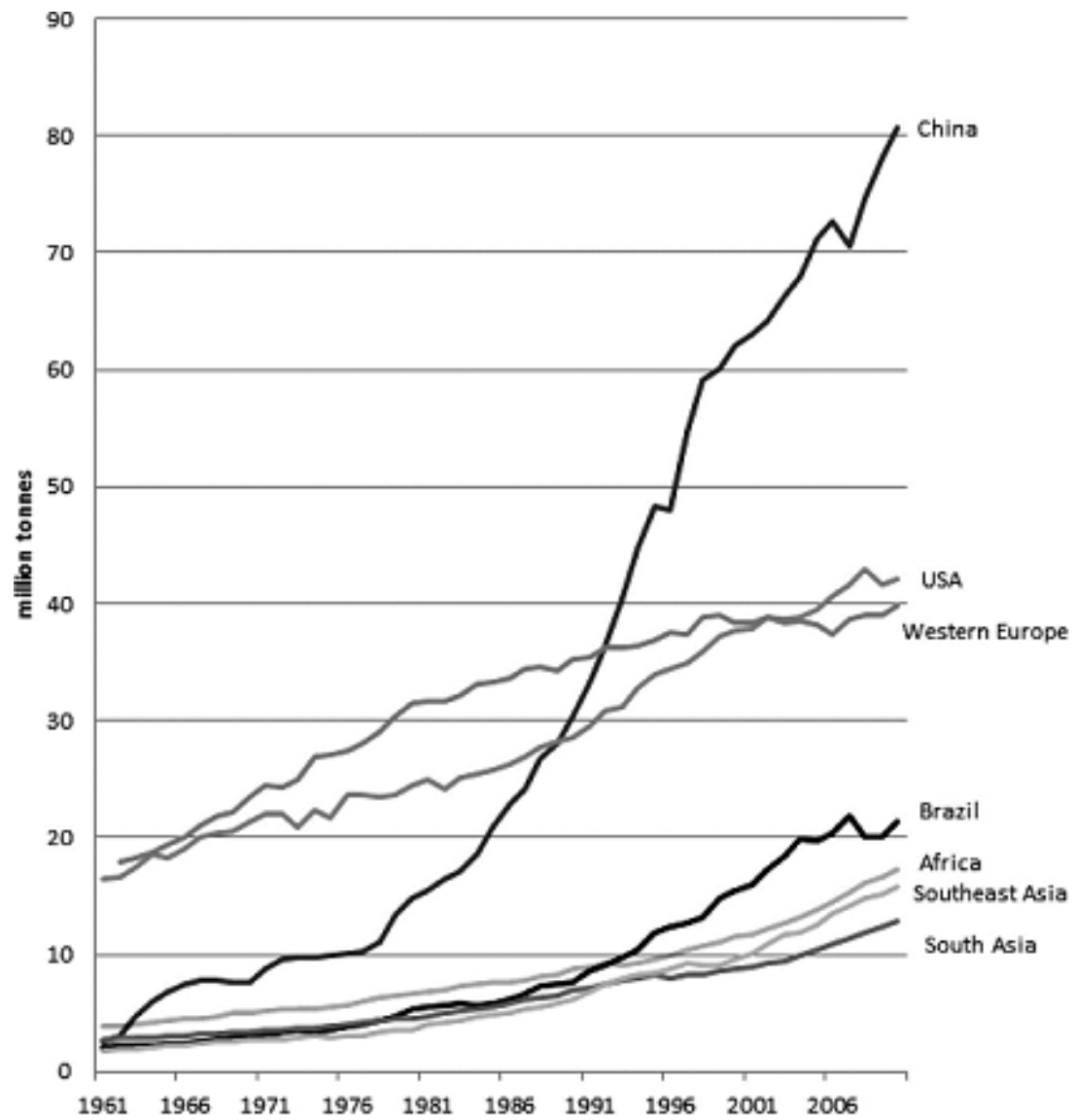
Applying a relational approach recognizes the power dynamics of land and resource control inherent in unequal agrarian systems and therefore implies that a “reform policy must work through a system of power to restructure its base” (Herring, 2003:59). This requires structural and systemic transformation which involves both a strong reformist State apparatus to challenge the landed elite and an organized movement from below to reinforce government policies on the ground. In practice this requires a restructuration of the countryside, a re-orientation of agricultural development from large-scale soy plantations to small-medium sized agro-ecology-based farm systems producing for domestic consumption. Local and regional food system networks should be developed through small-farm investment, extension and support services, cheap credit access, and farmer-to-farmer education programmes. The prevailing concept of nature must be transformed in accordance with the Law of the Rights of Mother Nature, rather than the dominant form of extraction practiced today. Without identifying, targeting, and challenging the underlying mechanisms driving social and environmental exploitation, policies will always come up short or lead to undesirable and unintended consequences. Although much more research is required to understand the relationship between state, capitalist, and societal actors, this paper has attempted to shed light on the agrarian dynamics that have shaped society’s unequal power relations and resulted in the concentration of land access and resource control by a capitalist class. As a preliminary analysis, this paper hopes to highlight the importance of situating land-based social relations of access and control in their historical and geographical contexts in order to understand present-day dynamics and future trajectories of agrarian change in a rapidly changing political economy of land and natural resources.

#### **APPENDIX I - World Bank's Eastern Lowlands Project: Objectives**

- a) Assist in the long-term development of the Eastern Lowlands through the preparation and implementation of a land-use plan (PLUS) for the region (Santa Cruz)
- b) Increase over a five year period the production and profitable agricultural commodities, and strengthen the balance of payments position of Bolivia by increasing annual exports of soybeans by about 200,000 tons, and substituting annually for about 30,000 tons of wheat imports
- c) Develop the technology and credit mechanism to increase and sustain agriculture productivity
- d) Improve existing roads and storage infrastructure
- e) Introduce market pricing of public lands
- f) Support the Ayoreos in the demarcation of their land and improve their living conditions, and assist the Chiquitanos in the demarcation of their tribal land.

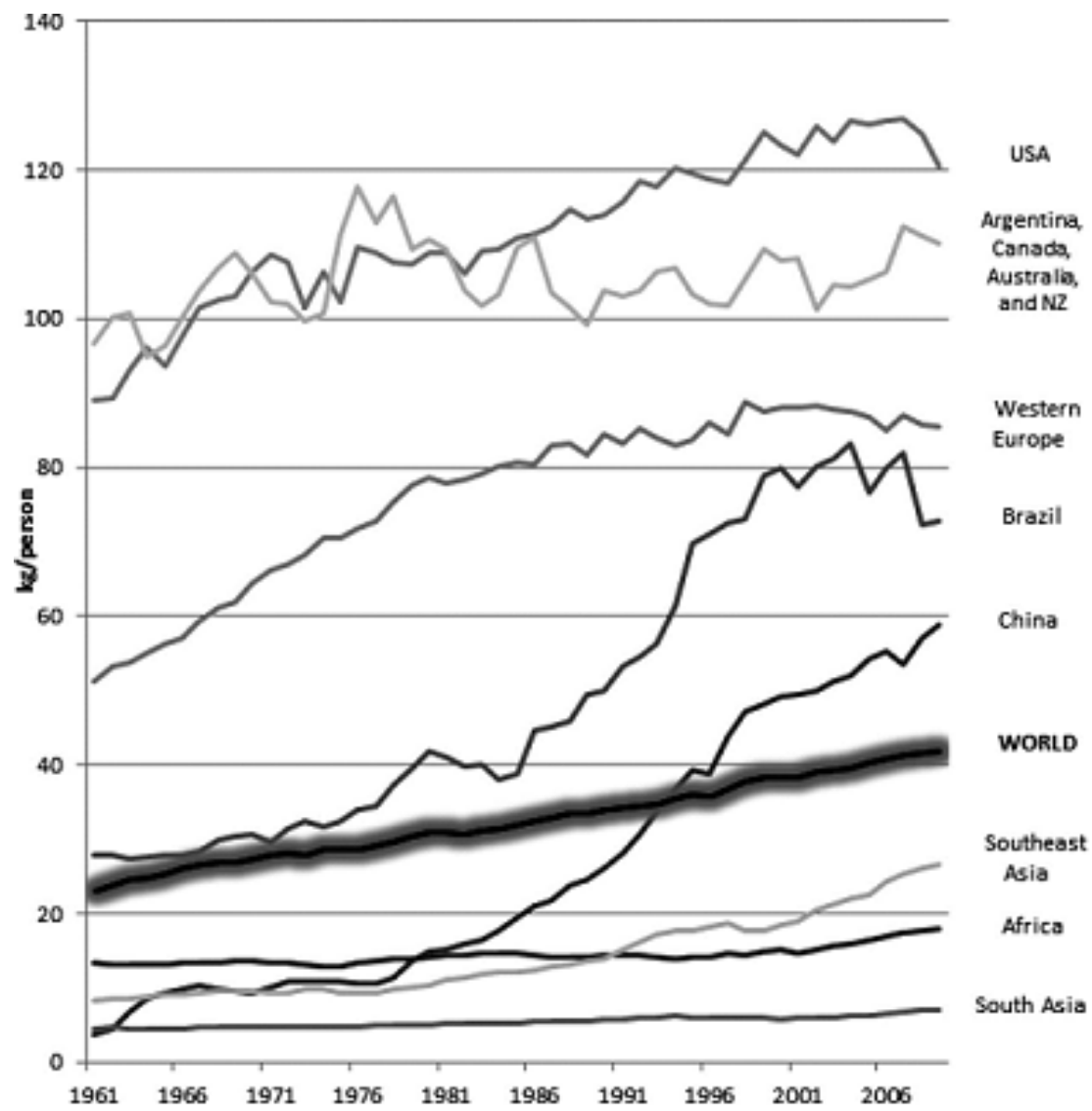
(World Bank, 1998:ii)

## APPENDIX II – World Meat Production by Volume: 1961-2009



(Weis 2013)

Meat Consumption per capita: 1961-2009



(Weis 2013)

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