CONTRIBUTING TO THE FOOD SOVEREIGNTY DEBATE: RE-LINKING LOCAL PRODUCTION AND CONSUMPTION

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Abstract: This paper contributes to the food sovereignty debate focusing on threats to localised food systems, perspectives for postmodern peasants and the need for a reconnection of local food production with consumption systems, particularly in agri-based economies. Highlighting on access to and control over production resources such as seeds or crop varieties of the postmodern peasant, the paper emphasises the need to investigate and unravel the power relations 'encoded' in the development of new varieties and market relations for enhanced food sovereignty. Main themes discussed include (1) Threats to localized food systems: Trade relations and misconceptions (2) Perspectives for localized food systems: post-modern peasants and reconnections and (3) Seed as Common Heritage Vs Tradable Commodity: Implications for Food Sovereignty.

Keywords: Food, Market access, Seed, Sovereignty, Peasant Farmers

The Food Sovereignty Debate

The worldwide Via Campesina umbrella movement of organisations of farm workers, peasants and indigenous peoples is known for its challenge to the (governing) patterns/codes in market relations. Particularly criticised is the (neo-)liberalization of trade in food, which, according to the movement, affirms and extends the monopolistic control of agro-business over food production and consumption and reinforces the spread of hunger and poverty in developing countries. Emphasising the need for change to currently prevalent food policies and market relations, the movement introduced the concept of 'food sovereignty' at the World Food Summit held in Rome in 1996.

It was formulated at that time as follows: "Food Sovereignty is the right of peoples to define their own food and agriculture; to protect and regulate domestic agricultural production and trade in order to achieve sustainable development objectives; to determine the extent to which they want to be self-reliant; to restrict the dumping of products in their markets; and to provide local fisheries-based communities the priority in managing the use of and the rights to aquatic resources. Food Sovereignty does not negate trade, but rather it promotes the formulation of trade policies and practices that serve the rights of peoples to food and to safe, healthy and ecologically sustainable production." (Pimbert 2008)

This much-cited declaration draws attention to many issues, including the effects of free trade and the commoditization of food. However, it is more than a declaration of intent to do things differently or a proposal for an alternative policy framework. It refers to the enactment of the principles of food sovereignty and, based upon this, stands as a call to action.

The Via Campesina peasant/social movement can be framed in terms of a 'resistance of the third kind' (Van der Ploeg 2007). This is a kind of resistance to the dominant ordering principles present in trade relations, technologies and in many other domains and policy contexts; it is a resistance that both challenges the codes in these domains and (re)claims the right to intervene in today's standard practices, to alter the processes of food production, consumption and trade and to strengthen a wide range of heterogeneous practices. The efforts of La Via Campesina directed towards the implementation of these heterogeneous practices are inspired by the following seven principles (Desmarias 2009, Reardon and Perez 2010):

(1) Reorganising food trade. Food is first and foremost a source of nutrition and only secondarily an item of trade. National agricultural policies should prioritise production for domestic consumption and food self-sufficiency; food imports should neither displace local production nor depress local prices.
(2) Democratic control. Smallholder farmers should have direct input into formulating agricultural policies at all levels. The movement emphasises that the United Nations and related organisations will have to undergo a process of democratization to enable the realisation of this.
(3) Food: A basic human right. Everyone should have access to safe, nutritious and culturally appropriate food in sufficient quantity and quality to sustain a healthy life with full human dignity. The movement advocates that each nation should declare access to food as a constitutional right and guarantee the development of the primary sector to ensure the concrete realisation of this.
(4) Agrarian reform. A genuine agrarian reform is necessary which gives landless and farming people – especially women – ownership and control of the land they work and returns territories to indigenous peoples. The right to land must be free of discrimination on the basis of gender, religion, race, social class or ideology; the land belongs to those who work on it.
(5) Protecting natural resources. Food sovereignty entails the ongoing care for and sustainable use of natural resources, especially land, water and seeds and livestock breeds. The people who work the land should have the right to practice sustainable management of natural resources and to conserve biodiversity free of restrictive intellectual property rights. This can only be done from a sound economic basis with security of tenure. Healthy soils and reduced use of agro-chemicals are prioritized.
(6) Social peace. Everyone has the right to be free from violence. Food must not be used as a weapon. Increasing levels of poverty and marginalization of the countryside, along with the growing oppression of ethnic minorities and indigenous populations, aggravate situations of injustice and hopelessness; the ongoing displacement, forced urbanization, oppression of and increasing incidence of racism directed at smallholder farmers cannot be tolerated.
(7) Ending the globalisation of hunger. Food sovereignty is undermined by multilateral institutions and by speculative capital. The growing control of multinational corporations over agricultural policies has been facilitated by the economic policies of organisations such as the World Trade Organisation (WTO), World Bank and the International Monetary Fund (IMF), and liberal policies toward regulation and taxation of speculative capital. A strictly enforced Code of Conduct for Multinational corporations is required.

In its efforts to resist and transform these aspects of global food systems, the movement has itself also evolved. According to Martinez-Torres and Rosset (2010), five evolutionary stages can be discerned through which the movement has increasingly organised itself on a transnational basis:
Phase 1 relates to the *emergence* of Via Campesina during the 1980s and early 1990s out of autonomous organisations of peasants, indigenous peoples and ecologists, first in Latin America and then on a global scale, and leading to a transnational social movement seen as defending the forgotten, the peasants and indigenous peoples ignored by the imperative of 'development'.
Phase 2 saw the movement established in *international debate* between 1992 and 1999, when its leaders were able to put forward their arguments for social change on the international stage.
Phase 3 confirmed the important role of social movement and enabled La Via Campesina to take a *leadership role* in global struggles during 2000-2003.
Phase 4 (2004-2008), in which the movement focused on itself, engaging in *internal strengthening* of the organisations of peasants, indigenous peoples and ecologists.
Phase 5, from late 2008 to date, has had the peasant/social movement broadening its scope of activities to *practical opposition* to transnational corporations, disputing with food policy makers and emphasising the convergence of multiple dimensional crises (financial, climate, energy and food), which are seen as also opening new spaces to challenge the dominant food model.

Various authors including Desmarais (2007), Borras (2008), Rosset (2008) and Borras and Franco (2009), have described the ways through which 'the voices of peasants' have been heard, leading to a plurality of collective, anti-hegemonic struggles on various fronts of action challenging trade relations and the social organisation of food production and consumption. These have led to initiatives at some national levels to incorporate the food sovereignty principles in national legislation and national agricultural policies in countries like Venezuela (1999), Senegal (2004), Mali (2006) and Nicaragua (2009). For example, Ecuador (2008) developed a food sovereignty framework law, while Nepal (2007) and Bolivia (2009) have integrated the right to food sovereignty in their interim constitutions (see also Beuchelt and Virchow 2012). Despite the strong evolution of the peasant/social movement and even its embedment in national constitutions, the index for hunger in the

world remains at a serious level. The global food situation is becoming more alarming and still many millions of peasants remain unable to claim their rights in respect of food. The struggles of the peasants to resist the distorted patterns in trade relations, the disconnections of industrialized agriculture from local parameters and the commoditization and decrease in the food quality of agricultural products are exemplary of their fight to strengthen localized food systems and inscribe other patterns in trade relations and production systems.

Threats to localized food systems: Trade relations and misconceptions

Throughout the world, movements of peasants, indigenous peoples, ecologists, producers and consumers are seeking to realise a diversity of autonomous food systems, based on equity, social justice and ecological sustainability (Desmarais 2002, Windfuhr 2005, Desmarais 2007, Pimbert 2006, Borras 2008, McAfee 2008, McMichael 2008, Roling 2008, Rosset, 2008, Borras & Franco 2009, Rosset 2011). The food sovereignty notion recognises that i) there are still many diverse local food systems throughout the world today, particularly in agri-based economies; and ii) most of the world's food is grown, collected and harvested by 2.5 billion plus small-scale farmers, pastoralists, forest dwellers and artisan fisher folk. This food is primarily sold, processed, resold and consumed locally, with more people again deriving their incomes and livelihoods through related work and activities at different points along the food chain, from seed to plate. Across the world, these localized food systems provide the foundations of peoples' nutrition, incomes, economies and culture. They start at the household level and expand to neighbourhood, municipal and regional levels. Despite their current role in and future potential for meeting human needs and sustaining diverse ecologies, locally determined food systems are still largely ignored, neglected or actively undermined by governments, corporations and academic paradigms on development. Peasant/social movements are thus engaged in a continuous struggle within this co-existence of social relations, encoded, that is, either in global food chains or in localized food systems, and through which they aim to transform the patterns (codes) in a range of areas, such as trade relations.

One important threat to the localized food systems comes from the *patterns in international trade relations* and the various governmental measures (trade liberalization policies), which create worsening effects on the localized food systems by integrating smallholder or peasant farmers into unfair competitive trade relations. For example, the EU insisted that African countries open their markets to imports of products like rice, tomatoes and poultry. This measure to liberate trade negatively affected local rice farmers in countries like Ghana, leading to the current situation whereby some 75% of rice consumption is imported (Quaye 2007). Another example is the Central American Free Trade Agreements, whose liberalization of markets resulted in increased imports of basic foods like maize, beans, rice and sorghum, and a steady decline in per capita land area producing these foods (Boyer 2010). Kunneman (2009) has described similar crowding-out effects of trade liberalization due to cheap imports in Africa, focusing on the plight of local milk and maize farmers in Uganda, milk and honey farmers in Zambia, and tomato and poultry farmers in Ghana. Beuchelt and Virchow (2012), Feldman and Biggs (2012), IAASTD (2009), Bello (2008), Murphy (2008) and Boyer (2010) have all looked at the flooding of domestic markets in agro-based developing countries with cheap, subsidized agricultural imports from industrialized countries and the devastating effects this has on local production systems. It is obvious that peasants cannot be expected to compete with global corporate food systems in the international food trade, due to power imbalances in capacities, economies of scale, access and availability of resources (IAASTD 2009) – which explains the emphasis that La Via Campesina places on transforming the patterns of international trade relations.

A second threat to localized food systems comes from the *misconceptions about peasant farming and resulting developmental policies*. Naranjo (2011) identifies the following four misconceptions about peasant farming: (i) peasant farming systems have low productivity and are economically inefficient, (ii) peasants are unable to feed themselves, (iii) peasant farming cannot feed the world's ever-growing population, and (iv) peasant farming leads to environmental degradation. In contrast to this one-sided and negative estimation of peasant economies and their potential for growth – leading to developmental policies of industrialization and modernization of the traditional farming systems – Naranjo (2012) emphasises various mediating factors.

On one hand, there are mediating factors that may contribute to a marginalization of peasant economies, such as (i) the low level of productive resources peasants have or can access, (ii) the limited possibilities for peasants to earn income, and (iii) the limited access of peasants to both domestic markets and fair international trade; on the other hand, meanwhile, there are mediating factors related to peasants' autonomy that may enhance their

economies, including (iv) peasants' control of productive resources, and (v) allocation of their own labour time to agriculture. Indeed, other authors (Patel 2006, Jongerden 2008, Van der Ploeg 2008) emphasise peasants' resistance to marginalization – as illustrated by La Via Campesina – fighting not only against unfair trade relations but also to revive their localized food systems. Instead of accepting the '*dead peasantry' hypothesis* expressed in modernization theory and some Marxist approaches, according to which the peasantry as a class has disappeared, or else inevitably will, Van der Ploeg (2008) emphasises the possibility for an emergence of new peasants who co-exist with the 'food empires' and actually out-perform them in terms of production (see also Long, 2001, 2008, Wiskerke & Ploeg 2004, Jongerden 2008).

Perspectives for localized food systems: post-modern peasants and reconnections

Van der Ploeg is inspired by three lines of reasoning. First, the postmodern peasants are *struggling for autonomy*, to progress in the context of dependency, exploitation and marginalization created by the 'empires' (Hardt & Negri 2000). Second, the postmodern peasants are *playing a critical role in modern society*, influencing the quality of life and of food and promoting sustainable production and consumption. Today's peasants have strong interrelations with society and the environment through the *care* they invest in landscape, biodiversity, food quality, and suchlike: they are an integral part of the present and the future). Third, the 'empires' with their dominant mode of ordering tend to marginalize and destroy the peasantry. Thus, there is a *continuous co-existence of peasant and empire arrangements* through which peasant movements like Via Campesina fight for those arrangements in food production, consumption and trade that give them *new perspectives* for installing their localized food systems. An important strategy in seeking to overcome the threat to localized food systems made by empire arrangements is the effort of peasant/social movements to *go beyond the disconnection* of agriculture from its local parameters, which have become constitutive of the industrialization of food production, and to fight to *regain control* of local eco-systems, knowledge, skills and cultural repertoires.

Various authors (Altieri 1990, Van der Ploeg 1992, Pretty 1995, Long 2001, 2007, Van der Ploeg 2004, Ruivenkamp 2005, Kareiva et al. 2007, Altieri 2009, Wittman 2009) have emphasised the disruptive effects of the patterns of disconnections embedded in the industrialization of agriculture and food production. Wittman (2009), for example, investigates the de-linking of agriculture (society) from nature as a result of agribusiness and corporate food production systems and the destructive effect of these on the socio-cultural and ecological values of peasant farming systems. However, with the re-emergence of peasant farming systems and agrarian citizenship, Wittman (2009) also refers to the potentiality to *reconnect society and nature*, and reminds of the need for society and nature to shape and reshape each other.

Analysing biotechnological developments in global food chains, Ruivenkamp (1989, 2005) argues that current biotechnological developments are shaped by and in turn reinforce three historical processes of disconnections or separations of industrialized agriculture in global food chains: 1) the separation of agriculture from its ecological environment, (2) the separation of agriculture from food, and (3) the separation of agricultural products from their intrinsic nutritional quality. Ruivenkamp emphasises that new technologies are not necessarily related to the socially dominant interest groups of global food chains and inevitably cast in the role of handmaiden to these three separation processes. It is also possible to use technologies precisely to *reunite what has been separated in global food chains* and *recreate and strengthen local food systems* (Ruivenkamp 2007). Ruivenkamp refers to the possibilities of using technologies for a re-coupling of agriculture to its natural environment, restoring the relationship between food production and agricultural production and re-linking the agricultural product with its food quality.

Other authors (Sonnino & Marsden 2006, Appadurai 2008, Levidow 2008, Manzini 2008, Brooks 2011, Carney 2011, Nicholson 2011) have also emphasised the relevance of re-linking agricultural product to food quality. They dispute the food quality implications of industrialized agriculture embedded in global food chains and propose alternative food networks that *reconnect production-consumption* through sustainable and quality processes and products with distinctive taste or freshness. Recurrent food scares and the health-related implications of industrialized foods in the global market have also become a source of worry to many consumers. Dixon (2009) draws attention to the increasingly contested nature of the 'search for nutritional and diet-based ontology security' in a world of shrinking dietary diversity and natural resources. Other examples include the introduction of additives like trans-fatty acids and sugar syrups in mass-produced foodstuffs. Analysing how Italian consumers are increasingly disconnected from their locally produced, healthy

foods, Nicolosi (2006) views process sociologically, in terms of the production of 'orthorexic society'.
Contributing to the dispute on food quality, Patel (2008) refers to the *illusion of choice.* Consumers' belief that they have a choice in deciding what to bring to their dining tables is illusory because, among other reasons, they lack adequate knowledge about how their foods are produced. Patel refers to the iniquity of '*being stuffed or starving*': some people(s) are 'stuffed' with the products of the food multinationals (to wit, the massive rise in obesity), while others, such as peasants in developing countries, suffer not only from the lack of choice – as a result of excessive power wielded by corporate food systems – but also from the unfair competition with farmers in developed economies (who are further advantaged by continued subsidies).

The threats to and perspectives for localized food systems are sites of contestation in many domains, which may be termed 'frontier areas in the struggle of peasants'. This is not only a struggle to *resist the disconnections* in agriculture from local parameters and the specific patterns in trade relations leading to unfair competition and high external market dependency. It also concerns a *fight for changes and reconnections* through, as Harcourt (2008) emphasises, changing our taste, eating locally and seasonally, and supporting sustainable agriculture and locally owned businesses and rural policies, based on living wages for all. In the fight for the realisation of localized food systems through the establishment of reconnections in agriculture and changing food quality characteristics, access to and control over productive resources are crucial issues.

Access to and control over production resources: land and seeds

In challenging the threat to localized food systems, the effort of peasant/social movements to gain access to and autonomy in (control over) production resources is focused on areas such as land, seed, water and technology, as well as access to credit (Young & Mittal 2008, IPC 2008). Here, we introduce issues related to land and seeds.
Agrarian reforms from the struggles for (access to) land have been a key issue in the move for food sovereignty, with, for example, the peasant movements heavily criticising land reforms led by the World Bank as privatising land and transforming it from a collective right or ownership into a tradable commodity where money rather than locality or labour is the key to access. According to Rosset et al. (2006), the World Bank's land policies have worsened the situation of peasants in many participating countries (like Brazil, Thailand and Mexico) because of their market-based approaches with land grabbing for export-led farming and the production of bio-fuels (Rosset 2011, Rosset 2006, Torres 2011).

In respect of the bio-fuel drive, a specific crop (sugar, for ethanol) becomes linked to the land access issue. Another crop-based example from South America is the massive cultivation of soybeans, which has involved huge deforestation in the central Brazilian state of Mato Grosso. Not only has this environmental destruction damaged the indigenous settlements, but the soybean industry has also consolidated the inequality in land distribution (in 2002, there were five million landless families in Brazil).

Discussing the ethical relations underlying production systems in South Asia (India and Bangladesh), Mazhar et al. (2007) have emphasised the relevance of localized rather than globalized food production and consumption systems, particularly for job creation. Indeed, in many places of the world there is an intensive struggle going on for public support/opposition to the various forms and techniques of land redistribution, the results of which may assist either global food chains or smallholders and communities.

In addition to land, peasant movements are also struggling to get access to and control over the development of seeds as another important productive resource. Different perceptions exist among various Relevant Social Groups (RSGs) of this resource. The peasant movements believe that seed is a common heritage of humanity, held in trust by rural communities and therefore should not be treated as a tradable commodity (Altieri 2009, Haugen 2009, McMichael 2009, Koohafkan & Altieri 2011, Ayres & Bosia 2011, Kumbamu 2012). La Via Campesina considers seed to be a key production resource, as the foundation, indeed, of food sovereignty, and vehemently opposes reliance on seed companies when seed can be produced locally. Kloppenburg (1988) showed that with the development of hybrid maize seeds, for example, farmers are encouraged to buy new seeds for planting every year instead of using their own seed from the previous harvest. Hybrid seeds like this strengthen farmers' ties to Multinational Corporation in production systems, while increasing yields also tend to increase affordability risks (when resource-poor farmers see their expensive seed investments lost in times of failed crops).

Ruivenkamp (1989, 2005) looks at how the breeding of new cultivars and the maintenance and propagation of basic seeds originally performed by farmers has increasingly been taken over by public research institutions and multinationals, and how this change in the social organisation of breeding activities has also affected the characteristic of the product. The seed has become a tradable and patented commodity with Trade Related Intellectual Property Rights (TRIPS) effectively giving monopolistic power to private enterprise and increasing the dependency of farmers on the corporations that own the genetic materials and commercial seeds. Indeed, a single company, Monsanto, owns close to 90% of genetically engineered seed in commercial use worldwide (Murphy 2008).

The development of seeds that strengthen the monopolistic power of seed supply companies and create dependency relations of farmers to these companies led Ruivenkamp (1989, 2005) to classify these commercial (and often genetically engineered) seeds as 'politicizing products', in which social relations of monopolistic power and farmer dependency are encoded (inscribed) in the products (as described, above). Parayil (2003) confirms that new forms of crops and plants are developed not just to help alleviate poverty and reduce hunger through productivity improvement, but also to increase the economic power of transnational companies that invest heavily in R&D. The pertinent question here that emerges from this debate is whether and in which ways it will become possible to *re-codify seeds*, to change the politicizing code in the seeds and particularly in ways that may enable the peasants to become a more integral part of the present and future food production system (Van der Ploeg, 2008). In view of this scientific and social debate on the role of seeds for strengthening the sovereignty of local food systems, it is necessary to investigate and unravel the power relations that are encoded in the development of new varieties and market relations, as well as to explore existing practices in order to consider potential possibilities for peasant movements to rewrite the codes (to re-codify), attuning them to the practices of their local food systems and enhancing the access of their food products to domestic markets.

Seed as Common Heritage Vs Tradable Commodity: Implications for Food Sovereignty

The food sovereignty movement describes seed as a common heritage for humankind, that is, seed sovereignty (Altieri 2009, McMichael 2009, Koohafkan & Altieri 2011, Kumbamu 2012), and argues, therefore, that seed should not be treated as a tradable commodity. Seed as key production resource has been one of the critical issues of concern to Via Campesina, foundational to the extent that one might say 'no seed, no food sovereignty'. Unfortunately, the private seed companies (especially Monsanto) have managed to penetrate the global markets with patented modern seed varieties that are available for purchase as a tradable commodity. These private seed companies have justified their claims regarding seed as a private property, patented and tradable, on account of the heavy investments and time-consuming breeding activities undertaken by them (and in collaboration with international breeding centres) in order to transform the otherwise raw germplasm into useful planting materials (Kloppenburg & Klienman 1988). This does not address the issue, however, of why seed should become a tradable commodity when germplasm mostly originating from developing countries used in plant breeding is collected free of charge, that is, as a common good for which no payment is necessary (Bush 1996, Kloppenburg 2010, Coleman & Reed 2011, Prathapan & Rajan 2011). In response, the private seed companies have claimed that compensating for germplasm collection would require an extensive program of genetic monitoring, because genes from various countries may be incorporated into a single cultivar, which make it extremely difficult to credit an original supplier of a particular gene (Kloppenburg & Klienman 1988: 186-189). Although the stance of the private seed companies may be debated, the current situation of small-scale farmers whereby they have to rely on seed companies and other, related and necessary external inputs to realize expected yields from modern seed varieties has caused hybrid seed to become a serious developmental issue for developing and agri-based economies. As stipulated in the food sovereignty principles, peasant farmers are agitating for their rights to access seeds and also, more specifically, for the right of seed autonomy.

From the food sovereignty perspective, seed is (should be) a common heritage, free for all and not a tradable commodity (not tradable, that is, as capital in the market economy). Peasant farmers seek to have their own seed stock season after season to ensure that they do not lose their premium varieties that they have carefully selected over time to meet their own needs (Quaye et al. 2009, Vroom 2009, Kumbamu 2009). For peasant farmers, it is critical that they do not sacrifice their own seed stock for any other thing, as a form of empowerment and seed sovereignty. As also confirmed by Visser (2002), farmers' practices of free exchange of genetic resources are culturally biased: these cultures do not regard genetic resources

as a means of earning income. In fact, farmers' practices of free exchange of genetic resources serve as a way to safeguard and promote the maintenance and development of genetic diversity on-farm, thus contributing directly to farmers' livelihoods and ultimately to a more sustainable agriculture and food sovereignty.

Seed as politicizing products: Implications for agro-technology development and Food Sovereignty

Some authors have described seeds as 'politicizing products' that are used to control small-scale farmers through dependency relationships while neglecting the relevance of the farmer's role in the conservation of genetic resources and biodiversity for food sovereignty (Kloppenburg 1988, 2004, Visser 2002, Parayil 2003, Ruivenkamp 2005, McAfee 2008). For example, Kloppenburg (1988) showed the relevance of the conventional maize production system in terms of produce used as food for home consumption, grain for sale and seed for planting. With hybrid maize seeds, farmers were encouraged to buy new seeds for planting every year instead of using their own seed from the previous harvest. Along with increased yields, therefore, this hybrid seed strengthened farmers' ties to Transnational Corporations (TNCs) in production systems. Again, Parayil (2003) confirms that new forms of crops and plants are developed not just to help alleviate poverty and reduce hunger through productivity improvement but also to increase the economic power of transnational companies that invest heavily in R&D, a situation which leads to an externalization of food production practices.

According to Ruivenkamp (2005), there has been an appropriation and substitution of farmers' activities through agro-industrial processes such as the breeding of new cultivars and the maintenance and propagation of basic seeds that were originally done by farmers but are now completely taken over by public research institutions and multinationals. Recognizing seed as a politicizing product has implications for the politics of seed variety development as a technological development process and the consequential effect on food production practices, an issue that has generated intense academic debate over the years (Kloppenburg 1988, Broerse & Bunders **2000, Machuka 2001,** Vroom 2008, Kumbamu 2009). Instead of the externalization of food production practices through seed politics, Ruivenkamp (2008) emphasized the need to re-connect science and technology developments to local food production networks through the re-codification and tailoring of (bio)technologies to the local environment.

Pimbert (2006) demonstrated the role of decentralized R&D systems in improving peasants' rights to access agro-technology, including seed varieties. He advocated food sovereignty as a radical shift from the existing top-down and increasingly corporate-controlled research system to the entrusting of greater responsibility and decision-making power to farmers, indigenous people, food workers, consumers and citizens. Pimbert considered the types of knowledge (modern vs. local) needed for a transformation towards food sovereignty in the context of bio-cultural diversity and endogenous development. He argued that while modern technologies might be useful, local people should be given the chance to decide on the kinds of technologies they need.

Conclusion

Agri-based economies are becoming increasingly dependent on foreign (outside) markets and losing their autonomy in food production and distribution (Windfuhr 2005). However, there are possibilities to re-link local production and consumption. This involves reconnecting local productive resources and local access to healthy and nutritious food for enhanced food sovereignty. Access to markets (both domestic and international) for smallholder farmers, which is one of the principles governing the food sovereignty concept, requires that local actors take control over their own production and consumption decisions. Historically, the local market served as a tool to facilitate production-consumption linkages in local food networks, but in recent decades the global market has effected a disconnection of such linkages. Global market forces have succeeded in crowding out small-scale farmers from their domestic markets and also made the international market inaccessible through unfair trading policies (UNCTAD, 2008).

This paper has reviewed some of the literature on the concept of food sovereignty regarding threats to localized food systems, trade relations, access to production resources and perspectives for re-linking localized food production and consumption systems. Peasants are fighting for their place in a re-linkage of local production and consumption and their rights to access production resources, particularly land and seed. Contributing to the debate on food sovereignty, we reaffirm the role of seed as a common heritage rather than a tradable commodity and the implications for food sovereignty among postmodern peasants. We emphasise the need to investigate and unravel the power relations that are encoded in the development of new varieties and market relations, so as to support enhanced food sovereignty.

Governments and policy makers in developing economies need to create the political space that can generate local ideas and commitments to assist farmers and enable them to take advantage of market opportunities.

References

[1] Altieri, M.A. 1990. Agro-ecology and rural development. In: Altieri, M.A. and Hecht, J.B. (eds. Agroecology: The Science of Sustainable Agriculture (pp. 113-118). CRC Press, Florida.

[2] Altieri, M.A. 2009. Agroecology, small farms, and food sovereignty. *Monthly Review* 61(3):102-113.

[3] Appadurai, A. 2008. How to make a national cuisine: cookbooks in contemporary India. In: Counihan, C. and van Esterik, P. (eds). Food and Culture Routledge Taylor and Francis groups, New York; pp. 289-307

[4] Ayres, J. and M.J. Bosia. 2011. Beyond Global Summitry: Food Sovereignty as Localised Resistance to Globalization. *Globalizations* 8(1):47-63.

[5] Bello, W. 2008. How to manufacture a global food crisis. Development 51(4):450-455.

[6] Beuchelt, T.D. and Virchow Detlef. 2012. Food sovereignty or human right to adequate food: which concept serves better as international development policy for global hunger and poverty reduction? *Agriculture and Human Values* 29:259-273

[7] Borras, S.M. and J.C. Franco. 2012. Global Land Grabbing and Trajectories of Agrarian Change: A preliminary Analysis. *Journal of Agrarian Change*, 12(1):34-59.

[8] Boyer, J. 2010. Food Security, food sovereignty, and local challenges for transnational agrarian movements: the Honduras case. *Journal of peasant Studies* 37(2):319-351

[9] Brooks, S. 2011. Is International agricultural research a global public good? The case of rice biofortification. *Journal of Peasant Studies* 38(1):67-80

[10] Bush, S.B. 1996. Is common heritage Outmoded? In valuing local knowledge, Indigenous People and Intellectual Property Rights. (Eds) S.B. Brush pp.143Island Press,Washington, DC. USA.

[11] Carney, M. 2011. The Food Sovereignty Prize: Implications for Discourse and Practice. *Food and Foodways*, 19:169-180.

[12] Coleman, W.D. and Reed A.J. (2011). Plant Genetic Resourcs, farmers' Rights and the Globalisation of Intellectual Property Rights: Reinforcing Asymmetries in *Autonomies.In Property, Territory and Globalisation* (Ed) Coleman WD, pp.172- 193, UBC Press University of British Columbia.

[13] Desmarais, A.A. 2002. 'The Via Campesina: Consolidating an international peasant and farm movement'. *Journal of Peasant Studies* 29: 91-124.

[14] Desmarais, A.A. 2007. La Via Campesina: Globalisation and the Power of Peasants. London: Halifax:Fernwood Publishing.

[15] Desmarais, A.A. 2008. The power of peasants: Reflections on the meaning of La Via Campesina. *Journal of Rural Studies* 24(2):138-149.

[16] Dixon, J. 2011. Diverse food economies, multivariant capitalism, and the community dynamic shaping contemporary food systems. *Community Development Journal* 46(1):20-35.

[17] Feldman, S. and S.Biggs. 2012. The Politics of International Assessments:The IAASTD Process, Reception and Significance. *Journal of Agrarian Change* 12(1):144-169.

[18] Harcourt, W. 2008. Food Sovereignty and the Right to Live. *Development* 51(4):439-441

[19] Hardt, M. and Negri, A. 2000. *The Empire*. Harvard University Press.

[20] Haugen, H.M. 2009. Food Sovereignty-An appropriate approach to ensure the right to food? *Nordic Journal of International Law* 78(3):263-292.

[21] IAASTD, 2009. Agriculture at crossroads, Synthesis Report of the International Assessment of Agricultural Knowledge, *Science and Technology for Development*. Washington DC:Island Press

[22] IPC, 2008. International Planning Committee for Food Sovereignty. *Civil Society statement on the world food emergency: No more "failures as usual"!* www.foodsovereignty.org accessed 28 February 2012

[23] Jongerden, J. 2008. First the peasant? Some reflections on modernity, technology and reconstruction. Ín: *Reconstructing biotechnologies: Critical social analyses*. Ruivenkamp, G., Hisano, S. and Jongerden, J. (eds.) Wageningen Academic Publishers: pp. 119-142.

[24] Kareiva, P., S. Watts, R. McDonald and T. Boucher. 2007. Domesticated Nature: Shaping landscapes and ecosystem for human welfare. *Science*, 316:1866-1869.

[25] Kloppenburg, J.R. 1988. First the Seed. The political economy of plant biotechnology 1492-2000. Cambridge: Cambridge University Press.

[26] Kloppenburg, J.R. and Klienman D.L. (1988). Seeds of Controversy: National Property Vs Common heritage. In *Seeds and Sovereignty, The Use and Control of Plant Genetic Resources*. (Eds) Kloppenburg JR pp.173-191. Duke University Press, USA.

[27] Kloppenburg, J.R. 2004. 'Still the Seed: plant biotechnology in the twenty-first century'. In: First the seed. *The political economy of plant biotechnology 1492-2000 Second edition*.Madison, Wisconsin: The University of Wisconsin Press.

[28] Kloppenburg, J.R. 2010. Impeding Dispossession, Enabling Repossession: Biological Open Source and Recovery of Seed Sovereignty. *Journal of Agrarian Change* 10(3):367-388

[29] Koohafkan, P. and M.A. Altieri. 2011. *Globally Important Agricultural Heritage Systems: A Legacy for the future*. Food and Agriculture Organisation, United Nations, Rome, 2011. Pp.49

[30] Kumbamu, A. 2012. Agri-food Sector's Response to the Tripple Crisis:Sustaining Local Social Initiatives in Andhra Pradesh, India. *Development*, 55(1):104-111.

[31] Kumbamu, A. 2009. The Global Knowledge Encounter: A Sociological Analysis of the Introduction of genetically modified seed in Warangal, India. *International Social Science Journal*, 60(195):25-36.

[32] La Via Campesina 2002. Proposal for family farm based, sustainable agriculture. Available at www.viacampesina.org accessed on 28-02-12.

[33] Levidow, L. 2008. European quality agriculture as an alternative bioeconomy. In *Reconstructing Biotechnologies: Critical Social Analysis* (ed. by G. Ruivenkamp, S. Hisano & J. Jongerden),pp. 185–205. Wageningen Academic Publishers, Wageningen, the Netherlands.

[34] Long, N. 2001. Development Sociology: Actor perspectives, Routledge, London UK.

[35] Long, N. 2007. Resistance, agency and counter-work: A theoretical positioning. In:Wright, W. and Middendorf, G. (ed.) *Food fights*, Penn State University Press, Pennsylvania.

[36] Machuka, J. 2001. Agricultural Biotechnology for African Scientist: Farmers must feed their own people. *Plant Physiology* 126: 16-19.

[37] Martinez-Torres, E.M. and P.M. Rosset. 2010. La Via Campesina: The birth and evolution of a transnational social movement. *Journal of Peasant Studies* 37(1):149 -75

[38] Mazhar, F., Buckles, D., Satheesh, P.V. and F. Akhter. 2007. Food Sovereignty and Uncultivated Biodiversity in South Asia: Essay on the Poverty of and the Wealth of the Social Landscape. *Food Policy Research for Development Alternatives*, Dhaka, Bangladesh 2007 New Delhi Academic Foundation, pp. 75.

[39] Manzini, E. 2008. Agriculture, food and design: new food networks for a distributed economy. In *Reconstructing Biotechnologies: Critical Social Analysis* (ed. by G. Ruivenkamp, S. Hisano & J. Jongerden), pp. 207–215. Wageningen Academic Publishers, Wageningen, the Netherlands.

[40] McAfee, K. 2008. *Beyound Techno-science: Transgenic Maize in the Fight Over Mexico's Future. Geoforum* 39(1):148-160.

[41] McMichael, P. 2009. A food regime genealogy. *The Journal of Peasant Studies* 36(1):139-169.

[42] Murphy, S. 2008. Globalisation and corporate concentration in the food and agriculture sector. *Development* 51(4):527-533

[43] Naranjo, S. 2012. Enabling Food Sovereignty and a prosperous future for peasants by understanding the factors that marginalize peasants and lead to poverty and hunger. *Agriculture and Human Values* 29(2)231-246.

[44] Nicolosi, G. 2006. Biotechnologies, alimentary fears and the orthorexic society. *Tailoring Biotechnologies* 2(3):37-56

[45] Nicholson, P. 2011. Food Sovereignty:Alliances and Transformation In *Food Movements Unite!* (eds) Eric Holt-Gimenez, Food First Books, Oakland, California.

[46] Parayil, G. 2003. Mapping Technological Trajectories of the Green Revolution and the Gene Revolution from Modernization to Globalization, *Research Policy*, 32(6):971-990.

[47] Patel, R. 2006. International agrarian restructuring and the practical ethics of peasant movement solidarity. *Journal of Asian and African studies*; 41(1-2): 71-93.

[48] Patel, R. 2008. Stuffed and Starved: The Hidden Battle for the world food system. *Development* 51:564-565.

[49] Patel, R. 2009. What does Food Sovereignty look like? *Journal of Peasant Studies* 36(3):663-706.

[50] People's Food Sovereignty Network. 2004. *Beijing Declaration from NGO/CSO Regional Consultation:From Agenda to Action' Follow-up to the NGO/ Forum for FoodSovereignty*. www.peoplesfoodsovereignty.org/statements/new/23.htm

[51] Prathapan, K.D. and P.D. Rajan. 2011. Biodiversity access and Benefit-Sharing:weaving a rope of sand. *Current Science* 100(3):290-293.

[52] Pimbert, M. 2006. *Transforming Knowledge and ways of knowing for food sovereignty*. The

International Institute for Environment and Development (IIED), London UK.

[53] Pimbert, M. 2008. *Towards Food Sovereignty:Reclaiming autonomous food systems.*London: International Institute for Environment and Development

[54] Quaye, W. 2007. Food Sovereignty and combating poverty and hunger in Ghana. *Tailoring Biotechnologies* 3 (2): 101-108.

[55] Quaye, W**., G.** Frempong, J. Jongerden and G. Ruivenkamp. 2009. Exploring Possibilities to Enhance Food Sovereignty within the Cowpea Production-Consumption Network in Northern Ghana. *Journal of Human Ecology 28(2)83-92.*

[56] Reardon, J.A.S. and R.A. Perez. 2010. Agroecology and the development of indicators of food sovereignty in Cuban food systems. *Journal of sustainable Agriculture* 34(8):907922.

[57] Rosset, P., R. Patel and M. Courville. 2006. Promised Land: Competing Visions of Agrarian Reforms, Oakland: Food First Books

[58] Rosset, P. 2008. 'Food Sovereignty and the contemporary food crisis'. *Development* 51 (4):460 463.

[59] Rosset, P. 2011. Food Sovereignty and Alternative Paradigms to confront land grabbing and the food and climate crisis. *Development* 54(1):21-30.

[60] Roling, N. 2008. 'The Future of food and farming: Complexity Thinking andSocial Development'. *The Broker* Issue 7, Ap ril 2008 www.thebrokeronline.eu.

[61] Ruivenkamp, G. 1989. *Introduction of biotechnology into the agro-industrial chain of production. Changing over to a new organization of labour*. (English Summary) Jan van Arkel Uitgeverij. Utrecht.

[62] Ruivenkamp, G. 2005. Between Bio-Power and Sub-Politics: Potentialities, Actualities and Spaces. *Tailoring Biotechnologies* 1(1):11-32.

[63] Ruivenkamp, G. 2008. Biotechnology in development: Experiences from the South. Wageningen Academic Publishers. The Netherlands, pp. 25-27.

[64] Sonnino, R. and T. Marsden. 2006. Beyond the divide: rethinking relationships between alternative and conventional food networks in Europe. *Journal of Economic Geography*, **6**, 181–199.

[65] Torres, F. 2011. La Via Campesina: Peasant-led agrarian reform and Food Sovereignty. *Development* 54(1):49-54.

[66] UNCTAD, 2008. *United Nations Conference on Trade and Development, 2008 Report*. Available at www.unctad.org. Accessed on October 2008.

[67] Van der Ploeg, J.D. 1992. The Reconstitution of locality: Technology and Labour in Modern

[68] Agriculture. Uneven development and the rural labour process, In: Marsden, T., Lower,

[69] P. and Whatmore, J. (eds). *Critical perspectives on rural change* Series iv,David Fulton Publisher, London, pp.19-43.

[70] Van der Ploeg, J.D. 2007. The third agarian crisis and the re-emergence of processes of repeasantization. *Rivista di Economia Agraria LX11 (3) 325-332.*

[71] Van der Ploeg, J.D. 2008. *The New Peasantries, Struggles for autonomy and sustainability in an era of empire and globalization*. Earthscan, UK.

[72] Visser, B. 2002. An agro-biodiversity perspective on seed policies. *Journal of New Seeds* 4: 231–245.

[73] Vroom, W. (2008). Redesigning (bio) technology: experience of a public-private partnership in the development of pro-poor transgenic cabbages in India. *The European Journal of Development Research* 20(3):399-415.

[74] Vroom, W. 2009. *Reflexive biotechnology development: Studying plant breeding technologies and genomics for agriculture in the developing world* PHD thesis, Vrije Universiteit, Amsterdam.

[75] Windfuhr, M. 2005. `*Food Sovereignty towards democracy in localized food systems'*. Discussion Paper 2005, FIAN, Germany. Published by ITDG Publishing www.itdgpublishing.org.uk

[76] Wiskerke, J.S.C. and *van der* Ploeg, J.D. 2004. Essays on novelty production, niches and regimes in agriculture: In *Seeds of Transition* Royal Van Gorcum, pp. 1-30.

[77] Wittman, H. 2009. Reworking the metabolic rift: La Via Campesina, agrarian citizenship, and food sovereignty. *Journal of Peasant Studies* 36(4)805-826.

[78] Young, S. and A. Mittal. 2008. Food Prize crisis*: A wake Up Call for Food Sovereignty*. Oakland Institute Policy Brief. Oakland, CA www.oaklandinstitute.org. Accessed 28 February 2012.