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PEASANTS & NATURE

THE ROLE OF PEASANTS IN OPENING UP A RANGE OF OPPORTUNITIES FOR FUTURE GENERATIONS

TESIS DOCTORAL
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To Orphée and Nicholas, my dear twin boys

The future generation

Acknowledgments

I would like here to thank those who helped me in this research and those who did not. They may have influenced this work as much. Usually it is as if acknowledgements should be positive and news on the TV negative. But perhaps acknowledgements could also be negative (and news on the TV positive). Beyond the amazing people I had the privilege to encounter, this is also the result of the negative experiences I have had and the awful people I met. Somehow, sometimes, life turns the other way round and pushes us to explore new territory. Things are often not the way we expect them to be. And then, one person, one instant, one split second can make a whole difference.

I would like here to bring some words I read a few days ago:

Words by Hazrat Inayat Khan, Sufi poet:

> *I asked for strength and God gave me difficulties which made me strong. I asked for wisdom, so God gave me problems which I learned to solve. I asked for prosperity, so God gave me a brain and brawn to go to work. I asked for courage and God gave me dangers to overcome. I asked for love, and God gave me people to help. I asked for favors, but God gave me opportunities. I received nothing I wanted, I received everything I needed.*

So thank you to the poets, the writers, the teachers, the friends, the peasants…The list of those I would like to thank is long. I will just bring here very few and thank all the others wholeheartedly.

Thank you to my parents and family for being who they are: Unique and extraordinary.
Thank you to Aksel, for his commitment, constancy, patience and amazing good heart, all of which have encouraged me all along this work.
Thank you to Chema, a truly wise and gentle man, without whom even the thought of this work could never have emerged. Thank you for his continuous support and guidance.
Thank you to Jan Douwe for the happiness I felt when I read his books on peasants and could finally see, written black on white, the answers to many questions which had followed me for years.

This is how my nights filled with stars.

Abstract

This research is about peasants and nature. The aim is to study the way in which peasant farming[1] opens up a range of opportunities for future generations. The scope is global, including both Global South and Global North.

The following questions have guided this research:

i. Are peasants disappearing or increasing and where?
ii. What are the values they create in relation to nature?
iii. Which approach could facilitate a shift towards a more peasant way of farming?

To answer these questions I have used a methodology based on literature reviews, analysis of world data and statistics, interviews, field enquiries, case study analysis, lessons learned and identification of knowledge gaps. The increased relevance of the characteristics of peasant farming to contemporary challenges, and the fact that it has received little attention in the past, makes it a unique ground for further research. It is hoped that this work will bring some contribution to the creation of innovative support mechanisms including financial, legal and technical tools and instruments, and to the design and implementation of postmodern policy approaches in support of the peasant way of farming.

The thesis is divided into four sections progressively building upon the results of each other. It also includes an introduction, a discussion of results and a conclusion. Elements of this research have been published in two books, translated in four languages, one of which launched at the 2012 UN Conference on Sustainable Development, Rio+20, and at the Rio People's Summit. Both books have been distributed to country organizations as well as to different agriculture and development ministries in Africa, Asia, Latin America and the Caribbean. They have also been distributed to world development networks and to international agricultural conferences and events. This research has been the basis for the creation of an international pro-peasant platform engaged in the development of specific tools and instruments dedicated to peasant farming.

[1] Peasant farming is defined in Section I p.40. Peasants are people involved in peasant farming.

Resumen

Esta investigación es sobre los campesinos y la naturaleza. El objetivo es estudiar el modo en el que la agricultura campesina[2] abre un abanico de oportunidades a las generaciones futuras. El alcance es global, incluyendo tanto a países en desarrollo como a países desarrollados.

Las siguientes preguntas han guiado esta investigación:

1. ¿Están los campesinos desapareciendo o aumentando?¿Y dónde?
2. ¿Cuáles son los valores que ellos crean en su relación con la naturaleza?
3. ¿Qué enfoque podría facilitar un cambio hacia una agricultura más campesina?

Para responder a estas preguntas hemos utilizado una metodología basada en la revisión de literatura (revisión de publicaciones científicas), análisis de datos y estadísticas mundiales, entrevistas, investigaciones de campo, estudios de caso, lecciones aprendidas y la identificación de déficit de conocimiento. La relevancia cada vez mayor de las características de la agricultura campesina frente a los retos actuales, y el hecho de que haya recibido poca atención en el pasado, la convierte en un terreno único para futuras investigaciones. Con este trabajo se espera promover alguna contribución a la creación de mecanismos de apoyo innovadores, incluyendo diferentes tipos de herramientas (financieras, legales y técnicas) y al diseño de políticas agrícolas postmodernas que integren las características de la agricultura campesina.

La Tesis está dividida en cuatro secciones complementarias. Se incluye una introducción, una discusión de los resultados y una conclusión. Elementos de esta investigación fueron publicados en dos libros traducidos a cuatro idiomas, con una versión actualizada y reimpresa, uno de los cuales fue presentado en la Conferencia de las Naciones Unidas sobre Desarrollo Sostenible – Rio+20 en 2012 y en la Cumbre de los Pueblos. Ambos libros han sido distribuidos por diferentes países, así como también a diversos ministerios de agricultura y desarrollo en África, Asia, América Latina y El Caribe. También han sido distribuidos en redes de desarrollo y en conferencias y eventos internacionales sobre agricultura. Esta investigación ha sido la base para la creación de una plataforma internacional pro-campesina involucrada en el desarrollo de herramientas e instrumentos específicos dedicados a la agricultura campesina.

[2] La agricultura campesina está definida en la sección I p.40. Los campesinos son las personas que practican la agricultura campesina.

Resum

Aquesta investigació és sobre els camperols i la natura. L'objectiu és estudiar el mode en el qual l'agricultura camperola[3] (tradicional) obri un ventall d'oportunitats a les generacions futures. L'abast és global, incloent tant països en desenvolupament com països desenvolupats.

Les següents preguntes han guiat aquesta investigació:

1. Estan els camperols desapareguent o augmentant? i on?
2. Quins són els valors que ells creen en la seua relació amb la natura?
3. Quin enfocament podria facilitar un canvi cap a una agricultura més camperola?

Per a respondre aquestes preguntes hem utilitzat una metodologia basada en la revisió de literatura (revisió de publicacions científiques), anàlisi de dades i estadístiques mundials, entrevistes, investigacions de camp, estudi de cas, lliçons apreses i la identificació de dèficit de coneiximent. La rellevància cada vegada major de les característiques de l'agricultura camperola front als reptes actuals i el fet de que haja rebut poca atenció en el passat, la converteix en un terreny únic per a futures investigacions. Amb aquest treball s'espera promoure alguna contribució a la creació de mecanismes de recolzament innovadors, incloent diferents tipus d'eines (financeres, legals i tècniques) i al diseny de polítiques agrícoles post-modernes que integren les característiques de l'agricultura camperola.

La Tesi està dividia en quatre seccions complementàries, a més s'inclou una introducció, una discussió dels resultats i una conclusió. Elements d'aquesta investigació foren publicats en dos llibres traduïts a quatre idiomes, amb una versió actualitzada i reimpresa, un dels quals fou presentat en la Conferència de les Nacions Unides al voltant del Desenvolupament Sostenible – Rio + 20 en 2012 i a la Cimera dels Pobles. Ambdós llibres s'han distribuït per diferents països, així com també a diversos ministeris d'agricultura i desenvolupament a Àfrica, Àsia, Amèrica Llatina i El Carib. També s'han distribuït en xarxes de desenvolupament i en conferències i esdeveniments internacionals sobre agricultura. Aquesta investigació ha sigut la base per a la creació d'una plataforma internacional pro-camperola involucrada en el desenvolupament d'eines i instruments específics dedicats a l'agricultura camperola.

[3] L'agricultura camperola està definida en la secció I p.40. Els camperols són les persones que practiquen l'agricultura camperola

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Agriculture is the profession of the wise, the most dignifying for any free human being

Cicero, De Officiis, i, 42-151

INTRODUCTION

INTRODUCTION

I came into the grounds of agronomy somehow by hazard. My true passion since I was a child has always been biology; the science of life. And my constant query: evolution.

This work comes as the result of years of work with and about those who co-evolve with nature: the peasants of this world. As knowledge and experience grew, together with age, it became obvious that I had to verify an intuition: That those who work closest to nature are those who open up a range of opportunities for future generations. If this was true, then development could only be understood as the best possible management of interactions. Relationships would then be at the centre of all living things, both organisms and populations. This thinking was totally opposed to the dominant discourse of the development agenda of the organizations I worked for.

These pages are the result of this query. As the work progressed, it became clear that it was unveiling a reality with more depth than anticipated: The *mystery of farming*[4], a timeless wisdom all too often unknown. I felt there was a need to illustrate the central role of peasants to our societies, and, beyond, to reflect on possible approaches and mechanisms that could unleash that formidable potential; a potential that probably lies within each one of us, should we allow it to emerge.

This work is built upon four pillars:

The first section presents a *State of the Art* of the concept of peasants. It looks back into the early literature and proposes an *overview* with a discussion on those who thought of *persistence* of peasants and those who imagined *disappearance*. It also touches upon the notion of *livelihoods* and it highlights the intrinsic qualities of what it means to be a peasant, presenting the characteristics of *peasant farming* which helps to understand why it has such relevance in today's world.

The second section is a picture of the *Status and Trends*. It analyses available data and official statistics to understand the importance of peasants worldwide and if numbers are increasing or decreasing. In the process it shows the current gaps in data and the need to introduce new classifications and differential criteria. The analysis of the *Status* (a static

[4] Ploeg (2008)

picture in time), and the *Trend* (an evolution during the last three decades), and the resulting maps, have been made possible thanks to the generous contribution of the staff of the FAO Statistics Division and the Geospatial Mapping Unit.

The third section is about the *Role and Value* of peasant farming to societies and nature. It encompasses a review of available literature on sustainable and *ecological agriculture*, including research and field studies in all continents. It is based on twenty five years of work of the author in agricultural development and farming communities in Africa, Asia, Latin America, the Caribbean, and Europe. The values of peasant farming and their role to societies are illustrated in *graphs on peasant farming*.

The fourth section is about the *Transition steps* for agricultural development: a new conceptual framework grounded on the analysis and lessons learned from successful transitions worldwide. This section proposes *Twelve Steps for a Transition;* steps that can facilitate viable food systems within dynamic communities based on local decision-making and self-determination, or, in other words, on endogenous and democratic processes. The steps are represented as a painting metaphor, with an open space in the middle for the local communities to draw their futures as they wish. A brief synapse of enabling policies is presented at the end.

Elements of this research have been published in two books, (the first one reviewed by a dozen Civil Society Organizations), both with extensive international distribution to organizations and networks and to world development conferences and events.

These publications are:

- *A Viable Food Future* Part I and Part II, first published by The Development Fund in 2010 in three languages, and Part I reprinted with an updated and revised version in 2011.
- *Agricultural Transition, a different logic,* published in four languages by The More and Better Network in 2012 and launched at the Rio +20 United Nations Conference on Sustainable Development in June 2012.

PEASANTS STATE OF THE ART

PEASANTS STATE OF THE ART

An overview

Until recently, the word *peasant* seemed to belong to a terminology of the past. Interestingly enough, the very notion of peasant, and the related peasantry and repeasantisation are being reconceptualized and seem to be, more than ever, part of today's reality.

The word comes from the 15th century French *païsant* which means coming from the *pays*, the countryside. Peasants made up most of agricultural labour-force in pre-industrial societies. As such, the majority of the people in the Middle Ages were peasants. In the western world, with the Industrial Revolution, factory-workers came to occupy large parts of the socio-economic stratum formerly held by medieval peasants. In the 14th century Eastern Europe peasants largely continued upon the medieval path until the 18th and 19th centuries. Serfdom was abolished in Russia in 1861, and while many peasants remained in areas where their family had farmed for generations, the changes did allow for the buying and selling of lands traditionally held by peasants. In Germany, peasants continued to center their lives in the village, well into the 19th century. They belonged to a corporate body and participated in managing the community resources and to monitor community life. In France the 19th century life of peasants in the villages is well described by Eugen Weber (Weber 1976).

The literature has often left records that tended to dismiss peasants as rustic figures, and the term *peasant* came to have a pejorative rather than descriptive connotation in historical memory. Society was theorized as being organized into three estates: those who work, those who pray, and those who fight (Southern 1952). But the Annales School of French historians, a group of historiographers who chronicled what they called the *longue durée*, or the long-term rhythms of material life, did emphasize the importance of peasants. Its leader Fernand Braudel devoted the first volume: *The Structures of Everyday Life* of his major work, *Civilization and Capitalism 15th–18th Century* (Braudel 1981) to the largely silent and invisible world that existed below the market economy.

Legends also have reflected the importance of peasants. One such example is the legend of the Gordian Knot, which talks about the ingenuity of peasants as follows[5]:

> *At one time the Phrygians were without a king. An oracle at Telmissus (the ancient capital of Phrygia) decreed that the next man to enter the city driving an ox -cart should become their king. A peasant farmer named Gordias drove into town on an ox-cart. His position had also been predicted earlier by an eagle landing on his cart, a sign to him from the gods, and on entering the city Gordias was declared king by the priests. Out of gratitude, his son Midas dedicated the ox-cart to the Phrygian god Sabazios (whom the Greeks identified with Zeus) and either tied it to a post or tied its shaft with an intricate knot of cornel (*Cornus mas*) bark. The ox-cart still stood in the palace of the former kings of Phrygia at Gordium in the fourth century BC when Alexander arrived.*

Research in the field of peasant studies was promoted by Florian Znaniecki, a polish sociologist who gained international fame as the co-author of the *The Polish Peasant in Europe and America* 1918-1920 (Znaniecki and Thomas 1918-1920) considered the foundation of modern empirical sociology and humanist sociology. Interestingly, his thoughts based on studying peasants go beyond peasants themselves to encompass the whole of human behavior. Znaniecki adds a new label to the idealism and realism labels of the time, with culturalism, a third way to look at the world. According to the culturalist perspective, sociology being the study of human being, should deal with the effects of culture. Sociology should therefore analyze social relations, which are composed of values. These values are the key in peasant relationships and the base of negotiation and collaboration (see Annex I: *The shared values of the peasant community Catacaos, Peru*).

In the same line, the works of Fei Xiaotong, renowned China's sociologist and anthropologist, were instrumental in introducing social and cultural phenomena of China to the international community especially through his writings about peasant life in China (Xiaotong 1939). His most important contributions to anthropology is the concept that Chinese social relations work through social networks of personal

[5] From: http://en.wikipedia.org/wiki/Gordian_knot (accessed August 2013)

relations with the self at the center and decreasing closeness as one moves out. Again the importance of relationship is highlighted.

This school of thoughts was also reflected in Robert Redfield's works, an American anthropologist and ethnolinguist who published in 1956, *Peasant Society and Culture* (Redfield 1956). A series of field studies starting on Mexican communities brought him to embrace a forum for interdisciplinary thought that included archaeology, anthropological linguistics, physical anthropology, cultural anthropology, and ethnology. As he did research, he realized he had been trained to treat society as an isolated culture. However, he stressed that people were involved with trade, and there were connections between villages and states. More than that, the village culture was not bounded. Beliefs and practices were not isolated. Redfield realized it did not make sense to study people as isolated units, and opened a broader perspective called the *great tradition* as opposed to the *little tradition*. The need of broader perspectives and breakage of artificial boundaries became a necessary baseline for his work.

In the 1960s, anthropologists and historians began to rethink the role of peasant revolt[6] in world history and in their own disciplines. Peasant revolution was seen as a response to capitalism and imperialism (Wolf 1966). One interesting example of such revolt back in History is reflected, in 1525, in the *Twelve Articles of the Swabian Peasants* (see Annex II) which reveals the social conflicts within and around the South German peasant communities of the early sixteenth century.

The anthropologist Eric Wolf, for instance, drew on the work of earlier scholars in the Marxist tradition such as Daniel Thorner, an American-born economist known for his work on agricultural economics and Indian economic history, who saw the rural population as a key element in the transition from feudalism to capitalism. Wolf criticized both Marx and the field of modernization theorists for treating peasants as lacking the ability to take action.

James C. Scott focused on the ways subaltern people resist dominance. His original interest was in peasants in Malaysia and his field observations convinced him that villagers were active participants in their local politics even though they were forced to use indirect methods.

[6] For a list of peasant revolts see http://en.wikipedia.org/wiki/Peasant_revolt (accessed November 2013).

He wrote the *Moral Economy of the Peasant* (Scott 1976) and emphasized the traditional forms of solidarity which break down with the introduction of market forces. Samuel Popkin in his book *The Rational Peasant* (Popkin 1979) tries to refute this argument by showing that peasants are also rational actors who prefer free markets to exploitation by local elites. Scott and Popkin thus represent two radically different positions in the debates in political anthropology.

Many of these activist scholars looked back to the Peasant movement in India and to the theories of the revolution in China led by Mao Zedong starting in the 1920s. One important outlet for their scholarly work and theory was the *Journal of Peasant Studies* established in 1973 with Terence J. Byres, Charles Curwen, and Teodor Shanin as founding editors.

Some, such as Alexander V. Chayanov, Soviet agrarian economist, scholar of rural sociology and advocate of agrarianism and cooperatives, predicted the shift of power into peasants hands (Chayanov 1920). He was a proponent of agricultural cooperatives, but was sceptical about the efficiency of large-scale farms. Chayanov's scepticism was rooted in the idea that households, especially peasant households which practice subsistence farming, will tend to produce only the amount of food that they need to survive. He believed that the Soviet government would find it difficult to force these households to cooperate and produce a surplus. These views were sharply criticized by Joseph Stalin (Chayanov was sentenced to five years in labour camps, his wife 18 years, and he was shot to death the day of his release). However, Chayanov was ultimately shown to be right about the problems with Soviet agricultural planning (about Chayanov see Ploeg 2013).

Chayanov's major works, *Peasant Farm Organisation* (Chayanov 1925) and *On the Theory of Non-Capitalist Economic Systems,* illustrating his theory of the peasant household strongly influenced economic anthropology. His theory is that the higher the ratio of dependents to workers in a household, the harder the workers have to work. Chayanov proposed that peasants would work as hard as they needed in order to meet their subsistence needs, but had no incentive beyond those needs and therefore would slow and stop working once needs were met.

The principle, which is called the *consumption-labour-balance principle*, is therefore that labour will increase until it meets (balances) the needs (consumption) of the household. This view of peasant farming implies

that it will not develop into capitalism without some external, added factor. Furthermore, the peasant's way of life is seen as ideologically opposed to capitalism in that the family works for a living, not for a profit. In practice, the consumption-labour-balance principle means that accounting is not as precise on a farm as it is in a regular financial capitalist company. This, as there is no separation between capital and labour. Accounting works with an artificial cost structure which charges all kinds of costs which in reality, a farm does not have. For example, wage and farm-grown animals as well as organic fertiliser and animal feed are charged against commercial (synthetic) fertiliser and animal feeds. A bought tractor is written off in four years against the bought value while the farmer often buys a second hand tractor and carries along with it for another 15 years.

The work of Chayanov is today drawing more attention among Western scholars than ever before. Largely ignored in his native Russia because they differed from Marxist-Leninist theory, and neglected in the West for more than forty years, Chayanov's theories were at last published in English in 1966. In his novel *My brother Alexei's journey into the land of peasant utopia* (1920) his hero wakes up in 1984, *in a country where the village has conquered the city, where handicraft cooperatives have replaced industry*. Today, a century later, Chayanov's writings take even greater relevance.

Following this overview, the next chapter looks now into the disappearance, or otherwise, of peasants.

Persistence or disappearance

In his Age of Extremes (1994), Eric Hobsbawm declares that *the most dramatic change in the second half of this century, and the one which cuts us forever from the world of the past, is the death of the peasantry*. As controversial as it may appear, this claim is reflective of what is commonly accepted to be a major part of the development process. Depeasantization, defined by Deborah Bryceson (Bryceson, 1999) as *the erosion of an agrarian way of life that combines subsistence and commodity agricultural production with an internal social organization based on family labour and village community settlement*, is taken as a parallel process of modernization and industrialization. Most commonly measured through rates of urbanization, it seems to be irrefutable that depeasantization is occurring at an ever-increasing pace.

But Johnson (2004) refutes the fact that the urbanization of the planet is a key indicator of the death of the peasantry. She considers that it is too narrow a view to parallel the trend that sees a decrease in the rural population to a decrease in the peasantry.

Depeasantization is contested. At the most basic level, the utter destruction of the peasantry is challenged; it is argued that the peasant way of life will always exist in some form. If the peasantry is a unit engaged in a form of production based solely on agriculture, then Johnson considers that the world is indeed witnessing a process of widespread depeasantization. If seen as a population whose *form of production remains driven by subsistence and retains some control over the means of production*, however, the peasantry still exists as populations employ diverse mechanisms to meet household needs.

Again, here, the terminology is key. The definition of peasant can encompass *anyone from those involved in basic subsistence agriculture to members of a modern family farm*, depending on the literature being reviewed. Peasants are often defined according to their form of production. Araghi (1995) defines peasants *as people involved in agriculture that have direct access to the production of their means of subsistence*. This may or may not involve direct ownership, although for Marx it was ownership that fundamentally separated peasants from the proletariat (Archetti and Aass, 1978). What is definitive about the peasant form of production is that, regardless of ownership, the logic of production is subsistence. Building upon Alexander Chayanov's theory of a peasant mode of production, Henry Bernstein (1979) argues that peasant production is distinguished from capitalism because there is no appropriation and realization of surplus value or accumulation of capital. The object is the satisfaction of family needs, not profit. Beyond this, Bernstein (2001) argues that it is not a form of proletariat production because the individual retains some control. There are therefore two central components of peasant production: *the driving logic of subsistence and the maintenance of some control over the means of production*.

Within peasant studies there is a major cleavage between those that advocate the *disappearance thesis* and those that support *the permanence thesis.* Both attempt to situate the historical course of the peasantry within the development of society, although the disappearance thesis is far more common than that of permanence. The disappearance thesis is

premised on the idea that capitalism will lead to the dissolution of the peasantry as individuals become wage workers in urban areas and capitalist farmers in the countryside. The permanence thesis, by contrast, argues that peasant societies do not abide by the *laws* of individualistic capital and have a developmental logic of their own that will result in the survival of both the peasantry and the conditions of its reproduction.

A key component of the disappearance thesis, present in the work of Marx and Engels is the sense that peasants are a class representative of barbarism, unable to shape history and blocking the development of civilization (Johnson 2004). For civilization to progress, therefore, the peasantry must dissolve as society moves from a traditional to a modern state.

This move is fundamentally connected to the progress of capitalism. David Lehmann (1982) argues that the development of capitalism is understood as both causing and requiring free labour.

Araghi identifies three key variants in the disappearance thesis: the first allows for historical variation rather than a unilinear progress to dissolution; the second identifies the persistence of the peasantry, explaining it as a result of functionality within capitalism, but arguing this as a temporary state as capitalist farms become dominant; the third argues that *essence* and *appearance* must be considered separately, and that remaining peasant societies are actually concealed rural proletariats.

In contrast to the disappearance thesis, the permanence thesis argues that the economic laws that govern peasant societies are distinct from capitalist societies. Its intellectual origins are situated within the debate between Marxism and Russian populism, which was influenced by thinkers such as Nicolai Chernyshevskii and Aleksander Herzen. Eduardo Archetti and Svein Aass (Archetti and Aass, 1978) argue that Chayanov outlined a peasant economy constituting an economic system where land, labour and the means of production were combined according to the natural process of family development, and where the labour provided by the family is the only possible source of income. The permanence thesis draws support from the persistence of family-based agriculture. Benstein (2001) notes that in agriculture there is more risk in investment due to uncertainties in the natural environment. There is also a non-identity of labour and production time; labour is at times unable to realize profit, because of growth cycles. Both of these tendencies make agriculture an area that is problematic for capitalist incorporation. While

there are developments in technology as production is standardized and simplified through biochemistry and mechanical development, permanence theorists argue that there will always remain an area that is inhospitable to the rigours of capitalism.

Modernization theories were pro-active, policy-oriented, directing social and economic change designed to incorporate the developing world into the emerging world order, raising standards of living for all populations and creating and stabilizing nation-states. Hoogvelt (2001) argues that modernization theories turned the abstracted, generalized history of European development into a necessary logic; development was seen as a matter of ordered social reform that removed the dysfunctional elements. Included in this was the peasantry.

Johnson analyses modernization in developing countries, and in particular in Africa. During the 1970s it became clear that the modernization strategy of development was not succeeding. Dependency theory emerged, arguing that colonial capital had distorted the economy and society of colonial countries. Beginning in the 1980s, Structural Adjustment Programs (SAPs) and economic liberalization were imposed by the World Bank and the International Monetary Fund as panaceas for the economic difficulties of developing states. Foreign debts had mounted throughout the 1970s, and the 1980s and 1990s witnessed a prolonged debt crisis in the developing world.

For rural agricultural populations in Africa, the policies implemented resulted in the removal of agricultural subsidies and price supports, land deregulation, wage freezes, and the devaluation of national currencies. For Bryceson (1999) in this context of high risks and low returns, small-scale peasant farmers were unable to compete. Industrialization strategies had already resulted in a reliance on imports or food aid for basic food. Vulnerability and exposure to world markets and price fluctuations for agricultural producers increased this dependency, while negatively impacting the purchasing power of whole populations. Farm incomes and investment were dramatically depressed while liberalization generated new opportunities for land grabbing by both domestic and foreign capital interests at the expense of the peasant holdings (Bernstein 2001).

Peasant communities reacted by intensifying migration and income diversification. This diversification represents a fundamental change in the labour form of a household from peasant production to that of wage labour; self-employment or reliance upon remittances, pensions or other

income transactions. Throughout her analysis, Bryceson (1999) implicitly defines peasant production as meeting all needs through exclusively agricultural activity. Reliance upon remittance, therefore, is seen as representative of depeasantization. Normally measured through population censuses, rural-urban migration represents a process that Araghi identifies as *deruralization*. He argues that this process, causing a depopulation and decline of rural areas and resulting in *overurbanization* as people concentrate in urban areas, is the primary coping mechanism used by rural populations. It is the central feature of depeasantization, which he defines as a *process where an increasing number of people who were involved in agriculture with direct access to the production of their means of subsistence become rapidly and massively concentrated in urban areas*.

Some authors find it difficult to argue that family members engaged in wage labour remain peasants. The peasantry, as previously stated, has two central components: the driving logic of subsistence and the retention of at least some measure of control over the means of subsistence. While engaged in wage labour, individuals lose that measure of control over their production; their means of subsistence is determined by someone else. Even if the household as a unit does not lose peasant status, the individual member does.

Johnson argues that the peasantry is a unit of production that is oriented to the household as a whole, however, not to the individual members. As such, even when individual members join the capitalist labour force, the household remains representative of the peasantry. The driving motivator of basic subsistence persists. Those that remain in rural areas continue to operate at a subsistence level, producing to meet family needs rather than to accumulate. In addition, the temporary migration to urban areas that splits a family is also an attempt to meet the basic subsistence needs of the household, not to profit. As an extension of this, if it became possible to meet these needs without the contribution of the migrant's wage labour income this practice would end, and the migrant would return home. The prevalence of circular migration, which occurs as needed, and of return migration is testimony to this. As migrants return to rural areas, re-engaging in peasant production and regaining control over their means of subsistence, a process of repeasantization for individuals occurs. The household in total, however, retained peasant status throughout.

Bernstein (2001) adds to this discussion by arguing that depeasantization is not complete when the separation of producers and the means of

production is incomplete. He instead argues that what has occurred is a differentiation within the peasant population. He identifies three crucial categories in rural populations: the poor, the middle, and the rich farmer. The poor farmers in his view are those completely unable to reproduce themselves with household production. They are therefore required to exchange their labour regularly, achieving reproduction only through sale of labour. They are, in essence, what the disappearance thesis argues has developed: a rural proletariat. The middle farmers, by contrast, are able to reproduce themselves mainly through family labour on family land, but only in specific relations to other forms of production. These are the households who diversify their incomes and differentiate within themselves, as one member migrates in search for wage labour. It is in this category we may find the persistence of the peasantry. Finally, he argues that the rich accumulate sufficient capital to invest in production through the purchase of means of production or additional labour. These have become capitalist farmers, and, like the poor, represent depeasantization.

It appears then, that the persistence of the peasantry is not, as may be argued by many traditional peasant theorists, a carrying forward of the past into the present. Rather, it is a particular form of production that is continuing because of, and in some cases despite, global capitalism. The populations that engage in this production are as variable and dynamic as those that do not.

Bernstein observes that *the peasantries (...) that inhabited 'the world of the past' (...) are indeed destroyed by capitalism and imperialism* (Bernstein 2001). For Johnson this process has resulted not in the disappearance of the peasantry, but in its redefinition. Today's peasantry is a population struggling for survival, clinging to control over the means of production that are increasingly unable to meet their subsistence needs, and excluded from the system that used to offer hope of development. Not aiming for an accumulation of profit, the peasants of today are instead in search of a sustainable livelihood that will ensure their survival, within any mode of production, into the twenty-first century.

It is the exploration of this very notion of livelihood and of viability into the twenty-first century that is explored in the following chapter.

From peasants to livelihoods

The way in which the notion of peasant viability has influenced policies is explored here in its relevance within the notion of livelihoods. The viability issue, is seen in the context of the Latin American notion of *campesino*.

Authors such as Bebbington (1999) have questioned the disappointing effects of development interventions referring to the notion that *one important reason projects fail is probably that they simply misperceive the way people get by and get things done*. He argues that we require a notion of access to resources that helps us not only understand the way in which people deal with poverty in a material sense, but also the ways in which the perception of well-being and poverty are related to livelihood choices and strategies. In this framework, people's assets are not merely *means* through which they make a living: they also give *meaning* to the person's world, and assets are not simply *resources* that people *use*: they are assets that give the capability to be and to act. Sen (1997) notes that the possession of human capital not only means people produce more and more efficiently; it also gives them the capability to engage more *meaningfully* with the world, and most importantly the capability to *change* the world.

Access to resources thereby becomes key to the debate on peasants and livelihoods. The example of the Andes is chosen to illustrate this point. Since the 1970s and 80s, much of the debate about Andean livelihoods and peasant economy has been heavily influenced by a mix of concepts deriving from unequal exchange, and mode of production theory (De Janvry 1981). Literature on the peasant mode of production (Deere and de Janvry, 1979) points out that the *campesino* economy was tied to the wider political economy in ways that extracted surplus value from rural areas, that constrained peasant access to resources and that involved very unfavorable relationships between rural people and both the market and state. Under this set of relationships, the peasantry not only provided cheap food to the urban economy, but because their income was low and asset base limited, had to migrate periodically; thus also providing the economy with cheap labor.

Some authors have analysed the peasant economy under the policy contexts of import substitution and industrialization, a context in which the state assumed an important regulatory and interventionist role. While pessimistic in analysis, there was an implicit notion that a *via campesina*

or *peasant way* based on intensified, agrarian based rural livelihoods was still a possible development option (Figueroa 1990; Brush 1987). By the mid-1990s there was a shift of emphasis, towards neoliberal economic reforms. Different works on the impacts of these reforms (Kay, 1997) provide some feedback (Enriquez, 1998). There seems to be a shift of mood carrying a level of defeatism on the part of those who would have taken the side of the peasants in the past. In some cases, this defeatism is phrased in more empirical terms: that within the framework of macroeconomic shifts, significant parts of the peasant economy can no longer be viable. In other cases it is phrased in normative terms: in a context of reduced public finances, the peasant economy should no longer be supported by public investment.

Together these changes led to a shift of all the grander theoretical discussion of the 1970s and 1980s: in the 1990s, interpretations have been more empirical, more narrowly focused and less hopeful. While still in the pessimistic vein of the earlier arguments, these reflections on viability shed the theoretical notions of functional dualism. Indeed, the notion of functionality is often gone. In some conceptions peasants are seen as dysfunctional to the overall economic model because they control land resources that could be used more efficiently by capitalist producers. Other, more critical conceptions are that within a wider political economy there is simply no need for the *campesino* sector, leading to the conclusion that this is a peasantry surplus to structural requirements, and that the policy challenge is to create alternative sources of livelihood in the urban sector.

The experience in Chile exemplifies this shift in thinking. Throughout the Pinochet era (starting in 1973) of broadly neoliberal reforms, the Chilean government gave only limited support to an emerging sector of medium-sized capitalist family farms and invested little or nothing in the peasant economy (Bebbington, 1999). Support to this sector came from the nongovernment organizations (NGOs). At the same time, the medium and large farm sector began to thrive into what was later known as the heralded miracle of Chilean agricultural transformation. By the time an elected government came to power in 1990, any idea of programs of asset (primarily land) redistribution had already been ruled out. Instead, the new government opted to extend programs of technical, credit and other support, so that they would now reach the Chilean *campesino*. The programs were being extended within an overall context of continued neoliberal economic policy and fiscal stringency. Soon when investments could not be shown to be profitable a language emerged that began to

differentiate among so-called *viable* and *non-viable* peasants. The argument was that a large part of the Chilean peasantry (some suggested 50%) was not viable (Sotomayor, 1994). The argument was based on the limited assets (land, water) they possessed which arguably could not make them become competitive production units capable of accumulating capital.

The argument was that, as they were not viable, these peasants should not be the object of programs aimed at enhancing their productive capacity but rather ought to be supported through social investment programs that would alleviate their poverty and ultimately facilitate their transition out of agriculture and into the urban economy. Others, more drastic suggested that the money spent on technical support should rather be spent on education (López, 1995).

Policy toward the small farm sector became one of promoting the reconversion or productive transformation (Kay, 1997) which meant investment only for those units deemed potentially viable (according to the land and other natural resources to which they had access), in order to facilitate their transformation into competitive capitalist family farms by increasing their yields. The non-viables would instead receive other types of support (from ministries other than agriculture) that would ultimately aim to enhance their potential to become a productive proletariat (Bebbington, 1999).

This notion of viability has subsequently spread through Latin America. The diffusion of this discourse was essentially due to the adoption of macroeconomic and agricultural policy frameworks often based on the Chilean experience. It also reflects the influence of the principal agencies financing these policy transitions which greatly influenced the Chilean case with the notion investments should be very strategically targeted to areas where there is the potential for enhanced productivity.

Even authors such as van Niekerk (1994) came to the conclusion that:

> *If the market is the determining factor in the definition of rural policy, Andean agriculture has two possibilities: to disappear, or to modernize violently to achieve competitive levels of productivity and production.*

He adds that neither of these options is likely in Bolivia and Peru given the limits on public investment and the inability of the urban economy to absorb migrants; consequently, he says:

> *The likely scenario is one of an impossible situation in which the peasantry continues to limp along, caught between migration and low-productivity agriculture.*

Opposing this view, authors multiply studies and scientific references to the economic viability of small farms. Peter Rosset (1999) writes:

> *For more than a century mainstream economists in both capitalist and socialist countries have confidently and enthusiastically predicted the demise of the small, family farm. Small farms have time and again been labelled as backward, unproductive and inefficient—an obstacle to be overcome in the process of economic development. The American model of large scale, mechanized, corporate agriculture is held out as the best, if not the only way to efficiently feed the world's population. Small farmers—or "peasants"—have been expected to go the way of the dinosaurs, and rightly so, according to conventional wisdom.*

In his Policy Brief, Rosset challenges the conventional wisdom about small farms and asserts that they are multifunctional. He argues that small farmers make better stewards of natural resources, conserving biodiversity and better safe-guarding the sustainability of production. The evidence he presents comes from both developing and industrialized countries. He highlights the fact that:

> *Small farms are far from being as unproductive or inefficient as so many would have us believe. Peasants have stubbornly clung to the land despite more than a century of harsh policies which have undercut their economic viability.*

He writes about the multiple functions of small farms which benefit both society and the biosphere, and which contribute far more than just a particular commodity—*though there is ample evidence that a small farm model for agricultural development could produce far more food than a large farm pattern ever could.*

Ironically, he quotes the United States Department of Agriculture USDA which talks of the *value of small farms* and released in 1998 a landmark

report called *A time to Act* (National Commission on Small Farms). The report expands on the qualities of small farms, namely: diversity, environmental benefits, empowerment and community responsibility, places for family, personal connection to food, and economic foundations.

Rosset makes extensive reference to scientists and economists who indeed find that small farms produce far more agricultural output per unit area than larger farms. This holds true whether studying an industrial country like the United States, or any developing country.

> *This is now widely recognized by agricultural economists across the political spectrum, as the "inverse relationship between farm size and output".*

These economists include economists of international development organizations and the World Bank.

The two decades following the Rio Declaration in 1992 witnessed a focus on the sustainability concept with increased attention devoted to the more technical and economical realm of farming. The concept of peasants which was, in the literature, essentially the field of social sciences as seen in the first sections of this paper (mainly anthropology, sociology, ethnology, archaeology, linguistics, anthropology, ethno-linguistics and history) and intimately connected to political ideology, was for a time, practically abandoned and only the concept of small farmer, poor farmer, smallholder and subsistence farmer, became the focus of development agencies, whereby small farmers became *the target beneficiaries, and objects* of economists and agronomists.

The coming back

While the word *peasant* and together with it, the concept, disappeared from the expert systems, it was reintroduced by the peasants themselves in 1993 by a group of farmer representatives (women and men) from the four continents who founded the movement: *La Via Campesina* (Desmarais, 2007). As stated by the organization:

> *Agricultural policies and the agribusiness were becoming globalized and small farmers needed to develop and struggle for a common vision. Small-scale farmers' organizations also wanted*

> *to have their voice heard and to participate directly in the decisions that were affecting their lives.*

For *La Via Campesina* (LVC) the choice of the word *peasant* was not neutral, on the contrary, it was politically loaded. As per Desmarais (2007) LVC purposely chose a word with a negative connotation to transform it into a source of pride, similar to the approach followed by the Black Power movement. With a rapid increase in power reflected by its membership and representation worldwide (presence in the UN and other global meetings and representing more than 200 million farmers), LVC adopts in 2008 a *Declaration of the Rights of Peasants: women and men* (La Via Campesina, 2008).

Therefore an ideological schism is created: while universities, development agencies and line agencies speak of farmers and seem to *know more*, peasants speak of peasants and make their own choices. In their paper *Sustainable Peasant and Family Farm Agriculture can Feed the World* (La Via Campesina, 2010), the movement defines the key principles of Sustainable Peasant Agriculture (Altieri, 2002) and states that:

> (...) *truly sustainable peasant agriculture comes from a combination of the recovery and revalorization of traditional peasant farming methods and the innovation of new ecological practices.*

By the same talken, recognised Civil Society Organizations such as the ETC Group participate to the reintroduction of the word *peasant* through their publication, in particular on who will feed the planet (ETC Group, 2009):

> *Half of the people in the world are peasants*
>
> *There are 1.5 billion peasants on 380 million farms; 800 million more growing urban gardens; 410 million gathering the hidden harvest of our forests and savannas; 190 million pastoralists and well over 100 million peasant fishers. At least 370 million of these are also indigenous peoples. Together these peasants make up almost half the world's peoples and they grow at least 70% of the world's food.*

Then, in 2008, Ploeg brings the theoretical ground, with his book *The New Peasantries - Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*.

Ploeg argues that a renewed interest in family farming coincides with current debates in Europe in which the notions of peasantry and peasant farming are re-emerging as key elements for the understanding of several complicated and mutually contradictory processes of transition that occur in the European countryside. He argues that peasant farming is widely spread throughout Europe, whilst it is currently being strengthened through new responses that might be summarized with the concept of repeasantization. The consequence he says, as far as developing countries are concerned, is quite clear:

> *In no way peasant farming can be seen as intrinsically backward. Peasant agriculture is not an obstacle to development and change, but might be, instead, an excellent starting point for it.*

In this context, the notion of the peasant is to be *reconceptualized* it is to be adapted to the historical circumstances that have been changed dramatically in Europe and in the world.

For Ploeg, whatever its specific forms, and whatever its specific location in the evolving spatial division in worldwide agricultural production, modernization implied, firstly, a far reaching increase in the scale of production and the associated outflow of agricultural labour force. Secondly, it implied the introduction of a technology-driven (but equally technology-dependent) intensification of production, which superseded labour driven forms of intensification. Related to the increases in scale and intensity was a many-sided and abrupt process of commoditization. The latter was a result of, as well as a prerequisite for, the former. Commoditization, especially on the *input side* of the farms, and a far reaching restructuration of the process of production went hand in hand. They became the core of the new entrepreneurial mode of farming as it was constituted by and through the modernization of agriculture.

The rise of the entrepreneurial farming did not sweep away the peasant mode of farming, instead:

> *(…) in many places, all over the world, important pockets of peasant agricultures remained, whilst we are witnessing during the last two decades important new processes of repeasantization,*

> *sometimes of a qualitative nature, sometimes expressing themselves especially in quantitative terms, whilst there is also an increasing series of expressions that unfold along both the quantitative and the qualitative dimension.*

In this perspective, repeasantisation is the second important historical trend that moved the rural world beyond the once classical dualism of capitalists and peasants. The peasant is not anymore the disappearing side of the equation: through repeasantization new robust and promising constellations are emerging, which increasingly turn out to be superior to contrasting and competing modes of production.

Ploeg opposes two approaches: one that has made the *peasantry invisible*, and opposed to this dominant approach is a new *post modern approach* that is being developed worldwide by many researchers which argues that a proper understanding of the rise and expansion of what are global markets is essential for post-modern peasant studies. Here *post-modern* refers to the fact that the studies on which this new approach is based were realized in the aftermath of the big industrialization projects (modernization) of the 1960s to the 1990s period, which affected the countryside everywhere in the world.

Crucial here, as cited by Ploeg, is the new superstructure of the globalizing markets (Hardt 2000, Friedmann 2004) which is characterized by the notion of *Empire*. Friedmann argues that agriculture and food have all along invisibly underpinned relations of property and power in the world system. At the heart of any solution to today's global agricultural impasse is an appreciation of *livelihoods* and *habitats*, that is the living foundations of all human societies: healthy human bodies and relationships and earthly cycles of air, water, soil, and organisms.

> *There is an imperial conquest with respect to the integrity of food, the craft of farming, the dynamics of nature and the resources and prospects of many agriculture producers. This conquest proceeds as the ongoing deconstruction and subsequent reassembling of many interrelations and connections that characterize the domains of farming, food and nature. New technologies and a widespread reliance on expert systems play a strategic role in the imperial reassembling (Ploeg 2008).*

Peasantry is therefore not a remnant of the past, but an integral part of our time and societies. The peasantry is deeply rooted in the realities of

today and is to be explained by the realities and contradictions that characterize the present. Current patterns of accumulation produce high levels of both urban and rural unemployment. The restructuring of the natural and social worlds implies an overall degradation of landscapes, biodiversity, rural livelihoods, labour processes and the quality of food. At the same time the farming population is confronted with an increase *squeeze on agriculture*.

From a socio-political point of view (Long 2007), today's peasantries constitute many *multitudes*, from which resistance, countervailing pressure, novelties, alternatives and new fields of action are continuously emerging. In a way, the peasantry presents a materialized and often highly visible critique of today's world and how it is organized.

Kearney (1996) and Harris (1997) participate to this reconceptualization. During the modernization period (1950s to 1990s) the perception and interpretation of different practices and policies, the social definition of interests by farmers and the elaboration of programmes were governed by the modernization paradigm.

And Friedmann states in 2004:

> *It is the rise of Empire as an ordering principle that increasingly governs the production, processing, distribution and consumption of food, and in so doing contributes to the advance of what seems like an inevitable agrarian crisis. This is also because Empire proceeds as a brutal ecological and socio-economic exploitation, if not degradation of nature, farmers, food and culture. Industrialization implies the destruction of ecological, social and cultural capital. Moreover, the very forms of production and organization that are introduced turn out to be highly fragile and are scarcely adequate in confronting the very conditions intrinsic to globalization and liberalization. Thus, new, immanent contradictions emerge.*

For Ploeg now, at the beginning of the 21st century, it is clear that this modernization project has run counter to its own self-produced limits. Hence a new approach is needed, one that definitely goes beyond modernization as a theoretical and practical framework.

> *I was intellectually shaped*, he says, *in an epoch (i.e. during the 1960s and 1970s) in which the demise of the peasantry was predicted and heralded everywhere and from virtually all theoretical perspectives. I never felt comfortable with this prospect, but did not have, at that time, the elements and tools to really argue against it. Now, more than 30 years later, I understand somewhat better the "mystery of farming".*

Adding:

> *(…) It is, only through the widespread and possibly renewed repeasantization that this international and multidimensional crisis might be redressed and averted.*

In practical terms, the long missing theoretical pillars that describe peasant farming for what it is, and no longer for what it is not, are described in the next section.

Peasant farming[7]

The following (Ploeg 2008) explains the fundamental differences between peasant farming, entrepreneurial farming and corporate farming:

1. Peasant agriculture is built upon the sustainable use of ecological capital. Its primary aim is livelihoods. It embeds many functions beyond food. Whenever possible, it is the family that owns, or has user rights on the land and other means of production, and the family members who work on the farm. What is produced returns to the farm and is sold in the market.

[7] Peasants are people involved in peasant agriculture. And peasant agriculture is (1) the struggle for autonomy that takes place in (2) a context characterized by dependency relations, marginalization and deprivation. It aims at and materializes as (3) the creation and development of a self-controlled and self-managed resource base that critically includes land and which in turn allows for (4) those forms of co-production of man and living nature that (5) interact with the market, (6) allow for survival and for further prospects and (7) that feed back into and strengthen the resource base, improve the process of co-production, enlarge autonomy and thus (8) reduce dependency. Depending on the particularities of the prevailing socio-economic conjuncture, both survival and the development of one's own resource base might be (9) strengthened through the engagement in other non-agrarian activities. Finally (10) patterns of co-operation are present which regulate and strengthen these interrelations (Ploeg, personal communication, 2013).

2. Entrepreneurial agriculture is built upon financial and industrial capital (credit, industrial inputs and technologies). The principal aim is profit; the production which tends towards simplification and specialisation is oriented towards the markets. It fits within the state-driven programmes of modernisation of agriculture.

3. Corporate and capitalist farming follows an agro-export model. It is based on scale and monocultures. Labour force is salaried workers. Production is geared towards profit maximisation.

Fundamental differences between peasant and entrepreneurial farming are the *degree of autonomy* and the *relationship to nature*. Peasants co-evolve with nature. For entrepreneurs, while nature remains an unavoidable raw material, the focus is on reducing its presence; nature being capricious, it is a hindrance to scale increase. Processes of production are progressively disconnected from ecosystems. This translates into growing counter productivity (since the fifties, efficiency of nitrogen declined, the longevity of cattle fell, energy use is multiplied and its efficiency declined and agriculture became an activity that produces large flows of waste).

Another difference is the *quality of labour*. Quality entails craftsmanship, local knowledge and relationships. This represents human capital in the sense that it reflects the ability to produce in an endogenous way. Peasants have the skills to transform nature in the sense that they have the capacity to realise high and rising productive results per object of labour (land, animal); the so-called *savoir-faire paysan* (peasant know-how). They use internal indicators (best ration per cow depending of the history of the cow). In contrast the business entrepreneurial farming patterns labour and productive processes according to market relations and use external indicators (best ration depending on price of milk and cost of feed).

In the peasant mode, the market is an outlet, in the entrepreneurial mode the market is an ordering principle. The focus on managing nature with great skills is not an expression of non-economic behaviour nor of peasants being un-enterprising; on the contrary peasants are keen to grasp new opportunities. They are enterprising, inventive and keen. But the underlying logic is different:

- The peasant logic is: production per labour object, care, dedication, self-sufficiency, aesthetic of the farm.
- The entrepreneur logic is: price-cost ratio, margin, technology, scale, income.

The peasant follows a step by step process of growth. He aims at improving yields and value added per object of labour; he auto-finances the increase as much as possible.

For the entrepreneur, scale is the main lever. The increase in scale results in a decrease in the margin per object of labour which induces a need to further accelerate the growth at farm level, a typical *fuite en avant* (running forward). He will require the newest technologies and will restructure the farm so as to fit the new technologies. In this model, taking credit becomes strategic.

The peasant mode of farming centers essentially on the creation and growth of value added, which at the higher level of aggregation translates into the creation and growth of social wealth; thus, in comparison, peasant farming contributes more to the generation of social wealth than entrepreneurial and corporate farming. This is the case in both Europe and in developing countries. Field studies running through four decades show that the difference of value added between peasant approaches and entrepreneurial approaches increase as time goes by (see example in Parma[8]).

In addition, peasant farming produces the highest total amount of gross value added (GVA). This is not only due to the fact that total production per unit of area is higher, but also because within the peasant mode of farming Gross Value Added represents a larger part of Gross Value Produced. If farming is structured according to peasant mode, not only more production and employment are generated, but the peasant mode generates more income. This applies to the agricultural sector as a whole. It equally applies to per capita income levels.

[8] Ploeg studied the differentiated growth patterns of production and value added in Parma (Italy) provinces in 1971, 1979 and 1999. He demonstrates that in 1971, the gross value of production (GVP) realised through the peasant approach constituted 15 percent more than realized through the entrepreneurial mode. In 1979, the difference was 36 percent and in 1999 it amounted to 56 percent, thus demonstrating that there is no intrinsic backwardness to peasant farming, on the contrary.

Hence, peasant farming (based on labour-driven intensification) is not identical to the often assumed distribution of poverty. There are many places where ongoing intensification is blocked and where diminishing returns emerge. Such phenomena are not *intrinsic* to peasant farming.

The way in which peasant farming unfolds is as follows:

Peasants work with nature in a very different way than entrepreneur or capitalist farmers do. They mould and remould resources in a way that allows continuity. In a context of dependency relations, marginalisation and deprivation, they struggle for autonomy; resources are, as much as possible, self-controlled and self-managed. The co-production (or mutual transformation) human-living nature and the interaction with the market allows for survival and for strengthening the resource back. In addition, peasants usually engage in other non-farm activities and their activities are embedded in patterns of cooperation and interrelation.

Co-production brings progress and new forms of local development. A meticulous fine-tuning, slowly improving the quality and productivity of key resources together with continuous re-patterning of the relations with the outside world allow for two interwoven processes: *production* of goods and services and *reproduction.* Production at the farm is not, as often assumed, related to family consumption; it is related to the operation of the farm as a whole.

The peasant condition and the peasant mode of farming represent a flow through time, a dynamic process that may unfold, depending upon the social formation in which it is embedded, in different directions, with different rhythms and through distinct mechanisms. It entails co-production, patterns of relation to markets that allow autonomy (flexibility, fluidity), pluriactivity, reciprocity and cooperation.

Therefore, the characteristics of peasant farming can be summarized as follows:

- peasant farming tends to the production and growth of as much *value added* as possible; the focus of the entrepreneurial mode of farming is geared towards as much takeover of resources as it is of value added, and the capitalist mode centres on profits (surplus value), even when it implies a total reduction of value added. When the main conditions are equal, the peasant mode of farming results in yields that are higher;

- a resource base nearly always limited;
- intensity of production; an abundant labour and scarce labour objects (land, animals etc);
- an organic unity; the resource base is not separated into opposed and contradictory elements (such as labour and capital, or manual and mental labour). Available social and material resources are possessed and controlled by those directly involved in the labour process;
- centrality of labour and innovativeness; levels of intensity depend on quantity and quality of labour, importance of labour investments (terraces, irrigation systems, buildings, improved crops and carefully selected cattle, etc.) the nature of applied technologies (skill oriented rather than mechanical) and novelty production;
- distancing from markets on the input side, differentiation on the output side.

Differing values of peasant farming:

The farm resources normally referred to as capital (land, animals, buildings, machines etc) do not reflect capital *per se* as they are not mobilised on the capital market. This means that they do not work as outside investment that need to realise profit. Resources allow to generate income and to improve the farm, making it a better and more beautiful place to live. The available resources and especially the land do not function necessarily as capital in the classical sense. If they were to do so they would flow outside agriculture. Their value is that they allow for farming and that they might be converted in the longer run into a pension for the senior generation and a comfortable starting position for the younger generation that takes over. This represents a socially regulated and institutionally grounded process of conversion; a conversion very different from the conversion of capital into profits subsequently reinvested as capital in order to realise more profits. In the peasant mode of farming, civil and labour rights are as, if not more important than property rights.

Ironically, the logic of industrialisation is pushing towards a re-emerging of peasants (a repeasantisation). Off farm prices are pushed down to the extent that marginalisation and new dependency patterns are introduced which triggers the need for survival in a context of deprivation and dependency. This repeasantisation trend is now observed both in the

South and in the North[9]. It has been the case in Europe over the last decade. It involved the search for more autonomy and a widening of the resource base. The response to the squeeze imposed on farming in South-East Asia is extremely low levels of remuneration. In parts of the United States, Brazil, Australia and New Zealand it is increasing the scale of farming (thus contributing to deepening of the squeeze).

What can be observed is that Europe is moving towards greater multifunctionality. European farmers are making their farms more pleasant and reconstituting themselves as *new* peasants, not as yesterday's peasants, but as peasants located at the beginning of the third millennium. What remains the same, however, is that current forms of repeasantisation are barely understood by most scientists and politicians, which has been the case throughout the ages. At the same time, a parallel process unfolds with, in a number of countries, small farms being eliminated.

In reaction to large commodity markets controlled by powerful food empires, many farmers are starting to diversify their output by selling products in the form of *real* foods (diverse, nutritious, healthy etc.) with indications of origin and quality. New products and services are produced and new market circuits are created. The *regrounding* of agriculture upon nature plays a central role*;* new forms of local cooperation are rediscovered and further developed. Farmers are taking their distances with agro-industry, banks and the expert system. It is a radical change to the idea that improving the efficiency of farming was the exclusive role of science and associated expert systems with little or no role for the farmers.

A paradigm shift starts to unfold that has never been clearly articulated at institutional levels. This is because it runs counter to too many institutional interests associated with previous modernisation processes. Admitting that such a far-reaching shift is occurring would imply that vested positions, scripts and routines need reconsidering. It might also damage the aura of "always being on the right track" (indispensable for expert systems and agrarian policy). European farming is experiencing a

[9] In Ploeg (2008): for Europe , Tras-os-Montes (Dries 2002), Spain (Guzamn and Martinez Alier (2006), Scottland Scottish Office (1998), Eastern Europe (Hann 2003) and Burawoy (2007), elsewhere in Europe (Ploeg et al 2000 and Ploeg 2002c), Coldiretti (1990) and Scettri (2001). For the US Joannides et al (2001). For Latin America Brazil (MST, Hammond 1990, Branford and Rocha (2002), Souza Martins (2003) and Cabello Norder (2004), Schüren (2003), overview Feder (1977, 1978), Mozambique Hanlon (2004).

far-reaching, complex and as yet unfinished process of transition that is unfolding along several different dimensions.

Increased autonomy materialises in a recreation of the resource base of the farm: it is broadened and diversified. It also means that more or less forgotten resources are rediscovered. Good examples are manure and soil life. Labour again becomes a central resource both quantitative and qualitative. Tailored labour (the *fordisation* of agriculture) that emerged during the epoch of modernisation is replaced by other forms of labour that allow for more overview, flexibility and quality, and greatly reduced stress. The shifts tend to enlarge the value added. The same shifts are reconnecting farming again to society and nature. While the model of entrepreneurial farming only contributes to further deepening the current agrarian crisis, repeasantisation may potentially bridge the many chasms that have, in the meantime, been created.

The transition occurring has some specificities that point to its peasant-like nature. It is not governed from any central locus of control; instead it is endogenous and somewhat anarchic. It does not offer a global solution for a range of different local problems and situations, but is evolving as a growing range of diversified local solutions for a general problem (*i.e.* the squeeze on agriculture). And finally, it does not proceed as a mega-project; but as a wide range of interconnected steps (that increasingly extend through time and space), which together compose, in a way that is constantly fluctuating, the overall and, indeed, massive change that is transforming agriculture and the countryside.

This type of repeasantisation is not a return to the past, it is the construction of the peasants of the third millennium. Its importance goes much further than simply changing the landscape. But it is difficult to understand a reality increasingly re-patterned in a peasant-like way with tools and concepts that belong to an entrepreneurial mode, nor will agrarian and rural policies function if they are based on this conceptual misunderstanding.

And, as reflected in the literature of the recent years, the conceptual misunderstanding continues to prevail.

The literature of recent years

In recent years debates have evolved around different and often contradictory development concepts and approaches with increased polarization. Beuchelt and Vir (2012) question which one of the two concepts: *food sovereignty* or *human right to adequate food*, serve better as international development policy for global hunger and poverty reduction. They conclude that the impact on food security is likely to be much greater if the right to food approach predominated public policies.

Another approach widely debated is the *sustainable intensification* approach which is considered by some an oxymoron. Garnett and Godfray (2012), in the context of the Future of Food and Farming Project of the UK Foresight Programme, bring together the issues raised by key thinkers from the academic and policy community about sustainable intensification, and in particular three areas of concern: environmental sustainability, animal welfare and human wellbeing (specifically nutrition) and propose a more *systems* oriented approach. In the 2010 book published by FAO and Bioversity International on Sustainable Diets and Bioversity, Burlingame and Dernini, present what they call *the current state of thought on the common path of sustainable diets and biodiversity* with a consensus definition of sustainable diets as follows:

> *Sustainable Diets are those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources*.

For Giovannucci *et al.* (2012) the future of sustainability means that farmers have to produce more food per unit of land, water, and agrochemicals; but they will have to do so while facing climate change, volatility, shifting nutrition needs, and the increase scarcity of production factors. *Agriculture is at the threshold of a necessary paradigm shift*, they state, but which paradigm, it is not clear. Haddad *et al.* (2011) propose to fill the gap between production and demand with technology and increased productivity. For them the key issue is poor adoption of technologies and the priority for researchers and policy is to scale-up investments in research and extension and encourage private sector participation.

The focus in many publications since the 2008 crisis is, as discussed by Foley et al. in *Nature* (2011) the issue of *increasing population and consumption* placing unprecedented demands on agriculture and natural resources. *To meet the world's future food security and sustainability needs*, the authors write:

> *Food production must grow substantially while, at the same time, agriculture's environmental footprint must shrink dramatically*.

Lang (2010) questions which crisis we are talking about, emphasizing the *normality* of the current food crisis. For him food policies are failing to respond adequately to the squeeze on land, people, health and environment. The evidence of failure and stress (his *New Fundamentals*) ought to reframe the twenty-first century food politics; yet discourse is too narrow and technical while *the twentieth century productionist policy paradigm is running out of steam*. In that line, Halweil and Nierenberg from the Worldwatch Institute (2011) describe a *New Path to Eliminating Hunger*, very much based on local innovation and ingenuity. Tomlinson (2011) provides a critique of the claim that we *need* to increase food production by 70% to feed the world in 2050 and challenges the dominant framing of the problem of food security and its resolution. She shows how statistics are used by dominant institutions and individuals with prior ideological commitments to a particular framing of the food issue. Tomlinson brings forward the alternative set of discourses around concepts of ecological food provision, food sovereignty and agroecology.

In One Billion Hungry, Conway (2012) explains the interrelated issues to global food supply and expands on the Doubly Green Revolution (Conway 1997) with increased food production, environmental stability and poverty reduction, commented and interpreted by Bill Gates as *the need to help smallholder farmers sustainably increase their productivity*[10]. In his review of Conway's last book, Holt (2013) talks about what happened in the 15 years between Conway's two publications:

> *(...) an explosive combination of global warming, peak oil, water scarcity, agrofuels, grain-fed meat, land grabbing, and financial speculation has ushered in a new era of high, volatile food prices and widespread peasant dispossession and impoverishment.*

[10] http://canwefeedtheworld.wordpress.com/test/ (accessed August 2013)

> "*One Billion Hungry" attempts to reestablish the imperative of the Green Revolution under conditions of global markets, monopoly concentration, and the privatization of pretty much everything (…).*

For Holt the book is again about how to double food production by 2050 to feed nine billion people, with sustainable intensification (less land, less water, fewer chemicals, more biotechnology and more free markets). He concludes by:

> *"One Billion Hungry" is not a revolutionary call, but a plea for kinder, gentler industrial agriculture during a period of late agrarian capitalism in which smallholders and the planet's natural resources are being systematically ravaged by global monopolies (…). Outside the Green Revolution, many are clamoring for its passing, and for a farmer-led, agroecological revolution.*

This debate illustrates the current dichotomy reflected in the literature with two tendencies in recent years one geared towards sustainable intensification with farmers as entrepreneurs , the other one towards food sovereignty with emphasis on peasants as the farmers of the third millennium.

Pretty (2013) refuses this dichotomy and prefers to focus on the finitude of source and sink resources of the planet, analyzing well-being latitudinally across 189 countries and longitudinally over 60 years. He connects the levels of GDP at which life satisfaction increases or stagnates. Concern about denial on climate change and the evidence of finite resources of the planet draws him to conclude to an inevitable green economy that would require human attachment to place and possessions, reducing disposal and damage. He talks of *entanglement* with high affiliation that improves life satisfaction, as does much non-material life consumption, and regrets that political and economic systems are still so far to recognizing these imperatives.

To conclude this first section, a state of the art of the literature on peasants has been proposed here to help shed some light on a word, and concept, that has been at the heart of often opposed policies and aproaches in the development agenda. While being part of the literature of medieval times and of the early years of the 20th century, the concept

has progressively faded away and almost disapeared from the lexicon of expert systems as the modernization project of the second half of the 20th century progressed. But the dispareance of peasants as predicted by many authors does not seem to have happened as expected. On the contrary, we are today witnessing emergence on the ground and a repossession of the terminology. It is within a post-modern approach of the 21th century that the new theories on peasants are being now developed, in the context of peasant movements which are gaining growing influence in the international decision-making circles.

As the recent literature show, diverging paths are proposed for the future. To pursue this research with a clear perspective, the author felt there was a need to better understand the importance of the phenoma, on the ground, in the different countries. In view of the fact that world statistics are not collected with the term *peasant*, the closest term which was the one chosen for this research was: *small farmers*. The exact definition of *small farmer* by international organizations is explained in the next section. The author worked with the Food and Agriculture Organization of the United Nations for many years, prior to this research. She was thus able to pursue collaboration and to undertake the research, data analysis, graphs and maps thanks to the generous contribution of the staff of the relevant FAO Divisions.

STATUS AND TREND

STATUS AND TREND

The second section of this research is about the *status* and *trend* of small farms across continents. It is based on statistics on small farms worldwide. The data was also used to create coloured maps to provide a visual illustration. Two types of maps are built which reflect presence and evolution of small farms during the last three decades. The data corresponds to the data available from census data officially collected by FAO in its Member Countries (114 countries reviewed and data from 84 countries used for the maps). The data was collected and analysed by the author. It was then discussed with experts from the FAO Census Division and Statistics Division. The author undertook a series of visits to the Geospatial Mapping Division, FAO Headquarters in Rome, to project data on world maps. Type of projections, type of data to be used, scale, design, colours etc. were extensively debated and a series of mock-ups were prepared until the result was found satisfactory and ready for publication. This was the first time that such maps dedicated to the representation of small farms were being prepared by the Organization. The maps became part of the publication *Agricultural Transition, a different logic*, with international distribution. They were since then, used for a series of international conferences and became part of the training material in two French schools (*Haute Ecole de Comerce, Paris;* and *Ecole des Mines*).

Review of world statistics

Discussions with the experts from the FAO Statistics Division brought a surprising realisation: we actually do not know exactly who the small farmers are. The reason is simple, country censuses do not systematically report on very small holdings or on small farmers simply because there *has never been a universally agreed definition of small farmers*. Are they small because of the size of their holdings? But then, this is relative and varies from country to country. For example, the average size of holding estimated in the Bangladesh agricultural survey of 2005 comes to only 0.3 ha (FAO, 2010) while in a country like Australia the mean size is 3243 ha. And in the case of China, the mean size of holdings is about 250 times lower than the mean size of the US holdings (0.67 ha compared with 178 ha).

The author found this realisation surprising. If one would count how many times the word and concept *small farmer* is used in the publications of international and research organizations the figure billions would fall short. The thousands and thousands of *experts* and *expert systems* worldwide working on *small farmers*, actually do not have an international agreed definition of the *object* of their work, or *target beneficiaries* as usually stated (the reason for military jargon being difficult to grasp). Small farmers *are* the *raison d'être* and the bread of thousands of experts and bureaucrats worldwide. Some, as the World Bank, take short cuts and state arbitrarily that small farmers are those with holdings under two hectares, and they are followed by many others. This conceptually erases any other type of access to land (such as temporary land use rights etc.), other than ownership and property.

Still, FAO being the international reference on world statistics in agriculture and food, this is where all the data was taken from for this research. In view of the fact that holdings under 2ha are usually recorded at country level this was the criteria selected to provide an approximation of small farms based on existing data.

Characterisation of small farmers

The author is grateful to FAO experts for having facilitated material which was internal documentation or still under review, and for the extensive discussions and dedicated work. Some documents include:

- *Characterisation of small farmers in Asia and the Pacific, Asia and Pacific Commission on Agricultural Statistics Twenty-third Session* Siem Reap, Cambodia, 26-30 April 2010.
- *Report on the 2000 World Census of Agriculture (WCA) – International comparison tables on structure of agriculture (1996-2005)* – FAO Statistical Development Series 13, under peer-review at the time of publication of *Agricultural Transition*.
- Excel table Changes in distribution of number and area of holdings in 2000 WCA round as compared to the previous three rounds.
- Excel table Number and area of holdings classified by size of holdings.

Average size and fragmentation of agricultural holding during (1995-2005)

Countries by continent (Number of reporting countries is given in parenthesis)	**Average area per holding** (ha)	**Average number of parcels per holding**
WORLD TOTAL (114)	5.5	3.5
AFRICA (25)	11.5	3.0
AMERICA, NORTH & CENTRAL (14)	117.8	1.2
AMERICA, SOUTH (8)	74.4	1.2
EUROPE (29)	12.4	5.9
ASIA (29)	1.0	3.2

Countries adopt varying criteria for coverage and classification of agricultural holdings in their census and surveys, which make international comparisons difficult. Often classification and tabulation of data from agricultural surveys are not carried out to adequately reflect the role played by small farmers. Data requirements of policies for small farmers should be taken into account at the time of planning agricultural surveys. The marginal cost for provision of such data, according to FAO statistical experts, would be negligible. There is also a need to evolve an internationally comparable criterion for characterisation of small farmers.

Agricultural holding, for the collection of census information is defined by FAO in the Statistics Division as:

> *The economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, regardless to title, legal form or size. The holding could comprise more than one parcel located in one or more villages and the single management may be exercised by one household or jointly by two or more households or by a juridical person including authorized companies or public institutions.*

Most countries however restrict this definition for practical purposes.

The cut-offs, based on scale of operations of holdings, are also used to keep the surveys and censuses cost-effective and under manageable limits. But for statistical purposes, it would also be important to have knowledge of activities which may be tiny in their individual capacity

but together (at a region, country or world scale) may contribute significantly to the agriculture sector or to food security.

Out of 114 counties reviewed by the Statistics Division of FAO, *only two countries carried out sample surveys to assess the contribution of the small-scale sector which usually remained outside the purview of the agricultural census.* The fact that very small holdings are excluded from the statistics does not allow to reflect their importance, which in turn does not allow to develop policies that can be targeted to supporting them.

For deciding the threshold level for holdings and for categorizing the farmers (holders) based on the scale of their operations, usually the main underlying criterion is *economic contribution*. At operation level, this categorisation is defined on the basis of one or more of the following factors:

- land size,
- herd size,
- marketable/marketed surplus/volume of sales, or
- income earning potential of the holding.

Operated land is the most important variable for characterizing the scale of operations, except perhaps for nomadic livestock holdings, because the land is the basic agricultural resource and is most closely related to other variables of scale, *e.g.* volume of production, volume of sale or herd size. Often a complex criterion involving land, livestock and sales is used to categorize agricultural holdings for the purpose of agricultural censuses and surveys, as well as for differentiated treatment in development policies. However, the use of such complex definition of agricultural holdings poses a challenge to international comparison of data on structure of agriculture. On the other hand, characterisation of holdings solely based on land size ignores other productive assets or activities of agriculture, such as livestock.

There is a great diversity in the average size of farms across the world. For instance China has almost hundred times more holdings than the USA, but only four times its population. But the total area of the Chinese holdings represents one-third of the area of the USA holdings. Not more that 10 percent of farms in China are bigger than 1ha, but only about 10 percent of farms in the USA are smaller than 5 ha. This is also greatly reflected on the distribution of holdings by size: out of 193 million Chinese farms, 180 millions are less than one ha,

representing 93 percent of the Chinese farms. Vietnam (85 percent) and Indonesia (75 percent) present similar ratios.

Six countries that have a remarkably huge mean size of their farms are: Argentina (583 ha), South Africa (288 ha), Uruguay (287 ha), Canada (273 ha.), New Zealand (223 ha), the USA (178 ha) and Australia (3243 ha). For all other countries, the mean size never exceeds 100 ha. The situation is however very varied by continents:

- In Africa, except South Africa, the mean size of holding is always equal to or less than 10 ha (10.45 in Libya and 10.24 in Tunisia represent the maximum). The African countries with the lowest mean size of holdings are: Madagascar (0.86 ha), Egypt (0.83 ha), Cape Verde (1ha), and Comoros (0.07). This may seem to qualify as backyard-gardening and not agriculture if one considers the Australian dimensions of an agricultural holding.
- In North and Central America, very large holdings in the USA and Canada and less than 30 ha elsewhere (Nicaragua has the maximum with 31.34 ha).
- In South America, in addition to Argentina and Uruguay, some other countries also have quite large holdings including: Chile (83.74 ha) and Brazil (72.76 ha).
- In Asia, no country has more than 5 ha per holding, except countries of Near East: Saudi Arabia (16.70 ha) and Qatar (11.91 ha).
- In Europe no countries have more than 100 ha, but a number of countries have quite large holdings including: Czech Republic (99.28 ha), Sweden (93.87 ha), Finland (72.24 ha) and UK (70.86), and about 10 countries have between 10 and 50 ha.
- In Oceania, huge holdings are in Australia and New Zealand, but very small holdings in all other islands, except New Caledonia (51.95 ha).

Beyond the FAO definition on holdings, and in view of the fact that there has never been a universally agreed definition of small farmers, the author asked representatives of academia, development organisations, farmers' organisations and other individuals working with agriculture what is their definition. The answers varied considerably. A selection is reported here[11]:

[11] ETC Communiqué November 2009

Smallholder: (…) a holding run by a family that derives a substantial and indispensable part, or all, of its income from agriculture and which relies on agriculture for at least part of the food consumed by the family – be it through self provision, non-monetary exchanges, or through market exchanges. The family members develop activities other than farming, locally or through migration. The holding relies on family labor with limited reliance on hired labor, but is possibly engaged in labor exchanges within the neighbourhood or wider kinship framework. Reciprocal relations are important here. UNCFS

Small scale food producers are those men and women who produce and harvest field and tree crops as well as livestock, fish and other aquatic organisms. They include smallholder peasant/family crop and livestock farmers, herders, pastoralists, artisanal fisherfolk, landless farmers-workers, gardeners, forest dwellers, indigenous peoples, hunters and gatherers, and any other small scale users of natural resources for food production. Pimbert (2009).

Peasants? The language around us is changing all the time. Historically, we were peasants. Then when that term came to mean "backward" we became "farmers". In these days "farmer" has the connotation of inefficiency and we are strongly encouraged to be more modern, to see ourselves as managers, business people or entrepreneurs capable of handling increasingly larger pieces of territory. Well, I am a farmer and I am a peasant. I learned that I had much more in common with peasants than I did with some of my agribusiness neighbours. I am reclaiming the term peasant because I believe that small is more efficient, it is socially intelligent, it is community oriented. Being a peasant stands for the kind of agriculture and rural communities we are striving to build. Karen Pedersen, past-president, National Farmers Union (Canada).

This debate in the literature ... is a fabrication at a higher level, by those who know more. In the countryside, out there, there is no such debate. We continue being peasants. That's the way it is. Emiliano Cerros Nava, Executive Commission, UNORCA (Union Nacional de Organizaciones Regionales Campesinas Autonomas), Mexico.

The recent Report of the HLPE, *Investing in smallholder agriculture for food security* (2013) acknowledges the fact that discussion on definitions is *neither trivial nor academic* as it has real implications for policies and impacts on livelihoods. The report provides nine detailed paragraphs on the definition.

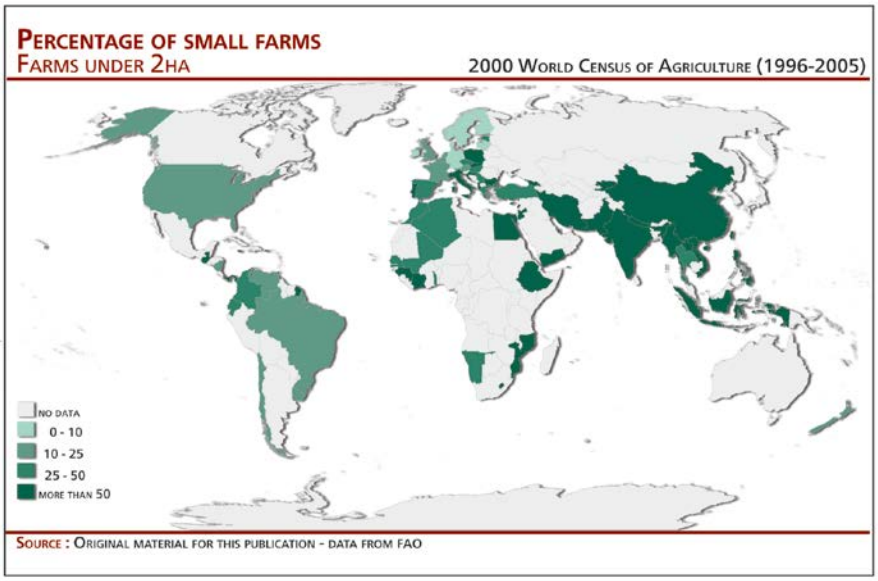
Paradoxically, the importance of small farmers at global level, despite their fundamental importance, is not well known. As stated above, the small-scale farms usually remain outside the purview of the agricultural census. The fact that very small holdings are excluded from the statistics does not reflect their importance, which in turn does not allow policies to be developed that can support them.

An important characteristic of small scale farming is family labor. The latest FAO census reveals that globally 250 million holdings in 57 countries (half of the total holdings reported in the census) employed 22 million workers which is less than 1 worker per 10 holdings. Hiring workers, except in industrial crop production, is the exception. On the other hand, the census reports that farms remain a huge source of employment in agriculture for household members with 228 million holdings employing 588 million members of households, with an average of 2.58 household members working on the agricultural holding. China reported 519 million household members engaged in agriculture on 193 million holdings with 800 million persons, an average of 2.7 household members per farm (each household of 4 persons).

On the basis of the available data and on the way that statistics are collected by different countries an analysis of the data available from the FAO 2000 World Census on Agriculture (1995-2005) was made with the purpose of assessing the percentage of small farms under 2 ha existing worldwide, compared to the total number of farms, and secondly to assess the trend of the increase in reduction of the number of these small farms, taking data from the last three world censuses of agriculture (since 1970), to analyse if small farmers are disappearing or, on the contrary, increasing and where. The results on percentage and trends, for the countries for which data is available, are shown in the following two maps (see Tables in Annex III).

Status of small farms

Percentage of small farms (under 2 ha) as a percentage of the total number of farms
2000 World Agriculture Census



For United States, New Zealand and Uruguay, data is on farms under 5 ha as no data was available on farms under 2ha.

In total, in the 84 countries which have provided country data, the total number of small farms amounts to 436 million which represents 83 percent of all the farms of the world[12]. This is a very high number which clearly reflects the importance of the number of small farms worldwide.

Not surprisingly the map shows the highest percentages in Asia with China (98 percent), Vietnam (95 percent), Nepal (92 percent), Indonesia (89 percent), India (82 percent), Laos (73 percent) and Philippines (68 percent).

High percentages are also found in Africa with Lesotho (98 percent), followed by Egypt (95 percent), Cape Verde (89 percent), Ethiopia (87 percent), Mozambique (84 percent) and Yemen (84 percent).

[12] Based on *The International Assessment of Agricultural Science and Technology for Development* (IAASTD-2008) world figure of 525 million farms.

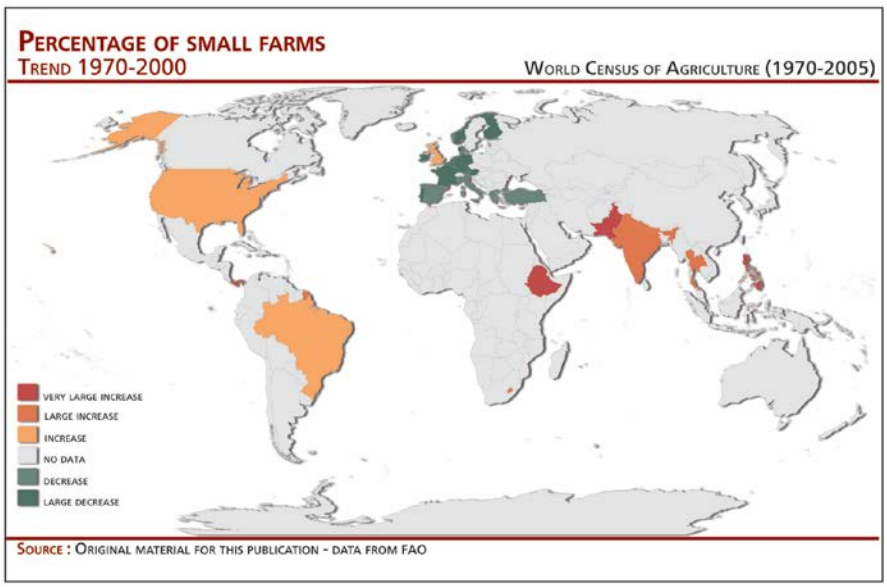
In Latin America and the Caribbean the highest percentages appear in Panama (90 percent) followed by Guatemala (89 percent) and French Guiana (56 percent).

In Europe, Italy shows a percentage of 57 percent, Portugal 55 percent and Poland 51 percent , while at the other extreme of the spectrum with very low percentages we find Denmark (1.7 percent), Ireland, Finland, Sweden, Latvia, Norway, Lithuania and Germany (8 percent).

Interestingly, the United States, United Kingdom, France, the Netherlands, Chile, Venezuela, Nicaragua, Brazil, Belgium, New Zealand, Austria, Luxembourg and Uruguay are within the same range 10 to 25 percent. In the case of the United States, New Zealand and Uruguay, the data was taken for farms under 5 ha as data was not available for those under 2 ha.
For more detail see Annex III.

Trend of small farms

Trend in the number of small farms (under 2 ha)- World Census of Agriculture 1968 to 2005



To make this map on the trends of small farms, the data was taken from the world agricultural census between 1968 and 2005 with available data

for that period found in 36 countries, which are those coloured on the map.

In the 36 countries with data available (representing 25 percent of the world's farms for the year 2000), what we observe is that in half of them there has been a growing trend of the number of small farms while in the other half these numbers have been reduced. The increase in the countries concerned is higher than expected and in some countries the increase of small farms comes as a surprise. In the countries where the number of small farms decreases, the percentages are often lower than expected. In reality, the number of small farms worldwide is not decreasing in the trend often described and not decreasing at all but on the contrary, increasing in large parts of the world.

Overall, during the three decades from 1970 to 2000, the number of small farms went from 66 million to 126 million, an increase of 91 percent. This increase reflects the importance of small farms and their role in providing a livelihood for hundreds of millions of people though in many cases the small size of farms has become a limitation to produce sufficiently for the family.

The largest increase in the number of small farms can be observed in American Samoa, Panama, Pakistan, Philippines and Ethiopia where increases in the number of small farms exceed 150 percent. In Lesotho, Nepal, India, Thailand, and French Guiana the range of increase is between 70 and 150 percent.

The surprise is to observe an increase of up to 25 percent of the number of small farms since 1970 in countries such as the United States, United Kingdom, and to observe the same increase in Brazil, Virgin Islands, Saint Lucia and Cyprus.

On the other hand, decreases up to 31 percent appear in Turkey, Puerto Rico, Italy, Greece and Spain; and larger decreases of more than 50 percent in Portugal, the Netherlands, France, Austria, Luxembourg, Germany, Norway, Belgium, Denmark, Ireland, La Reunion, Guam and Finland.

For more detail see Annex III.

To conclude this second section of the research, we can say that the statistical analyses brings us some key realizations:

- That there is no record of peasants as such in official statistics;
- That the closest approximation to peasants: small farmers, do not have an internationnally agreed definition;
- That in official statistics, only two countries in the world carried out sample surveys to assess the contribution of the small-scale sector;
- That very small farms are usually not recorded in the agricultural census;
- That we have no idea of farming activities which may be tiny in their individual capacity but together may contribute significantly to the agricultural sector or to food security;
- That the number of small farms worldwide is very high: if we analyse small farms in 84 countries, they already represent 83 percent of all the farms of the world;
- That contrary to what some believe, the number of small farms is increasing globally (91% in three decades) and not only in the Global South.

Overall we can say that there are important gaps in data on small farms, and that they represent a very important portion of the farms of the world. In addition, there is a discreapancy between the amount of policy and debate about small farmers and the lack of definition and statistical knowledge about them.

The following section of this research is now dedicated to a qualitalitative review of the multiple and complementary values of peasant farming to societies in general.

ROLE AND VALUE

ROLE AND VALUE

This section is based on a literature review and on twenty five years of experience and field studies of the author in Asia, Africa, and Latin America and the Caribbean. The section does not claim to make any exhaustive review of the complexity of small farms. An indepth review of field results had been previously presented in another publication (see *Viable Food Future* Part I and II 2010). In this research only some brief results are listed, the purpose being rather to present the close relationship peasant-nature and to illustrate the importance of peasant farming to societies with the understanding that peasant farming is closely connected to what is described here as ecologically based agriculture (see Peasant Farming, section one).

Multifunctionality

The draft paper of the High Level Panel of Experts on Food Security and Nutrition of the UN Committee on World Food Security on *Investing in smallholder agriculture for food and nutrition security* which was released in 2013 states that*:*

> *At global level, smallholder agriculture contributes in a massive, indispensable and strategic way to food and nutrition security. Beyond this there is considerable potential to further enlarge this contribution. This contribution is multidimensional. The economic dimension regards actual and potential production capacity. The social dimension associates with poverty alleviation and reduction of social and spatial inequalities. The environmental dimension embraces issues as biodiversity, deforestation, climate change mitigation and water conservation. The political dimension includes the emancipation of neglected groups in society. On all these dimensions smallholder agriculture can further enlarge its contribution to societies, and it is very urgent to do so.*

This multifunctionality was already reflected by the United States Department of Agriculture (USDA) in 1998. When, criticised on the externalities of industrial agriculture, USDA launched a call to act and recognised the public value of small farms described in its final report: *A Time to Act*, dedicated to Martin Luther King and to T. Jefferson *who envisioned the "yeoman" farmer as the bedrock of American democracy.*

The multifunctionality of agriculture was also pointed out in the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD Global Report -2008)[13]:

> *Agriculture is multifunctional. It provides food, feed, fibre, fuel and other goods. It also has a major influence on other essential ecosystem services such as water supply and carbon sequestration or release. Agriculture plays an important social role, providing employment and a way of life. Both agriculture and its products are a medium of cultural transmission and cultural practices worldwide. Agriculturally based communities provide a foundation for local economies and are an important means for countries to secure their territories*.

Hans Herren, co-Chair of IAASTD, further states:

> *The evidence in support of low input, ecological or "conservation" agriculture is undeniable, from the IAASTD, to the Union of Concerned Scientists to a recent UNCTAD report that states 'organic agriculture can be more conducive to food security in Africa than most conventional productive systems, and is more likely to be sustainable in the long term.' And evidence that sustainable, ecologically based agriculture can provide the nutrition and income to the billion plus poor and hungry of today, and the 2 billion newcomers by 2050, is now well proven.*

Selected examples of reference to ecologically based agriculture and its contribution to societies is listed herewith.

Ecological agriculture or ecologically based agriculture is defined in *A Viable Food Future* (2010) as follows:

> *Agriculture that centres on food production that makes the best use of nature's goods and services while not damaging these resources.*

This definition can be further refined with the four principles of sustainability presented in *Reaping the Benefits* (2009) by the UK Royal

[13] http://www.unep.org/dewa/Assessments/Ecosystems/IAASTD/tabid/105853/Default.aspx/ (accessed August 2013)

Society (*a fellowship of 1400 outstanding individuals representing science, engineering and medicine and dedicated to expanding knowledge, supporting science and guiding policy):*

- Persistence: the capacity to continue to deliver desired outputs over long periods of time, across generations and, thus, conferring predictability.
- Resilience: the capacity to absorb, utilise or even benefit from shocks and stresses, and still to persist without qualitative changes in structure.
- Autarchy: the capacity to deliver desired outputs from inputs and production resources acquired from within key system boundaries.
- Benevolence: the capacity to produce desired outputs such as food, fibre, fuel or oil, while sustaining the functioning of ecosystem services and not causing depletion of natural capital including minerals, biodiversity, soil or clean water.

According to these principles and measures, any system is unsustainable if it depends on non-renewable inputs, cannot consistently and predictably deliver desired outputs, can only achieve output goals by cultivating more land or causing adverse and irreversible environmental impacts that threaten critical ecological functions.

Ecological agriculture

Science and lived experience

In the last decades throughout the developing world, countless examples have emerged of sustainable and diverse agricultural practices drawing from the past while also applying the latest knowledge within given resources. These two seemingly separate entities usually are pulled together and implemented at the local level through farmers' organisations, NGOs, and other agencies, demonstrating the feasibility of intensifying production, regenerating and preserving soils, and maintaining biodiversity, based on sustainable technologies and locally available knowledge and resources. It has now been demonstrated that double digit increases in yields can be obtained while reducing synthetic fertilizers, and that pest control can be substantially improved while drastically cutting the use of chemical inputs. Beyond yields *per se* and the amount of

food that can be produced, these different forms of production touch upon a whole range of environmental and social benefits with both tangible and intangible benefits for local communities and ecosystems.

The largest and most illustrative scientific research on resource-conserving agriculture, undertaken by Pretty *et al.* (2006), encompassed 286 interventions in 57 poor countries covering 37 million ha which equalled 3 percent of total cultivated area in all developing countries. Looking at how these interventions increased productivity on 12.6 million farms while improving the supply of critical environmental services, they found that the average crop yield increase was 79 percent, and all crops showed water use efficiency gains, with the highest improvement in rainfed crops.

Prior to this work, several other case studies, have shown spectacular result on the potential for increased food production with sustainable farming. *The Real Green Revolution*, Greenpeace (Parrot, *et al.* 2002) provided examples of increasing maize yields between 20 and 50 percent by using green manures in Brazil, of farmers in Nepal increasing yields 175 percent through agroecological management practices, and of farmers in Tigray, Ethiopia, whose composted plots had yields three to five times higher than those treated only with chemicals.

The preparatory documents to the International Conference on Organic Agriculture, organized by FAO in 2007, stated that *Overall, the world average organic yields are calculated to be 132 percent more than current food production levels.*

Badgley *et al.* (2007) published their research on organic agriculture and global food supply, reporting that: *The most unexpected aspect of this study is the consistently high yield ratios from the developing world. These high yields are obtained when farmers incorporate intensive agroecological techniques, such as crop rotation, cover cropping, agroforestry, addition of organic fertilizers, or more efficient water management.*

A UNEP–UNCTAD (2008) report extracted a summary review of the impacts of organic and near-organic projects on agricultural productivity in Africa and found that *the average crop yield increase*

were 116 percent increase for all African projects and 128 percent increase for the projects in East Africa.

More recently, *Foley et al*. (2011) acknowledging the challenge of the twenty-first century, namely: *meeting society's growing food needs while simultaneously reducing agriculture's environmental harm* consider several *promising solutions* using new geospatial data and models and propose closing yield gaps by bringing yields to within 95% (or at least 75%) of their potential for 16 important food and feed crops by *adopting lessons from organic systems and precision agriculture*.

IAASTD also reported that:

> *Agroecosystems of even the poorest societies have the potential through ecological agriculture and Integrated Pest Management (IPM) to meet or significantly exceed yields produced by conventional methods, reduce the demand for land conversion for agriculture, restore ecosystem services (particularly water), reduce the use of and need for synthetic fertilizers derived from fossil fuels, and the use of harsh insecticides and herbicides* (IAASTD, Synthesis Report 2008).

Experts in agroecology (Carrol et al. 1990; Rosset 1995; Vandermeer 1995; Altieri 2008; Gliessman 2010; Lichtfouse 2012; Gliessman 2013; Martin & Suerborn 2013) etc.) refer to agroecology as being *cutting-edge, yet low-risk technology,* and of small farms as a *planetary ecological asset*. Agroecologists recognize that intercropping, agroforestry and other diversification methods mimic natural ecological processes, and that the sustainability of complex agro-ecosystems lies in the ecological models they follow. By designing farming systems that mimic nature, optimal use can be made of sunlight, soil nutrients and rainfall.

The advantage of small farming systems, as per the above authors, is their high levels of agrobiodiversity arranged in the form of variety mixtures, polycultures, crop-livestock combinations or agroforestry patterns. Modelling new agro-ecosystems on such diversified designs can be very valuable to farmers whose systems are collapsing due to debt, pesticides, in terms of both the cost of the input and damage they can cause, or from the effects of changing climates. Such diverse systems

buffer against natural or human-induced variations in production conditions.

Choices and diversity

Ecological agriculture is based on diversity. This includes diversity of agrarian systems, the diversity of crops, animals, insects and other forms of biodiversity including wild relatives and wild species, and the diversity of ecosystems. It can draw from a pool of resources, including a wide diversity of seeds which not only offers broad choices of foods for consumption, but also provides opportunities to make innovative choices in efforts to manage risk and adversity. Adaptation is constant, following the fluctuations of climates, markets and social conditions. Ecological agriculture allows for expanded choices not only in space but also in time, as generations transmit bodies of knowledge to each other, as youth and elders work together, sharing information and ownership, planning and testing for the future. When practiced in an enabling environment, it is a form of agriculture that opens a range of choices and opportunities for the next generations. While knowledge is transmitted, it is also constantly increased and transformed through experimentation and testing.

The only place where humans still co-evolve with a diversity of wild and cultivated plants is in and around the small farms where the choice of agricultural practices allows coexistence. As stated by Small and Catling (2008): Though we do not have exact figures, we know that peasants have domesticated at least 5000 plant species. *Knowledge about traditional varieties and wild relatives is in the hands and heads of small farmers around the world.*

Field research in recent years has provided interesting results on diversity. Jarvis *et al.* (2007), who studied the richness and evenness of 27 traditional crops maintained by farming communities on five continents, found that communities harbour a very rich number of varieties with almost ten times the diversity of individual farms. This means that the impressive diversity existing among small farms allows ongoing selection for farmers' preferred traits. The study also found that communities having smaller farm-field areas have more diversity than those with larger areas.

The country reports used for the draft Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture (FAO, 2009b)

indicated that the highest levels of crop genetic diversity occurred most commonly in areas where production was particularly difficult, such as in desert margins or at high altitudes where the environment was extremely variable and access to resources and markets was restricted.

This diversity is very important to halt the speed of current erosion. Only about 150 plant species are grown commercially around the world. Of these, global crop production concentrates on just 12 of them, namely maize, rice, wheat, soybeans, potatoes, sweet potatoes, bananas and plantains, sorghum, cassava, millet, sunflowers and canola. Some estimate that 75 percent of the biodiversity in agriculture was lost during the last 50 years of the twentieth century, and up to 90 percent of the most common species (ETC-group, GRAIN and ITDG. 2002).

This loss of diversity is also happening in domesticated animal breeds used for food and agriculture. According to FAO, *there are 6536 local breeds, of which1080 are transboundary breeds for food and agriculture*. Of all the known species, 9 percent already have become extinct, 20 percent are at risk and 35 percent not at risk, while the status of the other 36 percent is unknown (FAO. 2007c).

Strong local economies

There is a common perception that small farms are less productive and less efficient than big farms. The literature on productivity of small farms demonstrates the opposite. Scientific research undertaken during the last three decades has demonstrated the inverse relationship between farm size and output (Rosset, 1999). This view is now shared by leading development economists including those at the World Bank (H. Binswanger etc.), with a wide acceptance that redistribution of land to small farmers would lead to greater overall productivity.

Large farms tend to plant only one crop because monocultures are the simplest to manage, while small farms are more likely to plant crop mixtures and fill the empty niche spaces with crops instead of weeds. They also tend to combine or rotate crops with livestock, using manure to replenish soil fertility. Such integrated systems produce far more per unit areas than monocultures.

Evaluating the relative productivity of small and large farms requires discarding *yield* as a measurement tool and using instead *total output*. Yield only reflects the production per unit area of a single crop, while

total output is the sum of everything a small farmer produces including grains, fruits, vegetables, fodder and animal products.

Rosset (1999) offers a variety of explanations for the greater productivity of small farms:

- Multiple cropping: while large farmers almost always use monocultures and one or, at the most, two cropping cycles per year, small farmers are more likely to intercrop on the same field, plant multiple times during the year, and integrate crops, livestock and even aquaculture, making much more intensive use of space and time.
- Land use intensity: larger farmers and land owners tend to leave much of their land idle, while small farmers tend to use their entire parcel.
- Output composition: large farms are oriented toward land-extensive enterprises, such as cattle grazing or extensive grain monocultures, while small farmers emphasize labour- and resource-intensive use of land. Large farms may produce crops with lower value than do smaller farms.
- Irrigation: small farmers may make more efficient use of irrigation.
- Labour quality: while small farms generally use family as labour – who would be personally committed to the success of the farm – large farms use relatively alienated hired labour.
- Labour intensity: small farms apply far more labour per unit area than do larger farms.
- Input use: small farms often use far more inputs per unit area than larger farms, though the mix on small farms favours non-purchased inputs, such as manure and compost, while large farms tend to use purchased inputs, such as agrochemicals.
- Resource use: large farms are generally less committed to management of other resources (such as forests and aquatic resources) which combine with the land to produce a greater quantity and better quality of production.

With regards to small farm efficiency, it has been demonstrated that small and medium farms make more efficient use of land. Large farms

generally have higher labour productivity due to mechanization, so they might be considered more efficient in labour usage.

The definition of efficiency most widely accepted by economists is based on labour productivity but also includes *total factor productivity*, which averages the use efficiency of all the different factors that go into production, such as land, labour, inputs and capital. Research by Rosset (1999) demonstrated that small and mid-sized farms have greater total factor productivity than large farms in most countries, with evidence that farms lose efficiency as their sizes increase.

In addition, when practiced in an enabling environment, small-scale agriculture not only produces crops and livestock, it also contributes to livelihoods, nurtures or maintains cultures, and provides ecological services. The benefits of small farms extend beyond the economic sphere. By preserving biodiversity, open space and trees, and by reducing land degradation, small farms garden landscapes and provide valuable ecosystem services to the society at large.

Employment

When adding up the number of smallholder farmers, urban gardeners, livestock keepers, nomadic pastoralists, fishers and forest-keepers around the world the ETC Group[14] reaches a figure of 3 billion people (including family members), almost half the population of the planet today. Farming and the web of employment it creates in the rural communities and increasingly in urban agriculture is more extended and complex than realized. It embodies diversity, stewardship of natural resources, equitability through empowerment of communities with farmers relying on local business and services for their needs. Farms are nurturing places for families and children thereby expanding on family networks and institutions including education and health, they open local market possibilities that connect consumers with nature and with the people growing their food and they represent the vitality of local economies.
Regarding urban food production, figures are also considerable. According Canada's International Development Research Centre cited by ETC Group (2009):

[14] Action Group on Erosion, Technology and Concentration.

(...) *25% of the entire global food output is grown in cities. Undertaken before the recent food crisis, it is likely that this figure significantly underestimates the current level of urban food production. History shows that urban agriculture production rises with food prices. Some years ago, UNDP estimated that at least 800 million urbanites produce some of their own food, including at least 200 million urban families that sell some of their produce in local markets. Again, these figures are probably much higher today. Almost 18% of the land in downtown Hanoi is used to grow food. In Quito, about 35% of urban land is used for agriculture and in the Argentinan city of Rosario, 80% of the land grows some food. In Abomey and Bohicon, two cities in Benin, half of the population in the peri-urban area is growing food as their primary activity.*

Climate change

In a comprehensive literature review of the options for lowering agricultural emissions at global and national levels, Wrights (2010) of the Overseas Development Institute concludes:

> *While humanity is confronted with the almost overwhelming challenge of climate change and finite resources, there is no evidence suggesting that it is impossible to find a way to move forward. To the contrary, the growing body of analytical work examining scenarios at the global and regional level suggests it is not only technically feasible but also economically affordable, even profitable. The affordability of an ambitious response is even clearer when the costs of inaction are considered. These conclusions, however, only apply assuming a global transformation towards sustainability begins in the very near future and accelerates quickly.*

For Wrights, sustainability implies a shift towards agroecological models of production that allow significant reductions in the use of fossil fuel, present great mitigation potential through soil and plant sequestration, and have the flexibility and diversity required to allow adaptation to changing conditions.

In practice, agriculture can contribute to cooling the planet in three ways: by reducing the use of fossil fuel through reducing fertilizer production and the use of fossil-fuel powered transport and machinery; by slowing

the release of biotic carbon; and by increasing sequestration, particularly in soils.

GRAIN (2009)[15] calculated that:

- by using agroecological practices to rebuild the organic matter in soils lost from industrial agriculture, sequestration equivalent to 20–35% of current greenhouse gas (GHG) emissions can be achieved;
- by decentralising livestock farming and integrating it with crop production, total GHG emissions can be reduced by 5–9%;
- by distributing food mainly through local markets instead of transnational food chains, total GHG emissions can be reduced by 10–12%;
- by stopping land clearing and deforestation for plantations, total GHG emissions can be reduced by 15–18%.

Brought together, these measures would lead to reduction and sequestration of one-half to three-fourths of current global GHG emissions. This would also lead to decentralisation of production and distribution, effective support for agricultural practices based on agro-ecological processes, biodiversity and local knowledge, and profound agrarian reform.

Other authors strongly advocating a change in agricultural practices to mitigate climate change include Ensor and Berger (2009) as well as GECHS *et al.* (2008) stating that:

> *The uncertainty of future rainfall patterns, coupled with the likely increase in extreme rainfall or drought events and the emergence of unfamiliar pests and diseases, demands a form of agriculture that is resilient, and a system of food production that supports knowledge transfer and on-farm experimentation through building the adaptive capacity of farmers*.

Small-scale farming provides diversified diets including a wide range of pulses, beans, fruits, vegetables cereals and animal-derived products. In addition to being good for consumers' health, this diet also has its

[15] www.grain.org/front_files/climatecrisisrefs.pdf (accessed August 2013)

http://www.grain.org/article/entries/4168-small-farmers-can-cool-the-planet-presentation (accessed August 2013)

implications for climate change mitigation. A more vegetarian diet is responsible for fewer greenhouse gas emissions over a lifetime. In the US, an average of 25 kcal fossil energy is used per kcal of meat produced, compared with 2.2 kcal for plant-based products (Pimentel and Pimentel, 2003- Also available at http://ajcn.nutrition.org/content/78/3/660S.full accessed August 2013).

As stated by Jackson *et al.* (2007):

> *If developing countries were to consume as much meat as industrialised ones, we would need two-thirds more agricultural land than we have today.*

A comparative analysis of energy inputs on long-term trials at the Rodale Institute found that organic farming systems used 63 percent of the energy required by conventional farms, largely because of saving the energy input that would have been required for synthetic nitrogen fertiliser (Pimentel *et al*, 2005). The majority of climate change mitigation activities are cornerstones of organic agricultural practice, meaning that organic production systems arguably serve as the best widespread examples of low emissions agriculture to date. Organic systems also tend to be more resilient than industrial in terms of withstanding environmental shocks and stresses including droughts and flooding.

Values of equity, justice and respect for the earth

Ecological agriculture is community based and embedded in local cultures**.** Eyzaguirre (2006) writes the following:

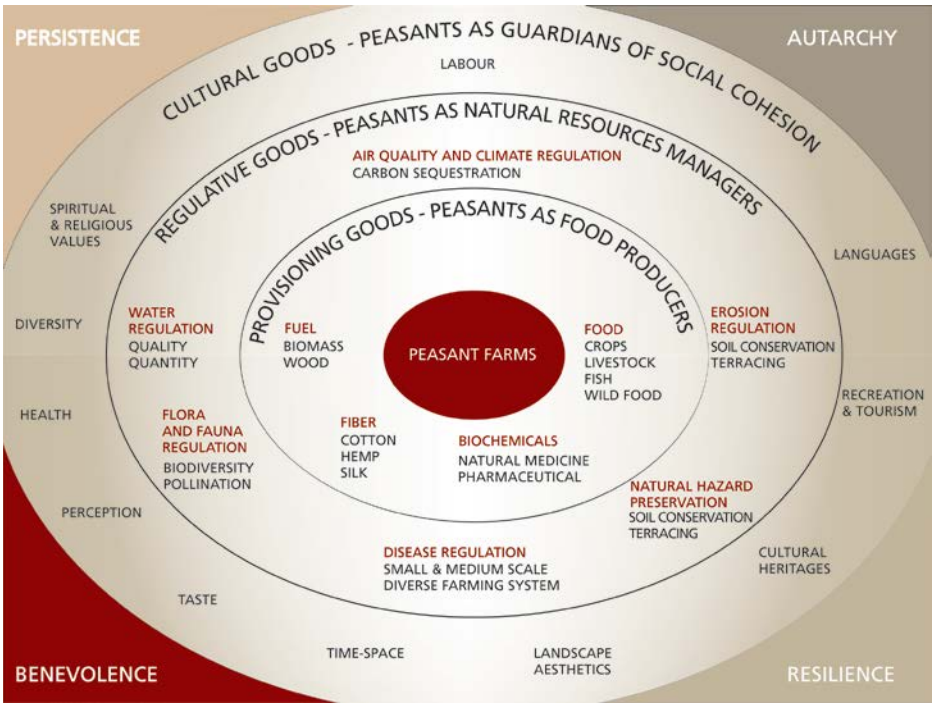
> *To the anthropologist culture is the fundamental instrument and process by which humans adapt and evolve. It guides the development of institutions, decisions, social cohesion, rights and collective action. Culture contains and transmits bodies of knowledge. As long as agriculture will be seen primarily as a technological process for using soil, water and biodiversity to produce good and commodities, we will continue to have hunger in the face of overproduction, malnutrition coupled with overnutrition and a growing population that is increasingly dependent upon an ever narrower portfolio of crops and livestock to meet its needs.*

In ecological agriculture, local communities use culture and nature to meet their food and livelihood needs. Ecological agriculture is grounded in locally available resources and builds on past and present knowledge systems and practices. This temporal dimension also has a spiritual dimension that connects rural communities to the earth, whereby farmers become the stewards of nature. Even when they are forced to migrate to slums and urban neighbourhoods, small farmers transpose their knowledge to their new environments. For the population in many parts of the world, this intimate relation to the earth has been lost, together with the understanding of what food is about and where it comes from.

Graphs on peasant farming

The previous paragraphs list some of the contributions of the peasant way of farming to societies. The author decided to illustrate these different contributions in visual graphs that could facilitate understanding of the various contributions of peasant farming to societies today and tomorrow, to create dedicated mechanisms that provide enabling environments for peasant farming and to inform policy. Tangible as well as intangible values of peasant farming and their benefits to human societies have been brought together in different graphs which have presented in various international events and are now part of publications being widely distributed. The graphs have been used by the author to create dedicated instruments for peasant farming, one of which being a novel investment mechanism specifically designed for peasant communities: A Peasant Fund, or *Special Purpose Vehicle*, currently being developed in Mozambique.

Peasants as food producers, as natural resource managers, and as guardians of social cohesion



Peasants do not only produce food (crops, livestock and derived products, fish and wild food), they also produce fuel (such as biomass and wood), fibre (through the production of cotton, hemp and silk) and biochemicals (natural medicine and pharmaceuticals).

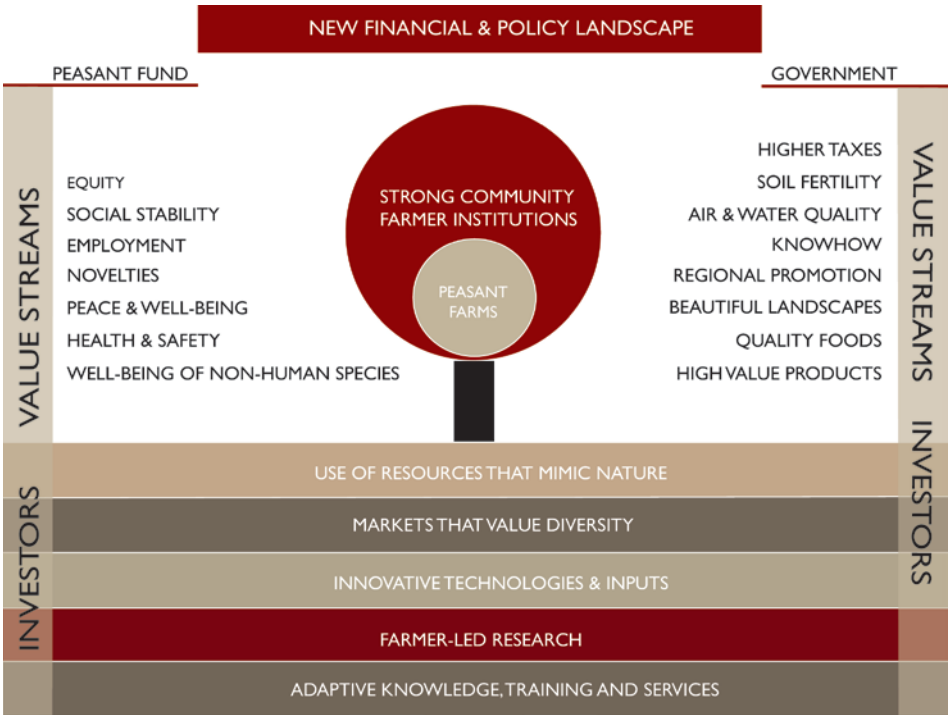
As natural resource managers, peasants contribute in different ways: water regulation both in quality and quantity, regulation of the local flora and fauna (increasing and maintaining biodiversity and allowing pollination), regulating diseases by maintaining a high diversity in their farms (while industrial agriculture and CAFOs[16] create conditions that can lead to pandemics), to natural hazard mitigation such as hurricanes etc. by building terraces and applying soil conservation practices, to regulating erosion through conservation practices and in air quality and climate regulation, cooling the planet by sequestering carbon in the soil and in plants.

[16] Concentrated Animal Feeding Operations

As guardians of social cohesion, peasants provide labour, they are also the guardians of thousands of languages, and maintain cultural heritages, spiritual and religious values, landscape esthetics, places for recreation and tourism, and another their own perception of time and taste.

A different financial and policy landscape

Peasants can create value which at higher levels of aggregation will produce wealth. Within an enabling environment (rights, policies, governance, investments), peasant farming becomes the most productive form of farming.



In the graph, the various layers that can potentially benefit from investment to feed the process and catalyse the creation of wealth are the following:

The use of resources that mimic nature

land and land-related institutions; water, access and irrigations systems; inputs and implements adapted to the local needs, dimension and social organisation

Markets that value diversity

market infrastructure, processing facilities, storage, packaging, branding, certification (quality, origin..), distribution, marketing (local markets, retail, wholesale..), consumption (real foods, fresh, regionality..)

Innovative technologies and inputs

inputs locally specific, family farm specific - biochemicals (biopesticide, biofertilizers, vermicompost..), - small-medium machinery and tools

Farmer-led research

co-evolution in local conditions, adaptation to climate change, related to crops, livestock, wildlife, agroecosystems

Adaptive knowledge, training and services

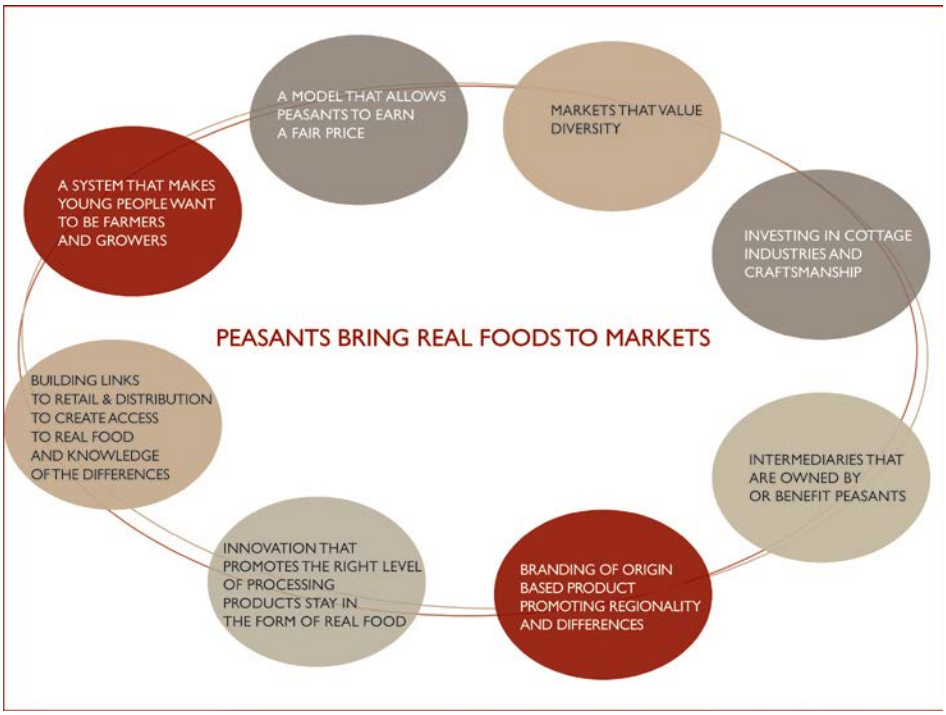
open knowledge pool - technology options - scientific knowledge, - traditional knowledge, - training (endogenous and exogenous), - Farmer Field Schools, services

These investments channelled through peasant institutions can facilitate the creation of value streams such as quality foods, high value products, beautiful landscapes, the recognition and promotion of a region, knowhow, air and water quality, soil fertility, which all contribute to higher wealth and higher taxes perceived by the local authorities which can be reinvested within the community. It can also contribute to social stability, equity and employment, to innovation and novelty, to health and safety and to the generation of peace and well-being for human and non-human species.

Peasants bring real foods to the markets

In a development approach oriented towards the peasant way of farming, peasants become the drivers of the marketing and processing of foods within the local economies and are able to reinvest locally within the communities. In this model, peasants earn a fair price, market value

diversity, investment favours cottage industries and craftsmanship, intermediaries are owned by or benefit farmers. The branding is made for products of origin which promotes regionality and differences, processing allows the product to stay in the form of real food. Links to retail and distribution create access to a market that recognises quality and differences and overall the system makes young people want to be farmers and growers.



In the same way that the word and concept of peasant has disappeared from the lexicon of expert systems during at least five decades and, as stated by Ploeg (2008), made invisible; the produce of peasant farming, and of agriculture in general, has been reduced to commodities with an obsessional focus on crop yields during all the modernization period, as if farming and the outcome of farming could be solely equated to volumes produced and traded. This commoditisation and conceptual simplification of agriculture has had serious implications on the health of societies.

This section is about these other values. Farming, and in particular peasant farming, holds a number of values both tangible and intangible that go beyond crop and livestock production, which may be of great value for urban and rural dwellers (a cleavage increasingly blurred) in the

21st century. Pretty's (2013) views for the future of agriculture, mentioned in the first section, while not opposing models of agriculture, does refer to very *peasant-like* values as keys for this century such as *affection for places* and he concludes with a Howards End citation: *it may be followed by a civilisation (that) will rest upon the earth*.

Presenting these values in this section and bringing them together in graphs is also done with a view to influence a shift into a less paternalistic approach to the idea some have of small farmers. As seen in the early discussions of this research some policies (see debate in first section on dual policies in Chile) believe that small farmers should be helped, not realizing the formidable potential of peasant farming if the local potential is unleashed. This condescending approach (see Gate's comments in first section about the *need to help smallholder* farmers) can have devastating effects.

On the other hand an emerging interest on how to capture these values has emerged from the impact investment industry which the author followed closely from 2009 to 2011 (US nascent impact investment). An interesting contradictory addition to the debate on the notion of value is brought by Harribey (2013) in his latest book which discusses the concepts of *wealth*, *value*, and the *invaluable*, placed in economical history with a critic of the myth that infinite accumulation of capital provides well-being (see also Pretty 2013 GDP and well-being).

The next section of this research is about the enabling environment to expand on these values or on how to boost and create blooming local ecologies and economies. Twelve steps are proposed, a distant echo to the 1525 *Twelve Articles of the Swabian Peasants* (see Annex II).

TRANSITION

TRANSITION

The fourth and last section of this research is about understanding enabling environments which have allowed successful agricultural transitions towards more sustainable farming practices, in different parts of the world. Transitions in farming communities that have been able to reorganize resources and relationships in a way that has benefitted the larger community have been selected and analysed to extract lessons on the steps that lead to success. The author has identified twelve key steps. These steps are then explained in detail and one case study has been selected to exemplify each one of the steps.

Three cases are analysed: The first is about a whole country in the American continent moving into agroecological practices and the possibility or otherwise to feed its people. The second is a large region in a country in Asia that moved towards more sustainable practices, the third one, in a Northern European country, is the illustration of a transition in a typical modern agricultural environment. A more extensive list of examples worldwide is available in the following website: www.ag-transition.org .

Agroecology in Cuba

The best illustration of sustainable peasant agriculture on a large scale, having gone through a transition, is the case of Cuba which is based on the farmer-to-farmer (*Campesino-a-Campesino*) learning process. Peter Rosset *et al.* (2010) present how this transition took place.

Cuba used to be characterized by a high dependency on imported food (57 percent in 1989-16 percent today[17]), agricultural inputs and implements and, late 1980s with 30 percent of agricultural land devoted to a single export crop, sugarcane, which generated 75 percent of export revenues. Cuba was considerred an example of the success of modern agriculture with the adoption of the Green Revolution, the highest number of tractors per person and the second highest grain yields of Latin America. Agriculture relied on external chemicals such as fertilizers (48 percent imported), and pesticides (82 percent imported).

[17] data also available at http://monthlyreview.org/2012/01/01/the-paradox-of-cuban-agriculture (accessed August 2013)

This model was not based on food sovereignty and was dependent on foreign trade. When external conditions changed (the collapse of the Soviet Union and the US tightened trade embargo), Cuba lost 85 percent of its trade relations and could no longer import food, machinery, inputs and petroleum.

A *Special Period in Peacetime* was declared to confront the acute economic and food crises. Smaller, more flexible peasant cooperatives were encouraged and the overall logic of production was overturned. As virtually all peasants belonged concomitantly to ANAP (National Association of Small Farmers), and to one or two cooperatives, the spread of alternative practices was able to spread quickly. Credit and Service Cooperatives were composed of peasant families who owned their individual farms and at the same time shared the machinery, access to markets and access to credit facilities through the cooperatives. This participated to the shift from a situation of total food collapse in the early 1990s, to the highest percentage of annual growth in *per capita* food production of all Latin America and the Caribbean with a 4.2 percent annual growth from 1996 to 2005. Agroecology and the farmer-to-farmer approach played a key role in this successful transition.

As analyzed by Rosset:

While hindsight now shows us that the technological breakthrough that was needed was greater agroecological integration, it was a methodological innovation that in our view has proved key. We believe that in the typical case, in most countries most of the time, there are abundant and productive ecological farming practices 'on offer', but low adoption of them is the norm, because what is lacking is a methodology to create a social dynamic of widespread adoption.

The most successful methodology for promoting farmer innovation and horizontal sharing and learning is the Campesino-a-Campesino (farmer-to-farmer, or peasant-to-peasant) methodology (CAC). While farmers innovating and sharing goes back to time immemorial, the more contemporary and more formalized version was developed locally in Guatemala and spread through Mesoamerica beginning in the 1970s (Holt-Giménez 2006). CAC is a Freirian horizontal communication methodology (sensu Freire 1970), or social process methodology, that is based on farmer-promoters who have innovated new solutions to problems that are common among many farmers or have

recovered/rediscovered older traditional solutions, and who use popular education methodology to share them with their peers.

Community managed sustainable agriculture in Andhra Pradesh, India

In Andhra Pradesh, in just four years, over 300 thousand farmers have chosen an alternative to the Green Revolution, now known as the *Community Managed Sustainable Agriculture* (CMSA) which has been adopted on half a million ha of farmland. What happened? Small farmers found themselves caught in the indebtedness spiral of the Green Revolution (high cost of chemical inputs, lack of credit, poor access to markets etc.) which resulted at national level, as reported by the official Indian statistics (Ministry of Agriculture) in more than 200 thousand suicides and in devastating effects on ecosystems that are still to be fully appraised.

In Andhra Pradesh, farmers opted for a survival transition and launched the CMSA, using an institutional platform of community organizations and their federations to plan, implement, manage and monitor the program (Kumar, 2009). CMSA is a combination of scientifically proven methods, indigenous knowledge and traditional wisdom. It is entirely managed by community institutions; federations of self-help groups with services from a non-profit entity, SERP (Society for the Elimination of Rural Poverty) which has developed an institutional model of federations of poor women that includes ten million women. The federation of self-help groups owns a corpus of USD 1.5 billion and provides a bundle of financial and other services to which the poor normally do not have access. This institutional architecture has given the poor access to USD 4.8 billion.

The initial objectives of the community managed sustainable agriculture were to provide healthy food, healthy crops, healthy soil, and healthy life. The Non-Pesticide management and soil conservation practices were introduced through Farmer Field Schools where farmers themselves could take their own decisions about management approaches. Local institutions were key to the success of the transition. They comprise women Self-Help Groups, Village Level Farmer Federations (bringing together all farmers practicing sustainable agriculture with each household represented by a man and a woman), and the District Level Farmer Federation. The first investment was on institutional building.

Then when the platform was ready financial support was provided for capacity building. There were no input subsidies. In CMSA all of the inputs are internalized so the cost of cultivation is drastically reduced. The bulk of the production is meant first to ensure food security locally. The surplus production is sold to nearby markets and niche markets with a premium price (product free of pesticides). All essential elements such as extension and programme management are lead by the communities.

The CMSA approach is based on the premise that ecologically sustainable agriculture makes sound economic sense. In view of the success of the CMSA, the Indian Ministry for Agriculture is planning on expanding the approach to other regions.

Territorial cooperatives in the Netherlands

In the Netherlands, as in most European countries, the interrelations between the state and the farms have suffered from the increase of regulatory schemes. Disarticulation and mistrust between farmers and the state apparatus have triggered the need for new forms of cooperation. A successful way was found with the creation of territorial cooperatives which have introduced new forms of self-regulation and strategies of negotiated development. The case of the North Frisian Woodlands is outlined here (Ploeg 2009).

Territorial cooperatives fit well within the principle of subsidiarity, and reflect a strong democratic tradition. They reduce transaction costs associated with current rural development programmes while augmenting reach, impact and efficiency. They can, therefore, be the perfect complement to agricultural policies. They crystallize the construction of regional cooperation (protecting the environment, nature and landscape), the construction of new forms of rural governance (involving principles of responsibility, accountability, transparency, representation and accessibility) and a move away from expert systems towards the innovative abilities of peasants (territorial cooperatives are field laboratories). In the regional cooperatives these elements are tied together into one new institution which strengthens the social capital available in a territory and the network of interrelations with other regional, national and supranational institutions allowing for expanded access beyond the territory.

The initial trigger of the creation of the territorial cooperatives was the transfer of the responsibility of the protection of the landscapes (characterized by hedgerows damaged by acid rain), to farmers. A solid contractual base for reciprocity was created insuring that parties did not feel victims of an opportunistic behaviour of the others. These were the first steps for grounding the cooperatives, later strengthened when legal room was obtained to develop and test several novelties[18] and the construction of a new peasant trajectory towards sustainability.

Interesting in this example is the snowballing effect of novelties, once they were given the space and environment to emerge. The result was a reversal of the interrelations between economy and the environment; the change from mutual distrust to negotiated cooperation between farmers and state organizations; the change from the single farm to the territory as the unit of operation (issues of landscape, biodiversity and environmental quality being thus dealt at the required level); a cultural reversal in the sense that despair and apathy was replaced by hope and contest, and in the overall net improvement of the environmental and social conditions of the region.

In all the examples described above, there is a common underlying current, the fact that a hidden potential that was not used before is always available *in offer* in all territories. Once the conditions and spaces are provided for different forms of social organization to materialize, powerful creative dynamics enter into play.

Steps for a Transition

A transition is a process or a period of changing from one state or condition to another. The word comes from *transire*, "go across". The purpose here is to present the possibility of a path to go across the bridge of unsustainable current practices in agriculture, towards more viable lands and to stimulate further discussion. This section goes into twelve proposed steps for a transition process. The steps do not necessarily follow each other as there is no pre-established sequence, but there is continuous reiteration amongst the various steps.

[18] Definition Ploeg (2008): Novelties are a deviation from the rule, deliberate or unexpected, which is not incremental and thus different from innovation.

Transitions are multilayered, multilevel, multi-actor, multidimensional and multistage.
Central in transitional processes is the creation of new connections and patterns that connect people, institutions and resources that were, until then, isolated. This is why local conversation and democratic consultation are important. Transitions are very much about the exploration and creation of these new connections.

To follow these steps some conditions need to be met: for a transition to materialise, basic rights need to be recognised, access to an outlet such as a market needs to be made possible, and farmers need to have the basic means to produce. Then, a transition can take place, and when it becomes successful it starts to be self-propelling and to go through complex progressive stages.

It is also important to know that in transitions there are periods of confusion and the construction of temporary technologies which may appear at first sight irrational (so-called *monstrosities*), but they are the ones that allow a smooth passage from one stage to another until a more adapted form emerges. Another characteristic of transitions is that they often need people who facilitate interface and help make things happen (so-called *uncles*) as they feel committed and align with the common goal.

The twelve steps that are presented here constitute the framework for this transition to materialise. Usually, the common approach, when building a framework, is to fill up boxes. In this case the approach will be different. The idea is to leave the boxes purposely empty. To keep them blank so as to leave an open space where new futures can be invented. Symbolically, the framework can be visualised as a painting for which only the frame is being built and for which the painting in itself is left blank, for local communities to do the painting and mix the colors as they wish. The surrounding framework, instead, is carefully designed with clear roles and responsibilities for the different players involved: farmer organisations, regional cooperatives, policy makers, political leaders, investors, corporations, scientists, citizen groups, businesses and many more. In other words, the framing that surrounds this center of open possibilities will contain the values, the principles and the conditions that can allow the emergence of endogenous development (defined as a self-generated development essentially based on local resources).

Open spaces for autonomy are voluntarily opened and left to the ingenuity of those who decide to *re-pattern* their resources with the aim of transforming a grim reality into new flourishing dynamics. Obviously this is not an easy path to take, and it does not go without struggles and battles, but it is alive; it brings back life into the system. Resignation and misery can give way to questioning, revisiting, trial and error and creativity. Probably chaotic, and intermittent at the start, it can find its own rhythm if it is guided by confluent very long term visions defined for and by the community. When relationships are being rebuilt, when links are reconstructed, when resources are re-evaluated through different lenses, when outreach beyond borders allow innovation to flow and novelties to emerge, then the space for thinking, expanding and thriving is brought back into existence.

The saddest process to witness is the slow and seemingly irreversible decay of whole territories and regions previously endowed with landscapes of aesthetic beauty, falling into the hands of outside powers of control that dictate form, size, quality, delivery, price of monotonous large quantities of low quality commodities imprisoned in strictly regulated processes, being delivered far away to impersonal plastified outlets. It is difficult in this context to imagine the encounter by an anonymous consumer with the pleasures and delights of foods. When human relationships are absent and the consumer loses knowledge about what he or she is eating and where his/her food comes from, pleasure fades away. Whole territories lose their identity in this way and this becomes a tragedy of our times.

We have learned from the development interventions of the last decade that one master plan fits-all does not work, nor can a solution imposed from the top be generalised. What needs to be done is to set free the productive capacities, imaginations and willingness to strive of those who are in the countryside. This means that we neither have to start from scratch, nor do we have to start everywhere at the same time. Due to a variety of reasons (different ecosystems, different social organisations etc.) some places start transitions earlier than others. These are the places that can be converted into true learning laboratories for progress, especially when outside means are made available. Once these promising places turn out to be successful, then attention shifts to how this can be facilitated and extended to wider areas. Facilitation will mean that instead of blocking these unlimited ingrained potentials, the purpose will be to provide the means and tools that are needed to accompany these various transitions at various stages.

A pro-peasant mechanism that can positively accompany transitions could be thought of but has not been invented yet, though we know that this is where value and a vast potential of dynamic creation of wealth exists. Nowhere yet has there been a pro-peasant platform created specifically to imagine, invent, build and give access to tools and mechanisms of the third millennium specifically aimed at peasants. Legal knowledge and financial tools, and many more, are still to be invented to fulfill the unlimited potential of peasant communities not only in rural areas, but in urban surroundings too. Tools and mechanisms that can make it attractive for younger generations to engage in the crafting of foods and services that are related to nature.

The steps

These steps are taken from real life processes of change that are already occurring in many parts of the world. To facilitate their understanding, one concrete example is chosen here (presented in italics), the North Frisian Woodlands[19] (NFW) in the Netherlands (presented earlier as an example of transition), to illustrate each step, with the understanding that the proposed principles can be applied worldwide.

1. local conversation

The process starts on the ground, at the level of the communities. It corresponds to the need for change, either because of a situation that has become unbearable, usually due to pressures from the outside, either due to an increased degradation of resources and quality of life within, or sometime due to the an emerging strong belief that things could be done far better. The characteristics in regions and countries widely differ, but the mechanics and dynamics are alike. Mobilisation starts on the ground, triggered by diverse purposes, when some individuals, women and men, coalesce around the opening up of new opportunities; they all encompass the search for a better quality of life be it in rural or urban surroundings. In the farming context the purpose is to bring back acceptable conditions of production linked to basic social and labour rights, together with access rights. Along the process access to specific tools can be facilitated by an open platform to support the premises of change towards

[19] Ploeg 2009. p 185

diversified forms of existence. This is especially true when people feel themselves that they could do better and translate this into proposals that are encouraged by those who align with their purpose.

In the NFW, during the early 1990s a national law (on ammonia and animal production) was implemented to protect nature from acid rain. The new regulations implied that in the hedgerow landscape agricultural activity would have to be frozen. The proposition provoked considerable anger in the area. The argument was that farmers had created that landscape and had always taken care of it. Mobilization begun and farmers started to develop a proposal for an alternative solution.

2. mapping of resources

Looking around with a fresh look allows to map opportunities and constraints in a different way. The reframing of existing resources can transform sources of pollution and nuisance into assets that can feed back into the production loop. In addition to mapping resources, mapping the territory is a tool widely used that provides a powerful projection to the future, presenting visually what could be, is a bonding exercise towards a common vision. Comparative approaches that explore heterogeneity and compare in quantitative and qualitative terms the way resources are being used in different ways of farming (e.g. industrial versus agroecological) is often an eye opener for those taking a fresh look.

The municipality promised not to declare the hedges acid-sensitive elements in exchange of the promise from farmers to maintain and protect the hedges, ponds, alder rows and sandy roads of the area. Thus, farmers' willingness to maintain and further develop natural elements emerged as an important resource. Consequently, six associations were created with this purpose, and they took responsibility for caring landscape, nature and biodiversity. Thus state objectives were secured but through other more appropriate means.

3- exploration of new practices

Post-modern tools for peasants, different from those developed in the modernisation paradigm, are still to be invented. Many viable practices exist in different parts of the world, but new tools need to be invented to bridge them and take them forward (*e.g.* sophisticated patterns of intercropping and mixed cropping exist in many parts of the world, experiments are now brought forward in some areas such as cereal and even vegetables in pastures in permaculture but these are not widely shared). Here there is a whole new field to be explored. Having access and sharing knowledge and services could be facilitated by virtual platforms able to merge different forms of connectivities involving a skypepeasant with wikipeasant and google-for-peasants and many more still to be imagined, that could be interwoven into the fabric of local and experiential knowledge, mixing subjective and objective knowledge towards novel forms of applied knowledge. The purpose being to open-up the possibilities of technologies at the service of communities and not otherwise, thus facilitating independence, autonomy and self-determination. Open source access to the depth and breadth of millennia of accumulated knowledge related to agriculture, with due protection against knowledge appropriation, can be a way to put accumulated wisdom at the service of peasants for trial and adaptation in different environments, a response to the vagaries of the weather and the climate.

Knowledge tools

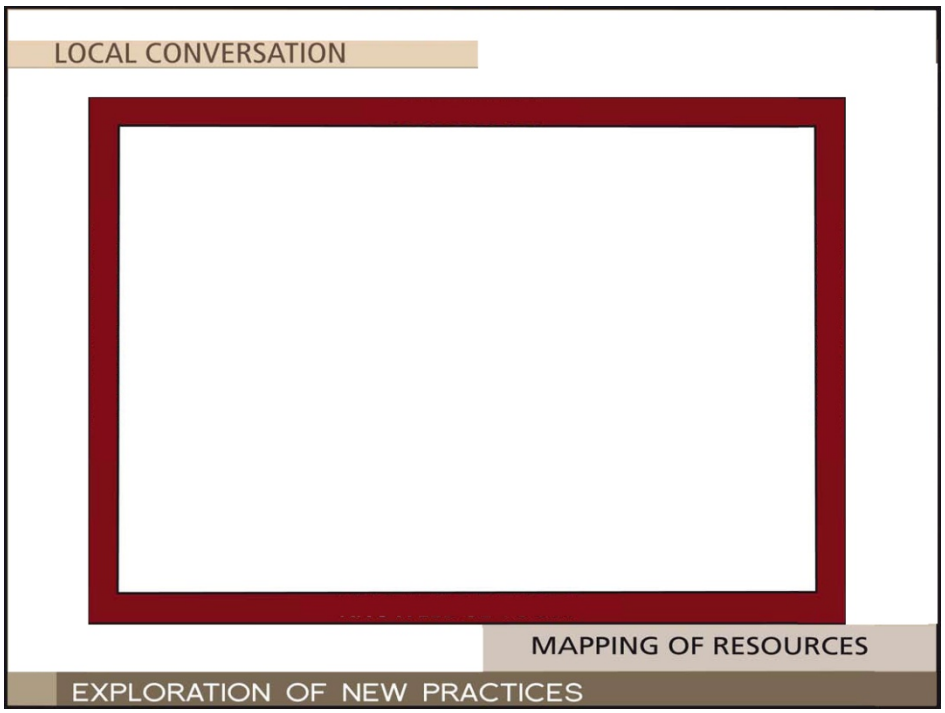
The idea is the construction of diverse pools of easily accessible knowledge in different forms that can allow the opening up and expansion of possibilities at a local level, benefiting from the successes and failures in other places.

This would:

1. reduce the isolation of farmers and their marginalization at the edge of progress and dissolve the backward perception
2. bring forward the pride and recognition of the main artisans of our foods
3. open up the range of possibilities
4. increase the ability to better cope with changes

This can lead to all sorts of applications such as, exchange and distribution of different seeds by peasants to be tried in their own fields etc. New ideas could be tested in transitional spaces, strategic niches which would constitute the physical areas for experimentation.

Several novelties were developed and tested for the maintenance of alder[20] rows, which later became the ingredients of the national programme for nature management by farmers. The associations designed an environmentally friendly machine for manure distribution (a machine appropriate for small fields surrounded by hedges and alder rows) and succeeded in engaging nearly all farmers in the management of nutrient accountancy systems.



[20] The alder trees are characteristic for that particular region. Alder rows are important carriers of biodiversity. They have been planted by farmers, from ancient times until today, in order to create boundaries between different plots needed to prevent the escape of animals.

4- democratic consultation

The initial conversation, the mapping of resources and the exploration of internal and external knowledge (both subjective and objective) by a small group of motivated individuals within the community, will then transform as the momentum grows into a more structured consultation process involving additional local and external players. A democratic consultation can take place with the possibility of making a coalition that is inclusive and representative and that is interesting for all parties involved which will then attract external players who might support it.

Farmers formed the first association to maintain hedges etc. in the spring of 1992. Then a second one in autumn of the same year and another four were created in the surrounding municipalities, and together, during the course of 2002 these six associations and cooperatives created the overarching NFW cooperative. This cooperative is now actively engaged in regional and sometimes also in national debates about the future of farming. Simultaneously, it democratically organizes many activities in its own area.

5- repatterning

This is the time to engage in redefining long term objectives, to re-organise or repattern resources in a different way to build a new series of links that facilitate the converting of local dynamics into newly formulated logic. This is a reiterative process that goes back and forth at the same time as the landscape and relationships are being transformed.

Two important modifications for participating dairy farms were strategic for producing effective environmental progress: the use of chemical fertilizer was strongly reduced and slurry was rebuilt into good manure. Within a few years the curves representing nitrogen losses per hectare changed completely. The average loss per ha decreased from 346kg per ha in 1996 to 150kg per ha in 2002. NFW also became involved in a wide range of activities for maintaining and improving nature, and as a result it was possible to achieve qualitative improvements of landscape and biodiversity far beyond those to be gained from single units of production. Gathering, analyzing and understanding data about nature, landscape and the environment became a large research programme carried out by scientists and farmers together. This programme shifted several boundaries between science and practice and transformed

several boundaries within science itself while creating new levers for local self-regulation.

6-shared values

As numbers of committed individuals increase, the time comes to consolidate the bonds of the coalition with the crafting of the shared values (the commonly agreed ethics to be respected by all) and common principles (reflecting the main beliefs and the new philosophy of the group). These shared values or common principles help to link people and to strengthen the building of a promising future and the construction of new alternatives that will tie people together. Different forms of cooperation will be created with varying degrees of engagement that can form higher degrees of aggregations (social organisation).

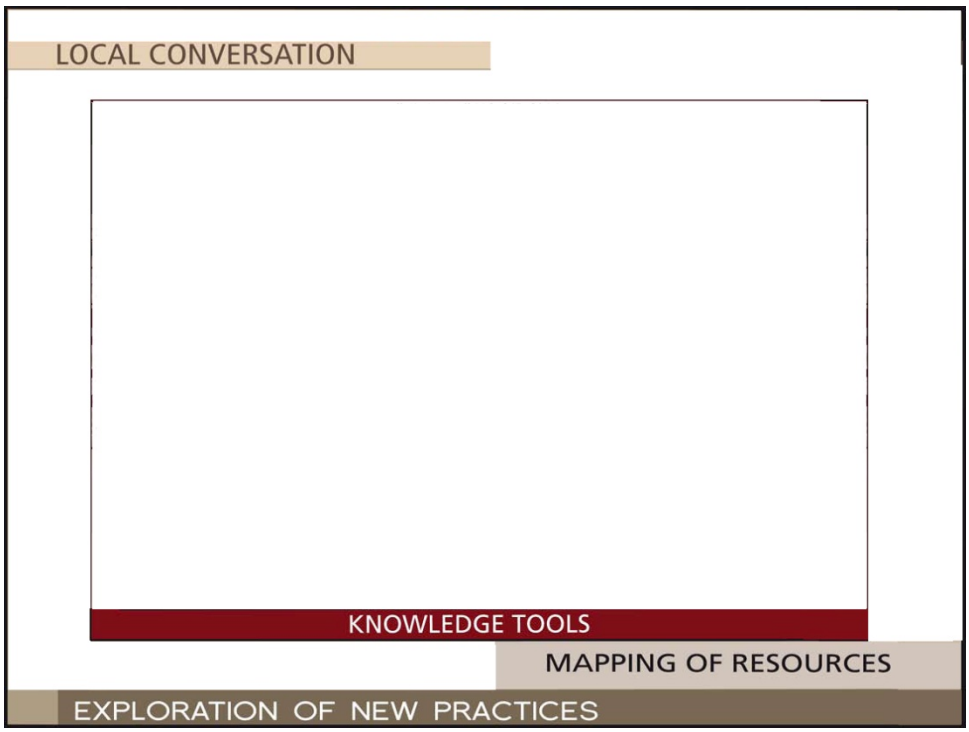
After several rounds of consultation, the NFW cooperative formulated a mission statement. This lists ten commonly shared values that reflect the history of both the area and the cooperative. They also reflect the interests, prospects and the emancipatory ambitions of its people. They include community, the unity of human and land, farming gently, own rights and entitlements, performing better, reliability, progressing slowly but steadily, not being alone and caring for the future, with satisfaction and joy.

7-negotiation

In the process, those leading change are confronted with unequal power relations. One of them is the access to resources. The key is the strengthening of farmer organizations and social movements. In addition, new tools to support peasant communities would be welcome. Tools or mechanisms that can support the negotiation process. Thus, the second fundamental tool proposed here is the legal support to communities which are not in a position to reclaim autonomy and rights. One possibility for a tool still to be invented is one that can facilitate access to a bundle of services, in particular legal services. An approach similar to the group of Elders (convened by Nelson Mandela in 2007, including Desmond Tutu, Mary Robinson etc.) could be sought. Instead of former presidents and political leaders, there could be a group of renowned lawyers at the service of the peasant communities that could intervene in specific litigation cases.

Legal tools
Creation of a group of lawyers able to structure an entity that can provide open and free advice and support to communities struggling for their rights. This can be done in close collaboration with the UN bodies and entities that have knowledge and access to information on specific laws and various legal instruments worldwide.

The first two nuclei involved difficult bargaining: the expectations of participating farmers and the surrounding institutions had to be brought in line. A solid contractual base for reciprocity had to be constructed without one of the parties concerned feeling the victim of any opportunistic behavior by the other. The effective grounding of the cooperatives took further shape when a contract was signed by the then minister of agriculture. The cooperatives obtained exemptions from legal obligations (such as injection of slurry into the subsoil) and room for large programmes and a new peasant trajectory towards sustainability.



8 - creation of new links

Opening up new opportunities will result in the creation of new links. Novel arrangements can then be tried and be amplified. Once the new links are made, they will in turn, open up new opportunities and challenges, bringing forward different ways of using and sharing resources that need to be discussed. Platforms of discussion will be created and evolve which will allow confrontation, alliances, argumentation, choice and mutual interaction and exchange.

As emerging ideas become more convincing, for example, energy saving devices or the use of renewable energies, or the search for less dependency on external inputs or the use of non-synthetic products, or even activities which may or may not be directly related to farming, like small-scale processing, local industries, service provision, local markets, artisanal products, leisure activities such as agro and ecotourism, roof cultivation in cities , new quality products, new fresh products etc., the need for investment may arise.

This will in no way resemble standardised projects, condescending aid, paternalistic approaches of development agencies, silver bullet packages designed by traditional expert systems in controlled environments. Within this framework, investments will go beyond traditional forms of aid that create dependency. It will be investments that result in the creation of new wealth and to which many rural people will commit to. In short, it will be real world investments with real life accountability leading to transparency and regulations.

Financial tools

This is where the need for new tools arise: the need for financial tools. Financial tools are still to be invented as currently occurring in other sectors, (e.g. the UK social bond, using investor capital to reduce a social cost) that would be specifically designed for peasants, while being full financial instruments designed to fulfill a gap, catalyse a possibility and grounded in the reality and scale that can make them useful. In addition, thinking can be pursued on the possibility of creating an agricultural fund that belongs to peasants and serves the creation of wealth within peasant communities.

Good manure became translated into a major correction of the Manure Law that allows for local exceptions to a global set of rules imposed on farming. In the practice of farming this helped considerably to avoid

huge cost increases. The web of novelties extends beyond the NFW area , into agrarian policy-making, into science and into changed soil biology beneath the area thus modifying value flows and investments in the regional economy and creating an enlarged goodwill for farming. The wood harvested from the alders and hedgerows is increasingly used for energy production. Thus the cooperative is constructing financial tools that might increase its dynamics, scope and effectiveness.

9-agricultural transition platform

While the complexity of interaction, creativity and responsibility increases at local level, it is possible to imagine formalising the creation of a more global forward looking platform which brings together representatives of peasants, investors, policy makers, corporations, scientists, Civil Society and other relevant players to provide a space where the chiasm of confluent views and interests can find an amplifying beat. The success of the local regeneration of communities could be supported by a reiterative back and forth between local and global dynamics supported by such a platform that would provide open-access tools as and when required in a decentralised fashion.

From 2003 onwards the NFW greatly enlarged the field in which it operated (green energy, improving the quality of soil, air, water; strengthen recreation and tourism; cost reduction; animal welfare and health; improving quality of products; management of landscape and nature; and land bank). The working plan contained 30 specific projects, which covered many aspects of the regional economy. Among those who signed the contract were the provincial government, the ministries of agriculture and spatial planning, the district water board, the five municipalities, the environmental federation, nature organisations, and Wageningen University. This agreement has resulted in the creation of a new territorial board in which the NFW and other partners meet at least twice a year.

10- permeability and synergies

During the transformation process, it is important to insure that, while internal dynamics are being strengthened, the community is not isolated from the outside, and that connections and constructive links in the new fields are reinforced with exchanges with the outside. It can be the moment of confronting the ideas with the outside and of strengthened

exchanges and learning. This would imply travel and visits to and from other areas and countries to share information and experiences in different fields such as agroecology, permaculture, regenerative agriculture, farmer-to-farmer, IPM (Integrated Pest Management), learning and testing different practices, techniques and technologies that can be adapted to specific scales and characteristics of production. It also includes learning about other forms of communal functioning, institutions and forms of access. This phase could be thought of as the synergetic plant-fungus relationship where both plant and fungi benefit, with expanded *hyphae* going further in different directions to explore and bring new resources.

In the initial exploration of relevant heterogeneity people in the NFW, were convinced that many improvements are already available, albeit hidden, hence there is no need to reinvent them. What matters is to find, unwrap, test and combine them. This principle was very important in the case of good manure, and with the construction of area-friendly machinery for slurry application with a specially engineered pump obtained from Germany.

11- emergence

With expanded networks inside and outside the communities, and the exploring of different channels of production and the selling of quality products (local markets, nested markets etc.) and the fact that similar mechanisms occur widely, a qualitative shift occurs, the possibility of emergence or coalescence becomes real, with powerful ways of producing food and dynamic communities that become the norm rather than the exception. Instead of speaking of the industrial system of food production as the *conventional* system, it is the highly diversified, nutritious and dynamic multifaceted local family production that becomes dominant and the norm.

The construction of this now widely accepted and scientifically supported re-patterning of the social and natural world, contained in the micro-cosmos of the dairy farm, took many years to develop. The approach has spread, like ink dots, all over the country, especially since it impacts positively upon the economy of the farm unit.

12-distribution of wealth

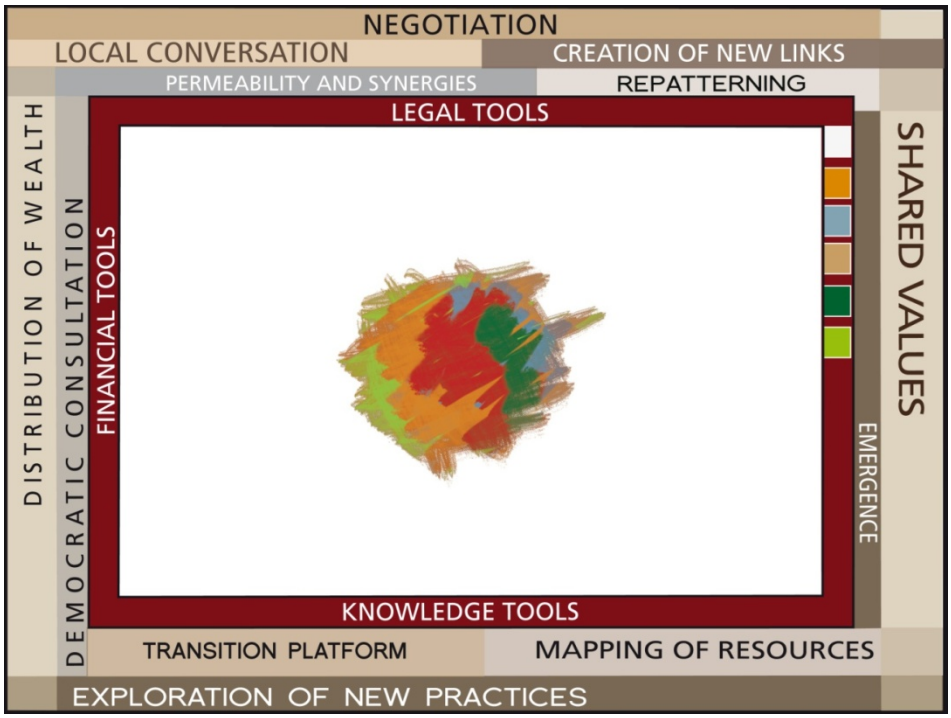
In this context, additional value is created at local level resulting in global wealth, which is not captured by higher levels of aggregation. It is then possible to reinvest within the communities that produce that wealth.

With a cooperative approach, the management of landscape and biodiversity could be lifted to the level of the territory as a whole. The cooperative management of nature and landscape creates an additional flow of income into the regional economy of four million Euros per year for the maintenance of landscape and biodiversity alone. During 2004, the average farm participating in the programmes for nature and landscape management gained an extra value added of some ten thousand Euros. Beyond this are considerable gains due to the novel practices that have been developed. For the participating farms this may render another ten thousand Euros.

To conclude, these are twelve crucial ingredients of transitional processes. In elaborating them we have strongly drawn on real life processes of change that are already occurring in many places of the world, especially in rural areas. Of course this list is not meant as a blue print; transitions are always capricious, they contain elements of surprise, and during the transition people have to deal with the unexpected, hence the need for active involvement and different ingredients, and in every situation the transition follows its own specific trajectory.

As pointed out earlier, processes of transition have starting points which are those places where people decide to explore different possibilities that are laboratories for governments as well. These places are interesting because they show to what degree these new developments are solid. Transitions start in these promising points. We should not pretend to start with comprehensive plans as progress is to be made along the road. In a transition process there cannot be mainstreaming. It is only when starting points become convincing that they can be extended. In many places farmers feel that they could contribute far more but the possibilities are blocked. This is what this transition is about: taking these hindrances away. More wealth can then be unleashed than is presently the case.

The time has come for different players to sit together and plan what is needed to bring the transition forward as a qualitative jump towards new opportunities, in which the different parties work together to outline a more promising future. This implies common ground and permeability amongst different complementary sectors. A firm ground exists already. It needs to be further refined.



The Policies

Proposals for policies presented here are only those related to the transition process. They concern firstly the importance of understanding peasants for what they are and their potential to create wealth, and secondly the transformations on the ground that can enable endogenous forms of development to thrive. Some other more general policies are briefly touched upon under the section global policies.

One of the important outcomes of this paper is that it is a mistake to put apples and pears together in the same basket. Peasant farming and corporate farming are worlds apart and obey a completely different logic of production. Designing the same policies for these two systems as one entity is a mistake which automatically prejudices one or the other.

The difference lies in three key dimensions:

- **value**

  Field studies have demonstrated that peasant farming produces more value than any other mode of farming, even in those places and at that time when others are incapable of doing so. Without peasant farming many places would be unused. When prices are low peasants continue to produce whilst corporations stop.

- **nature**

  Peasant farming builds on living nature, by constantly exploring its potential and amplifying it. Instead of destroying nature, peasants co-evolve with it. They protect biodiversity, ecosystems, waters, soils and other strategic resources.

- **relationships**

  The peasant mode of farming is part of an intricate web of relationships, connections and extended networks which stimulate local economies, hence, the development of peasant farming translates into substantial increases in the quality of life in rural areas as well as in the neighboring cities.

Different policies can be thought of to support a transition towards a more viable, peasant way of farming; proposals are presented here grouped under three sets. In every situation the right mix would need to be defined. Within a range of different possibilities, choices can be made.

In addition, these would be in line with the UN declaration on the rights of peasants[21].

First set of proposed policies- shift priorities towards the peasant way of farming

This implies to recognize the economical and social value of peasant farming and reconsider the present support to industrial agriculture and agribusiness (subsidised synthetic inputs and fossil fuel, agricultural subsidies, non-payment of social and environmental externalities etc.). It implies a shift towards agroecology and food sovereignty. It also implies strengthening local organisations, as the locus for peasant-based innovation and the management of resources, with the ability to adapt to changing conditions.

Second set of proposed policies - recognise the need for basic rights, autonomy and self-determination

As stated earlier, a transition cannot take place without the respect of minimum rights and the protection of these rights. Access rights as well as social and labour rights are the necessary and unavoidable baselines for the potential "on offer" within communities to find a space to flourish. This means stopping land grabs and reviewing the conditions for access to land, water, credit and markets for women and men. It means the negotiation at local level of protected open spaces, for innovation and the recrafting of the landscapes. Regarding markets, it has been recognised that markets can be effective mechanism to link the production and consumption of foods, but we also know that vast distortions can occur so it is crucial that markets are embedded in well defined institutional contexts which, is in itself, an open ground for policy. A high degree of monopolisation and speculation that destroys much of the social fabric and ruins ecologies, is to be avoided. The balance has to be reestablished by allowing for small and medium enterprise to prosper.

[21] http://www.ohchr.org/EN/HRBodies/HRC/RuralAreas/Pages/WGRuralAreasIndex.aspx (accessed August 2013) First session of the Working Group July 2013.

Third set of proposed policies- remunerate peasants decently; an insurance for today and tomorrow

To live with dignity, peasants need stability and higher prices for their produce. One example of possible policy change in this direction, is the creation of new markets that support locally produced foods (programmes that establish a minimum percentage, usually 30 percent of foods served in public institutions such as schools and hospitals, must be procured locally). A decent price that can cover the cost of production implies also, that governments do not allow the dumping of highly subsided cheap foods from abroad, that a minimum price is set, that food speculation is forbidden and, that public stocks are built.

Peasants need to be paid for the services they render to human societies such as: gardening the countryside, creating beautiful and changing landscapes, bringing an esthetic and artistic dimensions to our surroundings; breeding new crops which end up on our plates in a diversity of shapes, colors and tastes and new animal breeds; improving our health by bringing diverse tasty foods; reducing pain, suffering and violence by raising animals in more humane conditions; creating living places for wildlife (birds, insects) and families; storing carbon in soils and crops and keeping soils alive and water clean. Remuneration can be sought for peasants for their positive contributions to maintaining the beauty of landscapes, keeping and increasing biodiversity, mitigating climate change etc. In this set of policies it is important to avoid heavy bureaucracy and overregulation. Here legally conditioned self-regulation is the key.

Giving insurance to societies that those who produce foods will still exist tomorrow. In order to make sure that in the near future we will still have the human capacities and knowledge to produce, and produce well, there is a need to introduce a flat rate that helps family farmers survive instabilities and fluctuations. Possible ways would be the payment of a flat rate to peasants which would be a kind of insurance that society would pay to make sure that in the long term human societies will still have the production of foods, the gardening of landscapes and the availability of fresh water and living soil. An example, to be adjusted to local circumstances, is that being planned now for the European Union for 2014 onwards. The *tier system* which is based on three levels of payments: a flat rate per ha with a ceiling, an additional payment for those bringing additional benefits to the environment, in which case this can also be done by the community as a whole which gets a lump sum,

and thirdly an additional payment that rewards the creation of innovative markets.

Global policies

New international trade rules are needed. International trade rules, in the WTO (World Trade Organisation) and under bilateral and regional trade agreements, would benefit human societies by being changed to support rather than undermine local ecologies and economies. International trade rules for food, should therefore, only concern the produce that crosses borders, which is only about 10 per cent of the total food produced worldwide. Each country should have the right to decide its own levels of self-sufficiency, and its own ways of protecting and supporting sustainable local and national food production and consumption. All direct and indirect subsidies on export production in the industrial countries should be brought to an end.

DISCUSSION AND CONCLUSION

DISCUSSION AND CONCLUSION

Discussion

This research was structured around four complementary sections that look into the importance of peasant farming to human societies. The underlying assumption was that the special relationship that peasants establish with nature is a key that can unlock a range of opportunities for future generations.

This concluding chapter summarises the findings of this work. The first outcome is that the choice of methodology has provided the necessary depth and flexibility to give results which could then be analysed and compared. The methodology entailed a series of literature reviews, data collection and analysis, projection of data in maps, field interviews, lessons learned, and identification of knowledge gaps for further research, and with a view to inform policy.

The literature review in the first section shows that despite fierce debate about the disappearance of peasants, there is on the contrary a resurgence of peasants and of their way of farming, not only in areas of poverty but also as a new alternative to increased pressures from the outside. What we can see here is that peasants do not equate poverty, and that it is because of their intrinsic adaptability that they are able to survive *even* in poverty contexts. Some visionaries such as Chayanov had already seen the efficiency limitations of very large farms, and Ploeg has provided the theoretical grounds to understand why peasant farming is different to entrepreneurial farming. This section shows that the qualities of peasant farming are needed in the contemporary world and they represent a post-modern vision rather than the so-called backwardness of the peasantry. What seems instead backward today, as seen in Pretty's latest publication, is the modernization paradigm.

On the basis of the findings of this first section, it was felt then necessary to search for the size and importance of the phenomenon. How large was that sector in our societies, or more precisely, how *big* are the small farms compared to the large farms of this world, and *where are they going*. It was obvious here that the best place for data was in the world organization that officially collects food and agriculture data worldwide: FAO. Why small farms? Simply because there is no officially recorded statistical data about peasants, and small farms are the closest that could

be found to collect information on peasant farming. What we learn through this research is that there is no internationally agreed definition of small farms, and we suggest that additional work be undertaken in this respect. Perhaps, more importantly is the definition of *peasant farming*, provided earlier, which has never been used by development organizations or policy-makers in this sense, and which would, instead, be key to inform new policies. What the two maps do show us is that small farms represent an overwhelming part of the farms of the world and their numbers are increasing. This is a proof, if need be, of the relevance of the sector and of the need to rethink new perspectives adjusted to today's challenges.

The third section of this research explores and expands the notion of peasant to the very many other dimensions, beyond land, that characterise this form of farming. The section, through literature reviews, interviews, and based on own experience and knowledge, looks into the values, both tangible and intangible, of peasant farming. The literature review provides experimental results of decades of work on low external input farming (a characteristic of peasant farming), and initial findings are that low external input farming together with resource efficient practices, can double and even triple crop yields depending on the local conditions. The largest ever world review of agriculture, the IAASTD, already concluded that the evidence in support of low input, ecological agriculture, is *undeniable*. Case studies, and field reviews have provided concrete examples, additional detail and depth about the contribution of ecological agriculture in terms of diversity, climate mitigation and adaptation, dynamism of local economies, employment, cultural attachment and social cohesion.

There appears to be no holistic representation of these many contributions, neither is there a pro-peasant platform to trigger supporting mechanisms dedicated to peasant farming. To fill this knowledge and implementation gap, graphs have been constructed which reflect the impact on societies of the peasant way of farming. These graphs mainly represent a communication bridge to facilitate understanding. The first graph shows the roles of peasants as food producers, as natural resource managers and as guardians of social cohesion. The second one represents the groundwork to create a Peasant Fund and was extensively used with members of the impact investment industry mainly in the US. The third graph was also built with a specific aim which was the support to local processing and cottage industry to regenerate local economies, and has also been extensively used in international meetings and discussed with

representatives of farmer organizations. All of these are used as a bridge to the schism existing between players in the finance world and players in the development arena, and to influence a shift that could reorient investments towards local communities.

The fourth and last section of this research was based on a review of some successful agricultural transitions worldwide. The lessons learned were then brought together to identify the recurrent steps that lead to success towards sustainable farming. On the basis of this analysis, twelve transition steps were created to provide a framework for agricultural transition. These are described in detail and illustrated by one concrete example of transition. These steps have been published in the book *Agricultural Transition, a different logic* in 2012. This fourth section also includes three sets of proposed policies and suggestions for global policies.

Conclusion

The hypothesis underlining this work was that a key solution to the world challenges today is in the hands of peasants. The conclusion of this work is that this key lies just ahead of us but we remain blind to it. There is an unknown potential, an unleashed wealth that could drastically reduce poverty, reduce climate change and cool the planet, restore biodiversity, soil fertility and water resources, improve livelihoods and provide employment for billions of people while producing enough good and nutritious food for 9 billion people or more. Following this research we feel that the peasant way of farming, embedded in a specific relationship to nature, has the potential to open up a range of opportunities for future generations.

Over the last decades, policies under the modernization paradigm have tried to eliminate peasants and to transform them into entrepreneurial farmers with increased specialization. The irony of History, and what has been found here, is that it is the exact opposite that is happening today: industrial agriculture is sinking in the debacle of rocketing social and environmental costs while at the same time, we observe a resurgence of peasants, and of the peasant way of farming in all economies of the world, be it in the North or in the Global South. The move towards a post-modern agriculture is already on its way, and it differs drastically from the *credos* of the second half of the twentieth century.

Peasants simply cannot continue to be ignored. They have, in the last two decades, organized in powerful movements. What seriously lag behind, as discovered in this research, are the instruments, frameworks and policies to accompany and support these movements. What is missing today is the new thinking to invent the necessary shifts towards new forms of crafting our relationship to the living world *i*.e., to nature. And this is where a lot can be learned from peasants.

This research has helped dismantle a series of fundamental misconceptions that have been leading for decades the development agenda in agriculture. These are that peasants are disappearing, that peasants are small and vulnerable, that they function with the logic of entrepreneurs, that their raison d'être is food and that yields are about technologies.

These assumptions have proven to be wrong. As described earlier, peasants, and the peasant way of farming, are not disappearing; on the contrary, they are increasing. Peasants are not backwards, they are solid professionals with wide skills. Peasants are not small and vulnerable, they increase the intensity of farming while maintaining a high level of autonomy, and they feed more than two thirds of the world's peoples. Peasants are entrepreneurial but they go beyond the logic of business entrepreneurs as their primary aim is not only profit making. They differ in the value added and its distribution. The relation to nature, quality and sustainability are worlds apart. The primary raison d'être of peasants is livelihoods, not commodities; farms are places for families, they are embedded in communities and cultures. A farm is not a factory. There is an attachment to the place and a level of pride. And lastly, yields are about social relationships. The focus in agriculture in the last decades resulting from the agenda set up by research institutions, expert systems and corporations has been centred on increasing yields. But while yields are part of the increase of value added and peasants select varieties that produce higher yields, this is not the only criteria they look at; other criteria may hold greater relevance and are closely related to the local social context. They are influenced by the intricate web of relationships within the community in which peasant farming is embedded with extended links of reciprocity.

In addition, this research has shown that there is a lack of concrete proposals for a shift towards more viable forms of producing foods. It is not that transitions are not happening. In fact, they are unfolding in front of our very eyes. It is that mechanisms and tools dedicated to peasants, to

accompany these transitions are not developed enough. Looking at successful transitions in different countries has allowed extracting some recurrent steps to be designed.

What was observed in the case studies is that transitions contain elements of surprise and force people to deal with the unexpected; hence the need for active involvement and for a diversity of ingredients to make sure that they can follow their own specific trajectories. Peasants often would like to do more and differently, but they are constrained; how to unleash that locked potential, the unlimited abilities on offer that lay idle?

This research proposes twelve steps. They are not incremental nor are they in order but they follow a reiterative process. This framework can be visualised as a painting for which only the frame is being built and for which the painting in itself is left blank for local communities to do the painting and mix the colors as they wish. The surrounding framework, instead, is carefully designed with clear roles and responsibilities for the different players involved. In other words, the framing that surrounds this center of open possibilities will contain the values, the principles and the conditions that can allow the emergence of endogenous development until it becomes self-propelling. Tools and mechanisms are still to be developed to make it attractive for younger generations to engage in the crafting of foods and services that are related to nature. Enabling policies that can allow the existence of the peasants of the third millennium, in other words, the existence of landscapes, foods and well-being for human societies are still to be invented.

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ANNEXES

ANNEXES

ANNEX I

The shared values of the peasant community
Catacaos, Peru

An example of repeasantisation that succeeded is illustrated by one of the largest peasant communities in Peru, the community of Catacaos[22].

In Catacaos repeasantisation emerged out of the change of former *haciendas* into cooperatives, appropriation of land and water, a rise in the number of individual plot holders and a move away from the high degree of market integration. The shared values of the peasant community are stated as follows:

- *united, indestructible and autonomous community*
- *governed through the democratic intervention of all members*
- *all members are equal in rights and duties*
- *a community that recognises labour as the only source of wealth*
- *no exploitation of resources by foreign elements*
- *secure for members satisfaction of basic needs- housing, health, food, education and employment*
- *works for immediate and future needs of youth*
- *engages in solidarity with labour class of country*

[22] Jan Douwe van der Ploeg- *The New Peasantries*, p.53.

ANNEX II

The Twelve Articles of the Swabian Peasants (1525)[23]

The following list of demands was formulated by peasants in the Black Forest area of southwest Germany during the Peasant War[24]. It soon came to be considered the definitive list of rural grievances during the conflict.

The just and fundamental chief articles of all peasants and subjects of ecclesiastical and secular authorities in which they consider themselves aggrieved To the Christian reader, peace and the grace of God through the Christ. There are many Antichrists who have recently used the assemblies of peasants as a reason for pouring scorn on the Gospel, saying: "These are the fruits of the new Gospel: to be to no one, to rebel and rise in revolt everywhere, rally and band together with great force, to reform and overthrow ecclesiastical and secular authorities, indeed, perhaps even to slay them." The following articles are a reply to all these godless and malicious critics.

First, they will refute this calumny on the Word of God, and secondly provide a Christian justification for the disobedience, indeed, the rebellion, of all the peasants. In the first place, the Gospel is not the cause of disturbance or rebellion, since it speaks of Christ the promised Messiah, whose Word and life teach nothing but love, peace, patience, and concord, so that all who believe in this Christ become loving, peaceful, patient, and of one mind. Therefore the purpose of ail the peasants' articles (as will clearly be seen) is to hear the Gospel and live according to it. How then can the Antichrists call the Gospel a cause of disturbance and disobedience? That some Antichrists and enemies of the Gospel object to and bridle at this intention and desire is not due to the Gospel but to the devil, the most harmful enemy of the Gospel, who has awakened such opposition in his followers through unbelief, so that the Word of God (which teaches love, peace, and concord) will be

[23] Texts from Tom Scott and Bob Scribner, eds., The German Peasants' War: A History in Documents (Atlantic Highlands, N.J., 1991), pp. 251-276.). Also available at: http://hatlie.de/pdf/TwelveArticles.pdf (accessed August 2013).

[24] The German Peasants' War or Great Peasants' Revolt was a widespread popular revolt in the German-speaking areas of Central Europe, 1524–1525. The German Peasants' War was Europe's largest and most widespread popular uprising prior to the French Revolution of 1789.

suppressed and abolished. Secondly, it follows clearly that the peasants who ask for this Gospel as their teaching and rule of life should not be called disobedient or rebellious. But if God deigns to hear the peasants (who plead anxiously to live according to his Word), who shall reproach the will of God? Who shall meddle in his judgment? Yea, who shall oppose his majesty? Did he not hear the children of Israel when they cried out to him and deliver them from the hand of Pharaoh? Shall he not also save his own today? Yea, he will save them, and speedily! Therefore, Christian reader, read the following articles with care, and then decide.

Articles:

The first article.
First, it is our humble plea and request, as it is also the will and intention of all of us, that we should henceforth have the power and authority for the whole community to choose and elect its own pastor, and also to have the power to depose him should he conduct himself improperly. The same elected pastor shall preach the holy Gospel to us purely and clearly, without any human additions to doctrines and commandments. For constant preaching of the true faith impels us to ask God for his grace that he may instill in us the same true faith and confirm it. For if his grace is not instilled in us, we remain always mere flesh and blood, which is worth nothing […]

The second article.
Secondly, although the true tithe is ordained in the Old Testament and discharged in the New, nonetheless we will gladly pay the true grain tithe, only in just measure. Since it should be given to God and distributed to his servants, it belongs to a pastor who proclaims the Word of God clearly. We wish this tithe in future to be collected and received by our churchwarden, elected by the community. From it he will give the pastor who is elected by the entire community his adequate and sufficient sustenance for himself and his dependants, according to the judgment of the whole community. The remainder shall be distributed to the needy poor present in the same village, according to circumstances and the judgment of the community. Any further remainder should be retained against the need to provide military service in defense of the country, which should be paid for from this surplus, so that no territorial tax will be laid upon the poor man. Should it be that one or more villages have sold the tithe because of some need, whoever can prove he has purchased

it with the consent of the whole village shall not suffer loss, for we will reach a proper settlement with him according to the circumstances of the case to redeem the tithe within a suitable time and in suitable installments. But whoever has not purchased the tithe from a village, but rather their forefathers have appropriated it for themselves, we will not, we should not, and we are not obliged to pay him any more, but only, as stated above, to maintain our elected pastor with the tithe, to collect what remains or distribute it, as is written in holy Scripture, to the needy, be they clerical or lay. The small tithe we will not pay at all, for the Lord God created cattle for the free use of man, and we regard it as an improper tithe, invented by men. Therefore we will no longer pay it.

The third article

It has hitherto been the custom for the lords to treat us as their serfs, which is pitiable since Christ has redeemed and bought us all by the shedding of his precious blood, the shepherd just as the highest, no one excepted. Therefore it is demonstrated by Scripture that we are free and wish to be free Not that we wish to be completely free and to have no authority, for God does not teach us that. We should live according to his commandments, not the free license of the flesh; but we are to love God, recognize him as our Lord in our neighbor, and do all that God commanded us at the Last Supper, as we would gladly do. Therefore we ought to live according to his commandment, which does not show and teach us not to obey authority, but rather that we should humble ourselves before everyone, not just authority, so that in this way we will gladly obey our elected and appointed rulers (whom God has ordained over us) in all reasonable and Christian matters. We have no doubt that, as true and genuine Christians, you will gladly release us from serfdom, or else show us from the Gospel that we are serfs.

The fourth article.

It has hitherto been the custom that no poor man has been empowered or permitted to catch game, wildfowl, or fish in flowing water, which we consider quite improper and unbrotherly, indeed selfish and contrary to the Word of God. In some places the lords keep game in defiance of our wishes and to our great detriment, for we must suffer the dumb animals wantonly and unnecessarily to devour our crops (which God has caused to grow for the use of man), not to mention that this is contrary to God and love of one's neighbor. For when the Lord God created man he gave him dominion over all creatures, over the birds in the air and the fish in the water. Therefore it is our request that whoever has waters for which he has adequate documents to prove that they have been unwittingly

bought by him, should not have them taken from him by force, but rather that Christian consideration be shown for the sake of brotherly love; but whoever cannot provide adequate proof, should surrender them to the community in a reasonable manner.

The fifth article.
We are also aggrieved about woodcutting. […an argument similar to article four regarding the use of forest wood…]

The sixth article.
The sixth concerns our grievous burden of labor services, which are increased from day to day in amount and variety. We request that a proper investigation be made in order that we be not so heavily burdened, but to have consideration for us with regard to how our forefathers performed services, but only according to the Word of God.

The seventh article.
Seventh, in future we will not allow a lord to oppress us further. Rather, as the lord has conferred a holding on a peasant on proper terms, so shall the latter possess it according to the agreement between lord and peasant. The lord should not force or compel him further in any way by asking for more services or other dues without recompense, so that the peasant may use and enjoy his property unburdened and in peace But if the lord requires services, the peasant should willingly serve his lord before others, but at a time and day which is not to the disadvantage of the peasant, and for a proper wage.

The eighth article.
Eighth, we are aggrieved, especially the many of us who have farms, that these cannot bear the rents, whereby the peasants lose their property and are ruined. The lords should have honorable men inspect these properties and fix a fair rent, so that the peasant does not work for nothing, for every laborer is worthy of his hire.

The ninth article.
Ninth, we are aggrieved about cases of felony, where new laws are constantly being passed, for punishments are not imposed according to the facts of the case, but sometimes out of ill will, sometimes out of partiality. In our opinion, punishment should be imposed according to the old written penalties, according to the circumstances, and not with partiality.

The tenth article.
Tenth, we are aggrieved that some have appropriated meadows or arable that once belonged to the community. We wish to restore these to common ownership, unless they have been properly purchased […].

The eleventh article.
Eleventh, we wish to have the custom called *heriot* [a tribute or service rendered to a feudal lord on the death of a tenant] totally abolished, for we shall never tolerate or permit widows and orphans to be shamefully deprived and robbed of their property, contrary to God and to honor, […]. Henceforth, no one should be obliged to pay anything, either small or great amounts.

Conclusion.
Twelfth, it is our conclusion and final opinion that if one or more of the articles presented here be not in accordance with the Word of God (which we would doubt), and such articles be demonstrated to us to be incompatible with the Word of God, then we will abandon them, when it is explained to us on the basis of Scripture. […] Similarly, if further articles are found in Scripture to be in truth contrary to God and a burden to our neighbor, we shall reserve the right to have them included. We will exercise and apply Christian doctrine in all its aspects. for which we shall pray to the Lord God, who alone [and no one else) can give it to us. The peace of Christ be with us all.

TABLE ON SMALL FARMS
(under 2 ha)

COUNTRIES	Farms under 2 ha as percentage of total number of farms	
Lesotho	97.99	> 50%
China	97.91	
Cook Islands	95.24	
Egypt	95.14	
Vietnam	94.81	
Georgia	93.22	
Nepal	92.44	
Kyrgyz Rep.	92.18	
Malta	90.63	
Albania	90.01	
Panama *	89.59	
Cape Verde *	88.96	
Guatemala	88.92	
Indonesia	88.73	
Saint Vincent	87.76	
Ethiopia	87.13	
Lebanon	86.76	
Jordan	86.19	
Jamaica	84.56	
Mozambique	84.16	
Yemen	83.87	
American Samoa (USA)	83.61	
India	81.8	
Slovak Republic	81.64	> 50%
Saint Lucia	80.77	
Guinea	78.29	
Bulgaria *	77.01	
Qatar	74.11	
Laos Peoples Dem.Rep.	73.5	
Cyprus	71.52	
Philippines	68.13	
Croatia	66.74	
Iran, Islamic Rep.	59.54	
Pakistan	57.62	
Italy	57.22	
Myanmar	56.92	
Côte d'Ivoire	56.31	
French Guiana (Fr)	56.3	
Portugal	54.59	
North. Mariana Isl. (USA)	53.74	
Trinidad and Tobago	53.52	
Puerto Rico (USA)**	52.72	
Poland	50.94	
Samoa	50.83	

Virgin Islands (US)	49,74	25-50%
Greece	49,04	
Serbia	46,26	
Guam (USA)	45,75	
Thailand	45,5	
Mali	45,28	
Czech Republic	44,37	
Morocco	43,6	
Ecuador	43,43	
Réunion (Fr)	41,81	
Spain	40,71	
Hungary	40,27	
Estonia	39,95	
Namibia	38,94	
Senegal	37,47	
Turkey	34,54	
Algeria	34,38	
Colombia	31,63	
Togo	29,33	

Chile	24,79	10-25%
Venezuela	22,64	
Nicaragua	21,64	
Brazil	20,32	
Belgium	17,19	
France	16,83	
New Zealand**	16,79	
Netherlands	15,87	
Austria	14,59	
United States **	14,41	
United Kingdom	13,88	
Luxembourg	12,46	
Uruguay**	10,96	
Germany	8,02	1-10%
Lithuania	7,91	
Norway	7,83	
Latvia	6,17	
Sweden	3,41	
Finland	3,39	
Ireland	2,19	
Denmark	1,69	

* < 1 ha as % of total numbers of farms

** < 5 ha as % of total numbers of farms

*** Excluding 170 Government Holdings with 30772 ha, not classified by size of holding

The total number of farms in the countries above was 435 918 525 which is about 83 % of all farms in the world.

< 2 Ha as % of total numbers of farms: 85 %

Source: FAO (2010). 2000 World Census of Agriculture

TABLE ON TREND OF SMALL FARMS
INCREASE OR DECREASE OF THE NUMBER OF FARMS UNDER 2 HA

COUNTRIES	Increase or decrease of the number of farms under 2 ha in 2000***compared with the number of farms under 2 Ha in 1970***	
American Samoa (USA)	329.47	Very large increase, >150%
Panama *	314.62	
Pakistan	260.21	
Philippines	240.94	
Ethiopia	155.05	
Lesotho	139.7	Large increase, 70- 150 %
Nepal	103.83	
India	99.69	
Thailand	79.03	
French Guiana (Fr)	73.57	
Cyprus	24.78	Increase, 1 - 25 %
Saint Lucia	19.16	
North. Mariana Isl. (USA)	17.35	
United States **	14.41	
Brazil	11.06	
Virgin Islands (US)	6.74	
United Kingdom	1.88	

Turkey	-3.59	Decrease, 1-31 %
Italy	-19.76	
Greece**	-24.47	
Spain	-30.03	
Puerto Rico (USA) **	-52.7	Large decrease, > 50%
Portugal	-53.07	
Netherlands	-53.91	
France	-60.46	
Austria	-61.62	
Luxembourg	-70.21	
Germany	-80.62	
Norway	-83.38	
Belgium	-84.62	
Denmark**	-86.23	
Ireland	-86.58	
Réunion (Fr)	-88.36	
Guam (USA)	-91.37	
Finland	-91.81	

* The figures are for farms < 1 Ha (No figures available for < 2 Ha or < 5 Ha)

* *T he figures are for farms < 5 Ha (No figures available for < 1 Ha or < 2 Ha)

*** The years are within two periods; 1969-1985 and 1996-2005

**** Excluding 170 Government Holdings with 30772 ha, not classified by size of holding

The number of farms in the countries above is about 25 % of the total number of farms in the world (IAASTD figures, and 30% of the total number of farms in the 2000 census (438 million farms).

Source: FAO World Census of Agriculture