



Rural Areas,

Small- and Medium - Sized Local Authorities and World Governance

PROPOSAL PAPERS SERIES

Matthieu Calame

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INTRODUCTION

Issues raised by metropolization affecting rural areas and small- and medium-sized local authorities (SMLA)

Four major trends characterize today's world:

- global population that is set to keep rising until 2050, when it will reach 9.5 billion; this growth will be particularly strong in cities. 2007 marked the moment when, for the first time in history, the urban population became more numerous than the rural population; this imbalance is set to widen;
- cities often expand onto the most fertile lands; urbanization tends to concentrate on coastal areas, bordering seas and major rivers;
- water and energy problems are set to continue, due both to demographic growth and global warming;
- food supplies for poor city dwellers are problematic, as illustrated by the recent food crisis.

It appears that humanity is having to face up not only to an unprecedented level of urbanization, but also to the development of major metropolises, megalopolises and, more generally, conurbations inhabited by several hundred thousand or even million people. Although major urban centres have historically had a strong economic, social, political and cultural impact on the countryside and smaller urban centres, this influence will only increase once the majority of the planet's population are city-dwellers—or even mega-city-dwellers. And although the past bears witness to the existence of almost exclusively rural civilisations, such an existence has become hard to imagine in today's world, impossible to imagine for tomorrow's world. The rural world and SMLA will have no choice other than carving out a place for themselves that fits within the urban world. There is the added factor that urban populations are made up mainly of rural people; if we go back two or three generations, they were almost exclusively rural in origin.

Defining rural areas and SMLA

How can we define SMLA, rural areas and the population that inhabits them?

The rural concept is defined in relation both to wilderness areas and urban areas.

In relation to wilderness areas, rural areas are those managed relatively intensi-

vely by humans. The term “relatively intensively” is used since wilderness areas are themselves managed. We therefore need to accept that the boundary between them is somewhat blurred. But we can identify rural areas as places inhabited by sedentary populations where each plot of land is owned, either individually or collectively, or has a manager that usually uses it for a socio-economic activity. This is what distinguishes rural areas from large sparsely-populated natural and wilderness areas.

Although the boundary between wilderness areas and rural areas is difficult to define, the boundary between rural areas and urban areas is a matter of pure convention. What size does a settlement have to reach to stop being a hamlet and become a village, to graduate from village to market town, market town to small town, small town to medium-sized town, and from there to large town and on to megalopolis? Settlements of between eight and ten thousand inhabitants are called villages in India but towns in Europe. However, it is clear that once a settlement has reached a certain size, it is so big that relations between its centre and the surrounding countryside become more tenuous if not non-existent—in inhabitants’ imaginations at least. The same does not apply to supplies and, most especially, waste: the city dweller might well know nothing of the countryside, but it remains nonetheless vital to the metropolis.

It is true however that the notion of surrounding countryside no longer has any real meaning for many inhabitants of major cities. The city thus becomes a world of its own, whose inhabitants no longer visit rural areas on the fringes of their urban universe. They may in fact never have frequented these fringe areas, since many city dwellers are migrants or descended from migrants from far-off places. If they do visit the countryside, it is usually faraway, their place of birth. A parallel development is that cities’ needs are growing to such an extent that they can no longer be met by adjacent rural areas, and cities are beginning to trade with far-off regions in a process which further weakens the bond that ties them to surrounding rural areas.

So, in this context, where can we position the boundary between rural areas and SMLA on the one hand and urban centres on the other? Between approximately 20,000 and 100,000 inhabitants depending on the transport infrastructure and state of conservation. We then have to accept that rural areas and SMLA will include settled areas whose activities and more modest size exclude them from the category of metropolis, and that remain closely linked to the surrounding areas. If we are determined to define a precise boundary, we can place it at 30,000 inhabitants, keeping in mind the arbitrary character of this figure.

Using this definition, rural areas and SMLA constitute a whole that includes managed forested areas, farming areas and settled areas. These areas offer a huge

diversity of situations, from prosperous zones to those in decline, from sparsely populated areas, possibly on the point of being abandoned, to high population density and very active zones with a network of towns and trade activities, or even local authorities that have come into the orbit of big cities and have taken on a satellite role in economic, cultural and possibly political terms.

These areas share a common set of challenges that they all have to face:

- using farming, forestry and freshwater fish-farming to manage artificial ecosystems for producing food and raw materials whilst adopting a sustainable ecological approach;
- retaining a degree of cultural, political, demographic and economic autonomy in the face of developing cities;
- increasingly, supplying new global amenities, such as contributions to climate balance and water purification.

These shared challenges enable us to distinguish a number of key issues:

- rural areas' political and cultural capacities;
- the production of economic resources (food, fuel and textiles);
- protection of vital natural resources (water, soil, biodiversity).

We have opted to classify the proposals below according to these three categories.

What about the sustainable metropolis?

It is clear that rural areas' long-term prosperity will be far easier to achieve if urban areas themselves succeed in developing harmoniously. And they will not be able to do so if they grow too fast. Harmonious urban development therefore requires rural areas to retain their appeal. It is also apparent that cities' extreme economic and biological dependence on rural areas requires co-ordinated development and a rethink of the nature of exchanges between cities and rural areas. The metropolization of populations thus encourages us to devise a new attractive rurality that complements urban development.

PROPOSALS

NB: the proposals below are technical and institutional in nature. They do not directly address the question of values and motives. They are based on the hypothesis that rural communities are reasonably unified and motivated by a sincere intention to create harmonious development. Even the most sophisticated of systems could not further the development of a human community that is torn apart by internecine strife that promotes other people's unhappiness rather than general well-being. If some of these proposals thus seem inapplicable in a given context due to local feelings, strong opinions and hatred, the only answer is the moral progress of individuals, a prerequisite for any real progress achievable by human beings.



Diego Hernández, Jardín, 2004

Preserving Political and Cultural Capacities

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Proposal 1: Strengthen local democracy

“The inhabitant of New England is devoted to his township, not because he was born there as much as because he views the township as a strong, free social body of which he is a part and which merits the care he devotes to its management.”

Alexis de Tocqueville, *Democracy in America*, part I, chapter V

Strengthening local democracy meets two imperatives:

- increasing individuals' participation;
- involving local people, strengthening rural areas' cohesion and thus their political and economic force in the face of major cities.

Strengthening participation in rural areas

A medieval German adage said that “the air of the city grants freedom.” At that time a great many free

cities granted freedom to fugitive serfs who took refuge there. The question of political and economic freedom in rural areas and the concrete opportunities they offer individuals is central to their future development. The reduced scale of rural economies makes them easy to control by the authorities, just as a limited number of people can easily control their resources. Economic and political power is concentrated in the hands of major landowners, feudal lords and despots, and without this power, no initiatives can succeed.

Cities, on the other hand, seem to offer more opportunities, even if mediocre, and a degree of anonymity that provides an escape from social control. Cities are often impossible to control, which is why they are feared by the authorities. City dwellers form a crowd that represents a political force in itself; this force may well be blind, but its explosive actions have more of an impact, since governments tend to be headquartered in major cities. Since the birth of cities, the political authorities have always feared urban riots rather than rural riots, since the former are more likely to lead to revolution, whereas the latter often remain peasant uprisings. Economic opportunities and the power of the people contrast with the rigid and inegalitarian economic and social relations that characterize rural areas, inevitably giving the city a magnetic appeal.

The revitalization of democracy in rural areas, meaning the search for a collective vision involving and benefiting the greatest possible number of people, is the only antidote to the trend for urban migration. It is true that the countryside can never compete with the city in terms of individual opportunity and anonymity. It can, however, provide an alternative option: a social system where social control is indisputably more in evidence, but that does give individuals more of a say in important issues. Where cities offer individual opportunity and anonymity, rural areas can offer collective action and participation. In other words, less individual freedom, but more collective freedom.

In concrete terms, this implies two actions: strengthening local municipal power and fairly distributing the exercise of that power.

Strengthening municipal power and ensuring that the municipality is not a mere cog in the government machine or a government intermediary is vital if the exercise of local democracy is to be more than purely formal. But this also requires that rural municipalities be entities with a degree of power and endowed with their own capacities. Does a municipality of under 10,000 inhabitants have the dynamic it needs to acquire real autonomy in its choices? A country like Denmark felt the answer to be no, and in the early 2000s proceeded to reform local authorities to create municipalities with not less than 20,000 inhabitants. This is the same

concept behind France's grouping together of municipalities (*communautés de communes*).

Distributing municipal power can take several forms. One of the key ideas is to replace the municipal executive model that emulates the presidential model with a system based on the principle of joint decision-making. The mayor should be limited to the role of council president at most. This approach would meet two objectives: limiting individual power, and exercising local democracy based on more directly accessible subjects. Municipal spirit is the breeding ground of democracy.

Strengthening collective initiatives

"Now, take away power and independence from the municipality, and all you will ever find there are subjects and no citizens"

Alexis de Tocqueville, *Democracy in America*, part one, chapter V

Rural areas that function according to a socially and politically feudal model have no future as autonomous and dynamic political entities. Only democratic rural areas can provide the appeal likely to retain or attract enterprising individuals. Given that cities, all else being equal, almost always offer more opportunities for enterprising individuals to carry out individual projects, rural areas have to hold out the prospect of a collective local vision. It is interesting to note how many migrants from the cities to rural areas are indeed in search of a community project. They are often quick to take up the offer of accepting responsibilities in the smallest municipalities. Local democracy thus guarantees a collective development process. Whereas the manifest power of certain cities stands in place of a vision and means they can do without such a vision, made difficult by their huge size and inertia, rural areas need a shared vision to exist. Local democracy is thus quite simply the springboard for autonomous development and resistance to the pull of the city.¹

Proposal 2: Local money and credit

Obtain the credit necessary for local development

The issue of accessing credit is a generic development problem. Making credit available results in productive investments which in turn generate activity. The specific issue for rural areas is that historically the balance of capital flows between urban and rural areas has very often been favourable to the urban environment. These flows often benefited the urban elite exclusively, allowing its members to:

- either, gradually buy up rural areas. This therefore

represented a counter-flow from the urban to the rural sphere, but rarely a productive investment generating activity; it constituted instead a simple transfer of ownership;

- or, invest in new manufacturing or trading activities;
- or, spend extravagant sums of money on, in particular, building mansions and consuming luxury products.

From Pisistrate in the 6th century BCE to the 11th

nance, which is dedicated to financing agricultural related activities such as input supply, production, distribution, wholesale, processing and marketing, and **microfinance** which provides financial services for poor and low income people by offering smaller loans and savings services, while accepting a wider variety of assets as collateral. The following diagram illustrates the overlapping relationships between these different terms.³ It is also significant that the FAO makes the link with microcredit.



Loreto Corvalán, *Untitled*, 2009

century Wang Anshi and on to Quesnay in the 18th century, economic reformers in rural societies have often addressed the issue of providing access to credit for peasant farmers. The creation of farming credits in several countries in the early 20th century corresponded to the same need to irrigate the farming world with capital². In October 2007, the World Bank recognized this need in its 2008 report, noting the lack of investment in the farming world and recommending a major increase in such investment.

The issue addressed is invariably of credit for investing in agriculture. However, the rural world cannot be reduced to agriculture alone. The FAO began working on the notion of rural credit, providing the following definition: **Rural finance** encompasses the range of financial services offered and used in rural areas by people of all income levels. It includes **agricultural fi-**

The basics of rural finance

It would be wrong to believe that the rural world is always lacking in capital. However, the market is so narrow as to preclude banking services being lucrative:

- very large customers rarely exist and demand is often on the micro level;
- small regions sometimes have too few investors to generate banking.

Logically, this situation points to two solutions:

- the authorities bearing some of the transaction costs;
- adopting a federal, participative approach to reduce costs and achieve critical mass.

The creation of joint rural banks, made up of private stakeholders such as farmers and rural entrepreneurs and local authorities, is a key tool for financing rural development.

Issuing rural money?

The creation of a rural bank implies the creation of money, as it does for every other bank. But could the process be taken further? Money created by banks remains eminently volatile and can quickly disappear from the local economy. Capital flight can arise at any moment. This problem suggests compensating for the lack of capital and simultaneously preventing its flight by creating local money, as happened in Europe during the Middle Ages, when small towns and abbeys sometimes minted their own metal local currency and helped to stimulate the local economy.

Creating money may be a surprising notion, but what is money other than recognition of a debt whose debtor is so trustworthy that there is universal acceptance of this recognition as a means of payment? The 1930s depression produced a great many local currencies. The movement is currently reviving in Europe, particularly Germany⁴. Rural currencies, a version of local currencies, represent a more problematic but more effective solution than rural credit to provide a long-term answer to the lack of capital.

Cf, *Financer l'agriculture, Quels systèmes bancaires pour quelles agricultures ? (Financing Agriculture: which banking systems for which type of agriculture?)*, André Neveu, ECLM 2001

3. <http://www.fao.org/AG/agS/subjects/fr/ruralfinance/index.html>

Proposal 3: Decentralize education and decision-making centres

The general education and decision-making systems are a powerful component in the attraction of the city. The more that studies are prolonged and specialized, the more important it is to attend major educational institutions, which are located in the big cities. Furthermore, students in higher education tend to be at an age when they meet their future partners and get married. And what happens to a couple formed at university in the city? The city provides the spouses, with their similar levels of education and identical professional aspirations, with an environment that is socio-culturally neutral. The big city where the couple formed naturally becomes the ideal place for them to live and strike a compromise between private and professional life. This applies in almost every culture. Individuals thus have to make choices concerning their:

- place of habitation;
- profession;
- partner.

Rarely can they combine complete free choice of profession, place and partner. This means that even if individuals would like to return to the countryside, their choice of profession and partner prevents them doing so.

Clearly, the more centralized a country's education and decision-making functions, themselves generators of skilled employment, the more centralized the country itself becomes, creating a vicious circle.

Decentralization of education raises a specific problem: the situation of teachers. As far as students are concerned, studying in medium-size towns may have some drawbacks, for example in terms of cultural life, but also clear advantages, especially in terms of the cost of studies when local authorities have decided to invest in student housing either directly or indirectly by encouraging local people to rent their property.

Even when students need to work to support themselves, student employment can be organized efficiently in a smaller region. Since agriculture and tourism are activities that call on huge numbers of seasonal workers, it would be worthwhile matching university holidays with peak periods of rural working. The move to configure summer holidays to coincide with rural work originated in Europe. It is therefore feasible to establish positive synergies between student needs and rural areas. The needs of teachers, on the other hand, are harder to meet. They are often married to other teachers and are strongly attached to the need for a cultural life, so may hesitate to move to rural areas. The solution partially resides in stimulating cultural life and in creating networks of towns (proposals 7 & 8).

In terms of decentralizing decision-making, in addition to strengthening the power and responsibilities of local authorities, particularly municipalities (see proposal 1), the European example shows that the public function can be decentralized: EU authorities, rather than being concentrated in one city, are spread across Europe. Deconcentration of power also avoids the syndrome seen in a city like London, where a majority of the nation's lifeblood is concentrated in a city-state. A comparison of centralized and non-centralized states shows that the former are not necessarily more prosperous or better developed. Decentralizing power centres must therefore be considered as a benefit both in terms of democracy and development.

Proposal 4: Reinforce local boards

In the text below, the term "board" is used in a sense inspired by the experience of neighbourhood boards, combining local authorities and inhabitants, rather than the more usual meaning, referring to a public establishment dedicated to a specific technical task, (transport board, water board, etc.) or management mechanism: public services that are directly managed as opposed to contracted out.

Since rural areas have a limited number of clients, the opportunities for economies of scale are also limited. This applies both to public and private services. The market-based principles of supply and demand and free and fair competition can only be beneficial — indeed can only exist — when there are numerous economic players. Since this is not the case in rural areas, the result is either service cuts or prices that are high, verging on prohibitive. Rural economies very quickly become characterized by de facto monopolies or an absence of supply. Trying to introduce competition between grocers or gas suppliers when there is only one, or none at all, becomes a joke. The market cannot therefore operate in rural areas since it does not exist for many activities. And the distinction between private and public sector becomes meaningless. Especially when local authorities are themselves too small to develop a real public sector or even to employ staff.

The promotion of collective forms of action and management combining local authorities with inhabitants in local boards is a useful solution in this context. One of the roles of such boards could be to organize and run volunteer actions. Development of non-commercial activities is particularly important in areas lacking in capital and activity, where needs are not being met but where there is a plentiful supply of willing local labour.

It would also be useful to design these boards to be a means of paying taxes in working hours rather than

4. See Bernard Lietard, *Les monnaies régionales (Regional Currencies)*, ed. ECLM 2008

money, when financial resources are scarce. A system of this kind does tend to bring to mind scenes of medieval forced labour, but this system was reprehensible for its excesses not the principle. A tax only ever aims to mobilize resources from the community to meet the community's needs. The current form of taxation only mobilizes money. Creating a board and

Several movements are working to open up rural populations' mentalities. In Sweden, the Hela Sverige ska leva (Popular Movement Council) has created a rural parliament that meets every two years, the assizes of the rural world. These movements mirror the rural world's need for a collective and specific voice, to be given form not as part of a spontaneous process, but

by being discussed and gradually built up over the years. The creation of a long-lasting framework for making this voice heard within institutions is an important issue, involving three factors:

- training political, administrative and economic rural managers;
- establishing bodies enabling rural stakeholders to establish dialogue between each other and with national authorities;
- the existence of a rural policy and specific rural budgets.

Training rural managers

When agriculture was modernized in the 1950s, the French go-

vernment felt the need to train managers in the new agricultural model. It therefore founded IFOCAP, Institut de Formation des Cadres Paysans (Training Institute for Farmer Managers) which quickly evolved to include civil society and elected representatives. Local authorities usually have the characteristics that justify the need for specific training of its participants: elected representatives, development officers, entrepreneurs and even volunteer or paid managers from civil society. Training could also address legal issues, communications tools, administrative institutions, social and technical innovations and specific tools for understanding rural areas, particularly local ecological factors.

Bodies enabling rural stakeholders to establish dialogue between each other and with national authorities

The fact that a country is economically and administratively centralized increases the importance of



Isabelle Tournoud, Le coin des mauvaises graines, 2008 (Courtesy Galerie Nathalie Béreau)

a non-commercial mobilization of the community's power to take action in order to meet the community's needs offers an alternative method for achieving these objectives.

Proposal 5: Open up paths of communication between rural dwellers

Outlying areas tend to be characterized by a lack of horizontal links. These areas deplore the primacy of cities but have their sights set exclusively on them, neglecting to create links with other outlying areas. In other words, by omitting to establish a central relationship with each other, they remain tied to the city. By creating horizontal links with other rural areas, they would be taking a key step in freeing themselves from this subjugation.

representation for rural issues. The issue here is not so much the representation of each area individually, which can be undertaken by any one public figure with varying degrees of success, but rather rural areas' capacity to collaborate and produce a joint plan and demands. This proposal is not therefore based on multiplying bilateral relations between an outlying area and the central power, but on creating a collective consultation body. Given the absence of legal foundations, it would not necessarily be useful to attempt to institutionalize rural parliaments. However, the creation of national rural platforms should help towards the emergence of a specific plan for rural areas.

Rural policy and rural budgets

A society's long-term commitment to a given issue is translated into specific policies and budgets. In the 18th century for example, the existence of naval ministries reflected the perceived importance of the navy. The range of ministries paints a fairly accurate picture of the highs and lows of a nation's or political entity's priorities. They reveal the long-term commitment to a given sphere. Such commitments act as a unifying force for the various stakeholders, which use them as an outlet for their demands and to give concrete form to their vision. The existence of a rural policy gives the need to discuss and formulate joint principles a practical dimension.

Proposals 6: Promote skills and support rural popular education

With a few rare exceptions, it is unlikely that rural areas will attempt to base their growth on developing centres of excellence or attracting major industries, dependent as they are on plentiful unskilled labour which, almost by definition, is concentrated in the big cities. And even if an area accidentally succeeds in attracting a company that creates employment, dependence on a single employer represents a medium-term risk. An entire area is at the mercy of a turnaround or simply a change in industrial strategy. Rural areas find it difficult to provide a broad range of education, education in the usual sense of the term at least. For economic reasons, linked to the low-density population, conventional education will always be limited.

However, rural areas can draw strength from a lesser degree of stakeholder specialization and the existence of closer local ties between families, elected representatives, companies and trainers. They are therefore well suited to a different type of education based on promoting local stakeholders' skills and more interactive educational methods. It is no accident that rural areas which have focused on education have often shown the greatest dynamism in terms of popular education

and interactive educational methods. The Maisons Familiales Rurales (MFR) movement is emblematic of this approach. The movement's underlying principles are "sandwich educational methods, family responsibility, a global approach to education and participation in local development." It currently numbers 1,000 establishments, over 600 in Europe, almost 300 in Latin America, 160 in Africa and around 10 in Asia.

Instead of opting for developing secondary education based on an urban model, public authorities searching for an efficient system but with few resources to spend could usefully develop a rural education system according to MFR principles: sandwich training, family involvement and a global approach. In addition to a faster implementation of secondary education where none exists, this type of education, oriented towards identifying and promoting local resources, developing a spirit of initiative, autonomy and experimentation and a global approach better prepares students for rural societies, which will never offer a pool of skills, service and support comparable to urban areas. In the rural context, a combined academic and vocational education is more than an asset: it is a necessity.

Proposal 7: Establish networks of medium-size towns

Rural areas' strength lies in their towns. By which we mean medium-size towns, in touch with the surrounding areas and sharing a joint destiny with them. In other words, a locally-oriented town as opposed to the Singaporean city-state model, integrated into and totally governed by the global economy.

The presence of these locally-oriented towns is essential for offering local services — education, health and culture — and the employment opportunities that give an area its appeal. In economic terms, these towns operate in harmony with the nearby countryside to develop a dynamic local economy. Breathing new life into a rural area lacking towns of this type is extremely difficult. The reasons are simple: marriage and family choices. In relation to the social norm, a couple's decision to set up home far from a city involves so much effort that it is rare for both members to accept and successfully manage the situation. It is frequently the wife who gives up, as the one who very often has to deal with daily life and her children's future. The situation becomes particularly difficult during teenage years.

In terms of regional development, the creation of a network of medium-size towns is a more suitable long-term solution than the establishment of regional cities with international aspirations.

Maintaining locally-oriented towns requires:

Proposal 8: Strengthen local cultural life



Victoria Calleja, *Messenger*, 2005

Culture's association with leisure and artistic activities conceals its true civic importance. It is said that Pericles supported artistic activity, particularly the theatre, because he felt that it strengthened the city. Culture should therefore be viewed in this way: an activity involving the entire population that helps to stimulate the community, give meaning to its future and identity, strengthen cohesion and foster creativity.

It is vain to pretend that rural areas can compete with major cities in terms of cultural offerings, by which we mean mainstream cultural activities. These cultural offerings are part of a culture market which clearly distinguishes between consumer (spectator) and producer (artist). The rural context is focused on strengthening the local capacity to produce culture. The 19th century industrialization of Europe which dramatically changed the face of its countryside coincided with the emergence of folklore. The economic and social upheavals of the time brought into question local identities that were becoming less apparent. The rediscovery, or even the ex nihilo development, of costumes, traditions and popular arts played a key role in rebuilding local identities. Folklore helped people to deal with the changing world by providing them with a sense of permanence whilst remaining true to themselves.

The existence of a local identity, a form of low-key and inclusive patriotism, helps to create resilience and dynamism. Cultural action therefore needs to be rooted in popular culture, in other words activities that include the greatest possible number of inhabitants. This is important for two reasons:

- the national public authorities to constantly try to promote minimal quality of service throughout the area, with a priority given to these towns rather than setting up a limited number of centres of excellence. Despite the generally accepted idea, excellence emerges spontaneously as long as a broad high-quality base exists, whereas artificially induced excellence fails to produce the expected lever effect, as demonstrated by the longstanding existence of socially divided societies where a patrician economic, political and intellectual elite coexists with the 'plebeians';

- rural areas cannot usually afford to maintain culture professionals;

- the object of this type of popular culture is to involve populations and give them a role in creating cultural activity.

This requires a cultural policy specific to rural areas rather than a copy of major cities' policies, but with reduced funding.

Identifying and developing cultural actions

- local councillors to establish a permanent dialogue between the town and its surrounding area with the goal of creating synergies. The tools for doing so are cooperation between municipalities, a shared vision of development, local patriotism that goes beyond reflexive localism, and shared profits and benefits. The local culture of power is decisive at this level. A conflictual culture of power is a crippling handicap. An area cannot be saved or developed without the cooperation of its inhabitants.

It is evidently better to base this process on a cultural past, if one exists, since it is far easier to focus on continuity, even with a romanticized past, rather than create a popular culture from nothing. This naturally requires elected representatives and local civil society to abandon any enduring colonization complex and agree to work towards unearthing, gathering and organizing the various elements composing local identity. This also requires, as a minimum, a collective record for the entire area.

Once the record has been established, cultural policy and actions can be adopted, aiming to promote and develop elements of local identity by organizing them at different levels:

- at the school level, implying establishing a close link with the school. This may pose a problem if the teaching staff are hostile to anything that may, to varying degrees, be assimilated to an assertion of local identity;

- at the economic level, involving cooperation with the world of craftspeople and small businesses. Well-known examples are the AOC (Appellation d'Origine Contrôlée) label in France and the institution of "living national treasures" in Japan: craftspeople who are expert in their art and supported by the local authority in exchange for training apprentices. This type of approach is eminently practicable at the infra-national level;

at the social level; promoting culture naturally involves the world of non-profit organizations, particularly those working in popular education. These organizations can create links with the rest of the population. However, support for this world is sometimes difficult due to the sponsorship culture, which makes the expected returns unclear. Within this context, support for cultural life is considered as a "free" act, whose main, or even unique, reward for local authorities is

in terms of image, with the exception of the major festivals where local authorities can expect financial gains. If we take the civic aspect of cultural policies seriously, the issue of the consequences for the population and area, and how they are managed, should not be seen as a corruption, but should be at the heart of the relationship between the public authorities and those benefiting from their support. This is the Principle of Pericles. It may well wound the sensibilities of artists who proclaim the need for freedom in order to create. There is clearly a contradiction between the artists' absolute freedom and the civic function of art when freedom is recognized as not being the only essential social value. Support for the arts then becomes a form of social contract rather of sponsorship. However, the two approaches can coexist, weighted in varying degrees, within the same cultural policy. It is also important that civic-oriented culture is not systematically devalued in comparison to high culture. This problem relates directly to the world of art and its relationship with the rest of society. It is similar to the relationship between university research and teaching, the former benefiting from a more noble and prestigious reputation than the latter. We will merely point out that many artists have shown that a link with popular culture can act as a spur to original creativity rather than a handicap. Culture, like research and democracy, gains from being participative.



Patricio de la O., *Nueva Cosecha mecánica*, 1989

II

Producing Resources

Proposal 9: A stabilizing agricultural policy

Rural areas cannot be reduced to the agricultural business alone. However, it is one of the activities that typifies rural areas and differentiates them from urban areas. Furthermore, agriculture very often serves to structure the area itself, for better or worse. At the international level, agriculture still provides almost half of jobs worldwide. 45% of the world's population are still small-scale farmers or farm workers.

Although each local authority has the remit to exa-

mine local needs in terms of agriculture, the agricultural business is mainly structured by national policies. During the WTO negotiations in July 2008, the agricultural issue proved to be a stumbling block, with India wanting to avoid opening up agricultural markets for fear of destabilizing its rural population. Agriculture thus needs to meet three challenges: feed people, help to stabilize societies by avoiding massive rural exodus, and protect the environment.

Although it is often difficult to define at the national level all the details of interactions between agriculture and regions, it remains possible to outline the

main lines of agricultural policies necessary to meet these three challenges, with the hope that they can be extended to the international level.

High food prices

Supporting farming populations and enabling them to invest and educate their children requires keeping the price of agricultural foodstuffs high. Every country that underwent development in the 20th century, switching from farming societies to industrialized societies, adopted far-reaching agricultural policies. Quesnay set out this principle in the 18th century: “As is the purchasable value of things, so is the revenue. Abundance and no value is not wealth. Dearth and high prices is misery. Abundance and high prices is opulence. Let us not believe that low prices are profitable to the laboring class; for cheapness of products lowers the wages of the laboring people...”⁵ Low prices ruin small-scale farmers, who flock to the city where they fail to find alternative employment and form an unproductive population feeding on cheap foodstuffs whose low cost contributes to further destruction of small-scale farmers’ livelihoods, and so and so forth. This represents the vicious circle of peasant farmer plebeianization.

It is thus essential for food prices to be kept high through direct action in the markets (countercyclical purchase and resale, storage capacity).

High cost of the productive resource

In the absence of a safety net, expensive foodstuffs can lead to the development of practices that damage the environment and devastating land speculation causing small-scale farmers to disappear. This problem can be overcome by maintaining a high cost of productive resources based on:

- a high land tax serving to curb land annexation (comparable to leasing land to the local authority⁶);
- taxes on other productive resources: water, fuel, inputs, pesticides and seeds;
- a minimum wage.

The combination of high prices for agricultural products and productive resources naturally favours economic stakeholders that produce much with few resources, precisely the goal of sustainable development.

Proposal 10: Ensure easy access to market information

Intermediaries are often blamed for rural underdevelopment. Although the criticism is often well-founded, it fails to take into account the workings of mediation and, amongst other elements, setting

of prices. Intermediaries are usually far more familiar with the market than producers. In specialized sectors, the authorities or often even private consortia such as traders’ federations are quick to set up shared information platforms. Fairs and markets, in particular, have played this role, bringing together sellers and buyers in the same place so that information can circulate more freely and with less distortion.

It is undoubtedly one of the public authorities’ responsibilities to supply small-scale economic players with the information that enables them to negotiate on an even footing with intermediaries. Especially since current communications tools are on a par with, surpass even, available means of transport.

Proposal 11: Modify the land ownership model

Rural areas are primarily differentiated from urban areas by physical space: the land. Rural areas have an abundance of space. However, this does not mean that it should be put to bad use, quite the opposite. Unfortunately, rural areas often make mistakes and fail in their land management practices. This springs from a scarcity of resources, absentee owners — for both developed and undeveloped land — individual egos that are harder to deal with in small societies, and simply a lack of conscientiousness and skill.

On the other hand, the collective management of public goods — property in this case — has proved in the past to be a powerful tool for social cohesion, political education and economic production in many rural societies. This type of public goods management often endures in mountainous areas, where the land is too rugged to have been annexed. These public goods represent an intermediary stage between private goods and state goods. Marked differences in the rights attached to ownership also exist. Where some countries continue to staunchly protect owners’ rights (for example, with the Roman *usus et abusus* legal principle), others strictly limit the rights attached to ownership, with local authority restrictions and rigorous control, as seen in the Netherlands.

It is vital for local authorities to be able to manage their land responsively. When land needs to be protected in the name of the common good, this may imply establishing contracts between the state and local authorities. This approach would involve:

- strengthening the hand of local authorities and municipalities in the face of remote and absent owners, particularly for reusing land that is little managed or not managed at all. This implies the local authority having the right to impose certain constraints (actual presence, maintenance, proper use, etc.) and, if necessary, to penalize owners and pre-empt abandoned property;

5. Quesnay, *General Maxims of the Economical Government in an Agricultural Kingdom*, quoted by M. Augé-Laribé in *The Agricultural Revolution*, Albin Michel 1955.

These lines provide us with a striking parallel to the current situation of the global economy, agricultural and non-agricultural: under the

20 pretext of lavish consumers with low-cost products, we have put pressure at the global level on the wages and income of entire populations, with damaging results.

6. This tax could be levied in proportion to land fertility, as in Germany, where it is based on the *Bodenschätzung* standardized soil assessment.

- making local authorities responsible for the consequences of their local management practices in terms of adjacent areas, particularly at downstream (this relates particularly to water management);
- drawing up contracts between the local and regional levels when the area has to fulfil major ecological roles, including water and forestry management.

Proposal 12: Participative seed selection

Erosion of domestic biodiversity

For thousands of years, human beings and the animal and vegetable species they have domesticated to meet their needs have cohabited and evolved together in rural areas. Despite appearances, this domestic biodiversity is in escheat. Jacques Pernès provided an excellent analysis of the problem in the 1960s: “We can thus free ourselves from the frightening illusion that the air-conditioned safes used to store seeds and tissue cultures represent the only solution to protect us against our own waste. Unavoidably observable in every country is a three-way genetic depletion of crops: with the focus on a handful of crops given a profitable level of productivity and mechanization, there are less cultivated species; there are less varieties cultivated per species, despite the deceptive abundance of variety catalogues, since the varieties are often only slightly modified copies of a unique ideotype customized to suit technological and commercial constraints; varieties are less genetically polymorphous since it is easier, for commercial reasons, to multiply and protect simple and reproducible variety structures.”⁷

The result in terms of domestic biodiversity is highly salutary. The FAO estimates that China had 10,000 varieties of wheat in 1949. This figure dropped to 1,000 in 1970, and erosion is believed to have increased since. 86% of the 7,098 varieties of apple used by the USA between 1804 and 1904 have disappeared. The figure is 95% for cabbages, 91% for corn, 94% for peas and 81% for tomatoes. And so on ad infinitum. These figures do need to be approached with caution: it is difficult to identify at which point the varieties are differentiated, and thus difficult to assess the loss of diversity. They do nonetheless bear witness to a wide-reaching and worrying phenomenon.

Small-scale farmer or participative selection

The solution to this erosion problem is to return to the practice of participative selection used before the industrial revolution. However, the practice should be elective and not imposed. Whereas in the past peasant farmer communities could not exchange varieties and had no choice but to diversify, the contemporary context is about promoting the protection and

development of local varieties using a recognized and sustained approach. This is the solution proffered by Pernès: “[...] The second, more deep-reaching and effective [package of measures to combat genetic depletion] will involve delegating the creation of varieties to farmers themselves, who will renew and select polymorph and original varieties and populations. Seed production companies will take on an increasingly important training and consultancy role as well as working to create and introduce genitors and source populations which will quickly leave the ghetto of the stations to be selected by expert small-scale farmers themselves. This vision, allotting everyone a role in genetic resources and plant improvement, may seem utopian to those who have never had the chance of marvelling at the expertise and wisdom of peasant farmers, the heirs to all the plant domesticators of the past. They range from the traditional corn and bean farmers in Mexico and Guatemala to Chinese peasant farmers producing diverse wheat varieties and creating millet, rice and soy, and African peasant farmers managing millet and sorghum varieties as well as multiple pulses and so on.” Agronomic research bodies and peasant farming communities are launching initiatives of this kind.

This implies that the public authorities recognize not just the selection of generic and homogeneous commercial varieties but also initiatives based on participative selection and production⁸, and the relationship between the two types of seeds. Commercial seeds must not be confused with seeds produced by participative selection, which have different characteristics. This requires:

- creating catalogues for participative selection seeds;
- recognition of the communities practising this type of selection;
- specific research and development aid programmes.

Proposal 13: Encourage migration to rural areas

Faced with explosive urban growth and rural exodus in certain parts of the world (not forgetting that other regions suffer from the opposite problem: a rural population growing too fast), states often adopt measures that coerce rather than incite: they want to dissuade people from coming to cities, but without making the countryside attractive. And local authorities suffering from depopulation sometimes have a tendency to shed crocodile tears: they complain about depopulation without really doing anything to remedy the reasons behind it (see proposal 11 on land ownership).

Local authorities undergoing depopulation often dream of attracting an economic player with the capital and expertise to provide employment for local families, preferably bringing children to the area, and

7. J. Pernès et al. *Managing plant genetic resources*, Volume 2, Manual **21**

8. Italy has long recognized local varieties.



José Esteban Basso, Boceto, 2002

doing nothing to overturn local sociological balances nor compete with land owners in the concentration of local land. In reality, successful new integrations usually work thanks to a community's commitment and capacity to make concessions, notably in terms of land and real estate, or even investing in new activities to smooth the path for the arrival of enterprising but capital-poor people.

The many possible measures for encouraging migration to rural areas include:

- developing high quality property compared to the urban environment, particularly by developing a rental market;
- aid from the state or large cities for those setting up in rural areas in the form of initial grants and subsidized loans (as is already the case in several countries for agriculture);
- providing business services such as accounting and IT in areas where the private development of businesses is stagnant (see proposal 4 on local boards);

- a welcome and integration policy, particularly for partners when they are not involved in the developed activity;

- providing guarantees for financial partners, or even contributing financially to the investment.

Proposal 14: Energy and organic materials

It is a scarcely questioned fact that the social model that developed in Europe in the late 18th century consumes huge quantities of energy. It began with coal, then moved on to oil and, to a lesser extent, hydroelectricity. Human production, transport, habitat and comfort (heating and air conditioning) all depend on intensive energy consumption. This high energy consumption society is now coming up against two issues:

- limited resources, even though exploitation of oil shale and coal liquefaction will no doubt be enough to

hold out until the end of the century;

- climate disruption due to anthropogenic gas emissions that has already led to deep-reaching changes in global and local ecosystems.

Even if great progress can and must be made in terms of the sustainable city, and although the city can both economize and fix energy, especially by putting its roof surfaces to better use, rural areas are already having to play a role, and will be increasingly called on to do so, as:

- carbon sinks to partially fix greenhouse gases (GHG);
- an area for producing energy.

After all, oil and coal are merely the surplus of the biomass accumulated tens of millions of years ago. Today as in the past, the process whereby solar energy is fixed by the earth's ecosystems produces usable energy.

Two methods for fixing energy that call on rural areas currently exist:

- solar panels and wind turbines, which are primarily

mechanical. But it is unlikely that this method will be used exclusively, even with the emergence of ambitious projects for solar plants located in the heart of the desert;

- the use of plants. The relationship between humanity and photosynthesis will probably be as strong as ever. Rural areas will remain at the heart of this relationship, as the place where solar energy is fixed and transformed into living organic matter (plants) then dead matter, in the form of soil humus.

The challenge lies in working simultaneously to:

- **maintain fertility in ecosystems, which are highly dependent** on their carbon density since their fertility guarantees the operation of the water cycle and a high level of resilience and of biodiversity. Overexploitation of biomaterials can lead to the system's depletion;

- produce energy using different approaches. A forest-based approach using ligneous and perennial plants, and an agricultural approach either using farming by-products or promoting energy-producing crops. Examples include the use of corn or sugar cane to produce ethanol and palm oil to produce oil;

- **produce enough food** to feed a growing population until the middle of the century.

In conclusion, exhaustion of fossil energy resources and, especially, the climate changes caused by the greenhouse gases produced by the use of these resources is increasing the importance of ecosystems. Their importance lies in storing CO₂, the main greenhouse gas, supplying materials and energies that can replace those produced by petrochemicals and carbon chemicals, and continuing to produce food.

Recognizing the Kyoto protocol at the infranational level

The Kyoto protocol on greenhouse gas emissions went no further than the national level; in other words, it did not specify the way in which responsibility would be divided up within each nation. Although states signing the protocol accepted the obligation to reduce their greenhouse gas emissions, their footprint also includes fixation, which is often linked to their forests. However, no mechanism is in place at the national level for measuring the contribution to the national footprint of different regions within the same country. Furthermore, a system for internal compensations does not exist, even though the least industrialized regions with less intensive agriculture partially offset the emissions of the more industrialized and intensive areas.

This distortion needs correcting and intra-national adjustments made between the local authorities, for cities and regions, with a high level of emissions — generally rich areas — and local authorities that fix

energy, that tend to be poor areas. Rural areas naturally fear being sanctuarized and colonized by powerful authorities in the name of the national interest, a phenomenon that can arise if policies for buying up and irreversibly freezing land are adopted rather than a limited-duration and regularly reassessed contract. The fact is that an area's ecological contribution is permanent and should be recognized as such. Rural areas need to be proactive and turn their energy-fixing role into an asset. To do so, they need to ascribe real value — financial if necessary — at the national level to the positive contribution they make to the country's ecological balance.

In addition to carbon fixing, local authorities need to work to maintain on-site any possible transformation of accumulated biomass into consumer durables in order to retain any added value. The energy question can thus serve as an opportunity for rural areas, as long as they take the initiative, appropriate the process and keep control of it. Taking up a defensive position is doomed to failure, given the issues at stake and the state of necessity.

Advantages and risks of green energies

An economy based on green energy and materials is thus possible, but does also pose a threat to local communities and authorities. The spectre of being turned into an area producing only palm oil, corn or sugar cane to produce ethanol is all too real.

This requires local authorities to:

- properly manage their land (see proposals 11 and 9);
- carefully select businesses that set up in their area, taking into account their ecological and social impacts;
- ensure they have the capacity to organize the development of these business activities themselves

Developing the effective use of rural areas

Meeting these challenges involves an organizational process comparable to the most sophisticated urban planning. Rural area ecology aiming to identify synergies that increase production efficiency and minimize waste is vital.

It will also be important to use techniques including:

- water purification as part of a carbon fixing process (lagooning plus short-cycle coppicing);
- agroforestry combining food crops and trees;
- production of ecomaterials such as insulating materials made of plant fibres and recycling them in the form of compost;

and to organize different activities in the areas:

- distribute forests over water catchment areas, along

watercourses and along slope breaks;

- set up collective heating installations linked to available resources (for example, woodchip from sawmills);
- spread livestock operations across the area to attain optimal agronomic balance between animals and crops;
- install energy-generating infrastructures (wind or solar) in areas where farming and forestry opportunities are limited.

Local energy agencies

Integration of the different activities is technically appealing but socially delicate. Without the introduction of interventionist practices, it will generate major transaction costs between stakeholders. Formulating collective energy strategies in a rural area encourages the creation of energy agencies at the local level. This in turn encourages the establishment of partnerships between stakeholders likely to influence policies on settlement and occupation of rural areas, water treatment, and the location of farms, forests and factories. Local authorities that have made progress in integrating their activities locally will be one step ahead in the challenge of tackling energy issues.



Catalina Prado, *Serie de las visitas IV*, 2009

III

Protecting Vital Natural Resources

25

Proposal 15: Ecological tax system

Tax consumables and detax labour

The oft-cited dematerialization of the economy is not mirrored in reality. Water, mineral ores, fossil and fissionable energy consumption all continue to grow unchecked, fuelled by low raw materials prices. It is clear that the market is incapable of sustaining a long-term vision and cannot internalize environmental effects. Which is why it produces abrupt corrective measures, with devastating social consequences. The recent misery caused by the sudden upsurge in oil and foodstuff prices is one example.

It is only the public authorities that can gradually increase the price of raw materials and guide econo-

mic stakeholders towards measured changes. The tax system is an ideal tool to do so, serving as it does to direct the economy in the long term.

The goal of achieving sustainable development therefore implies:

- taxing material production resources;
- reducing tax on labour.

Ecotaxes need to be introduced, or existing ecotaxes increased, on:

- water;
- energy;
- mineral ores (as distinct from recycled metals).

Waste also needs to be taxed according to the polluter-pays principle.

In addition to its dissuasive role, this ecotax would also contribute to financing what economists call environmental amenities or environmental services, i.e. the social or biological functions often provided by wilderness and rural areas. The best example is the purification role played by certain wilderness and rural areas (forests, marshes and mangrove swamps). An ecotax of this kind, directly affecting industry and therefore all its consumers, particularly in cities, could thus help to finance the management and low-level exploitation of these areas.

Implementing the tax system

The questions then raised are: at which level should this tax system be applied and how should the sums generated be used?

Setting up the tax system at the local level would create distorted competition. It implies that the authority — regional, state or group of states — that adopts such a tax system has the right to protect its markets against products from countries that have not adopted the same type of measure. The ecotax would thus be applied at the border, which involves accepting a restriction on free trade.

Another and no doubt better solution would be to lay the foundations for a global tax system.

Implementation difficulties

Setting up this kind of tax system may be as politically delicate as it is technically simple, especially the global tax option. So does a credible alternative exist? There is the quota market, but it is just as politically difficult to put in place and far more technically complex. The difficulty of setting up an ecotax system is thus a technical issue — how best to introduce it — rather than a political issue: should it be implemented or not?

From a technical standpoint, it is simply a value-added tax adjustable according to products' environmental impact. It would vary depending on the type of product: iron, oil, hydraulic energy, cement, etc.

Ecotax stakeholders

Setting up ecotaxes requires drawing on traditional tax savoir-faire combined with environmental know-how. International bodies like the IMF and WTO could coordinate the implementation of ecotaxes at the global level.

Proposal 16: Forest energy policy

Restore continental environments' biological functions

The forest is the most efficient of all ecosystems to have made an appearance on earth in terms of carbon fixing (which combats the greenhouse effect), soil creation and preservation, and water regulation, both locally and globally.

- Carbon fixing: even in conditions characterized by high mineralization (fast destruction of dead organic matter by soil micro-organisms), the forest ecosystem maintains a mass of 100 to 200 tonnes of carbon per hectare. Forest ecosystems are home to 80% of the planet's plant carbon and 40% of soil carbon⁹. Only high altitude or high latitude cold grasslands and very wet zones (peat bogs) could do better. If humans want to stabilize the greenhouse effect, they need to make proper use of the carbon source provided by growing forests.

- Soil creation and preservation: carbon accumulates in soil, giving it structure and some of its fertility (particularly biological life). The forest can be used to reconstitute damaged soil, either with replantings or by taking a reasonable percentage of organic forest matter fixed each year and spreading it on farmlands, either green (the technique known as Ramial Chipped Wood) or after composting.

- Water regime regulation: the forest has a three-way effect on the water regime. It forms clouds above the continental masses by "sweating" (evapotranspiration). The evapotranspired water does not return to the sea but falls on the continental masses. Secondly, the forest creates porous soil, which allows rainwater to infiltrate the subsoil where it can be retained. Thirdly, the forest is darker than bare soil and thus reduces the albedo (the extent to which the soil reflects the sun's light). Since the rays are absorbed, the air is cooler and encourages condensation of atmospheric and rain water. Mountain reforestation in dry regions, like the Atlas Mountains and Mount Lebanon, is the best way to bring the rain back and halt desertification of the plains.

Humans' actions are often the cause of areas turning to desert. The light that reaches these areas is not used for photosynthesis but is reflected, thus increasing the greenhouse effect. Slow and careful reforestation of desert areas could also go some way to saving existing primeval forests. Respectful exploitation of these forests could also be considered (see the Forest Stewardship Council: <http://www.fsc.org/>).

Reconfiguring forest exploitation has the added advantage of offering major potential in terms of creating wealth and jobs.

Humanity needs a global forestry plan for all these reasons.

9. Sources: ONF (French National Forest Service), CIRAD (French Agricultural Research Centre for International Development), EU.

Implementing the plan

The main difficulty facing forestry activities is the long-term investments they require. In contrast to the exploitation of natural forests — a process similar to harvesting — planting and maintaining domestic forests, with a possibly high level of biodiversity, requires constant care over the medium term (25 years) or long term (200 years). However, this maintenance work is usually concentrated on the start-up period or during the first 20 years, after which the first trees to be cut down start to generate income. A replantation operation therefore requires long-term action



Nils-Udo, Autel d'eau Méréville, 2010 (détail)

that can usually only be implemented by authorities. Individuals and private investors can usually manage a forest once it is stabilized, on condition that certain fiscal or legal measures (such as supervising the forest's condition) encourage them to do so.

History gives us several examples of successful forestry policies, both in Europe and Asia. These policies provide prototypes with principles that can be adapted for use elsewhere.

Stakeholders in the plan

Private stakeholders in the Forest Stewardship Council have demonstrated that it is possible to promote proper forest management in terms of looking after existing forests. The Kyoto protocol and cooperation agreements provide useful frameworks for

reforestation agreements. And the FAO could easily develop a forestry arm, especially since most countries have a forestry department. Furthermore, the World Bank and the development banks could serve as potentially effective financing tools.

Proposal 17: Support agroforestry

Modify farming and food-producing models

Food is one of the biggest challenges facing humanity in the 21st century. It is almost certain that the current farming and food-producing model will not be able to meet humanity's needs, as it:

- requires huge amounts of fossil energy (particularly for producing fertilizers);
- requires huge amounts of water (73% of pumped freshwater is used for agriculture);
- destroys the soil.

What are this model's characteristics? It focuses on growing cereals (wheat, corn and rice) and annual legumes, mainly soy, livestock rearing on an extensive (deforested area) or intensive basis, both with cereals used as feed. It has tended to follow the north European model and marginalized dry trees, which need little or no irrigation.

Nonetheless, many positive examples of using trees for food purposes do exist, including almond, bread, walnut, olive and chestnut trees. Trees like the acacia are also used for fodder in dry areas. Agricultural practices that use trees are generally known as agroforestry.

On condition that it requires little or no irrigation and is based on a diversity of trees, agroforestry has many advantages:

- soil preservation;
- improved drought resistance;
- positive impact on local climate;
- positive impact on water cycle;
- fuel production (wood);

- extraordinary level of productivity with no need for inputs.

An added benefit is that agroforestry requires more labour, a positive factor for countries with strong demographic growth.

It is important to note that the development of food trees can also have a direct impact on urban and peri-urban agriculture.

Implementation

The widespread adoption of agroforestry requires a combination of three types of changes:

- agronomic;
- economic;
- cultural.

From the agronomic standpoint, agroforestry is often successfully managed despite little investment in research. Some degree of research has already been undertaken, but there remains a wide margin for progress in terms of selecting and combining trees and management mechanisms (plantation density, association with annual crops), and signs for the future are undoubtedly promising.

Supporting agroforestry implies securing specific investments and loans, given the return on investment timescale. We should note that the creation of the emphyteutic lease, a long-term lease featuring the obligation to plant fruit trees, in the Roman Empire of the 3rd century corresponded to the lessee's need to obtain a return on investment.

Agroforestry development implies a shift in eating habits — a shift that is already becoming inevitable, for example, with the need to reduce red meat. However, replacing saccharose extracted from sugar beet by fructose taken from fruit, or sunflower and rape oils by arboricultural oils does not pose a major problem. Reducing the proportion of cereals in people's diets is more delicate. However, it is worth noting that a large percentage of these cereals are used to feed cattle, which are not natural grain-eaters. Pigs would be quite happy to eat ground acorns rather than corn! On balance, dietary changes appear to be minor. Moreover, we know that eating habits follow fashions. The widespread adoption of the US diet is rooted in American cultural appeal rather than any nutritional merit.

Implementation stakeholders

A number of international networks promoting agroforestry already exist (see <http://www.worldagroforestry.org>).

A great many research teams are already at work on agroforestry models, and many farmers are discove-

ring or returning to this type of practice. Without forming a huge majority, they nonetheless represent a springboard for a more widespread uptake of agroforestry practices.

In financial terms, stakeholders like the World Bank — which admitted to failing to invest sufficiently in agriculture in 2007 — could easily adopt a long-term loans policy to promote these types of practices, subsidized by governments if necessary, as in Europe.

Since dietary habits are cultural, the public authorities could use their food policies, and public figures such as actors and sportspeople their high profile, to promote a new model.

Proposal 18: Halt urbanization of the best land

Protect the soil resource

The high cost of transport and preservation difficulties have historically led to cities being developed in areas where production and supply was easy. Which is why many of today's major cities in Asia (Beijing and Tokyo), Europe (London and Paris), Africa (Cairo) and the Americas (Mexico City) are founded on extremely fertile land. At a time when humans need to make the best possible use of all available resources, it is absurd to see the urban fabric neutralizing the planet's best land. This situation is especially worrying given that so far nothing seems to have been able to curb urban creep, even though the increase in oil and transport prices should eventually have an impact which, if not anticipated, will be both catastrophic and violent.

It is therefore vital to protect the best land, either by encouraging denser growth in the city or the development of cities on non-fertile lands.

Three tools can be used to do so:

- prohibiting construction on fertile farmland;
- introducing a building tax linked to the soil's potential for fertility;
- reducing the appeal of cities built on fertile sites by relocating administrative and power centres to other sites, which could have a positive effect on city and country planning.

This solution calls for a more global urban strategy.

Implementation

Implementation of this kind of measure provides a perfect example of active subsidiarity, since it requires the national, regional and local levels to collaborate. Just as a city cannot solve the problem alone, central



Andrea Carreño, Bretagne, 2010

administration cannot solve it without the cooperation of the local authorities. International involvement, however, is not required to adopt these types of policies.

Implementation difficulties

We could imagine that the problem is even more acute for countries facing fast and untrammelled urbanization. However, poor populations are not necessarily those developing on fertile zones. Rio de Janeiro provides an example of a city where unplanned housing springs up in abandoned areas, i.e. areas that are not fertile. The elite population is more likely to cause the problem.

Proposal 19: Reverse the market-based approach to greenhouse gases

Incorporate economic issues into ecological issues

Greenhouse gas markets are rooted in a worthy desire: to incorporate ecological questions into economic questions. However, this market-based approach is based on currency. And it is clear that currency has been slowly dematerialized over the last century. It is becoming increasingly evident that currency mirrors, in complex ways, a nation's past, present and future

power. “Power” is being used in the broadest sense of the term, incorporating the economic, political, cultural and military aspects.

Basing the greenhouse gas markets on the dollar because the USA won the last world war, or on the yuan because we are anticipating China’s increasing influence may well be well founded from an anthropological standpoint; but the problem remains that the climate crisis is not anthropological in nature, but a crisis of self-regulation of the earth’s climate system.

From many points of view, human activity can essentially be seen as totally enmeshed in a type of super-economy: the carbon cycle. We can liken the earth’s ecosystem to a meta-system of carbon transactions. When we eat, breath, defecate, run, grow and die (possibly by being eaten by another member of the ecosystem), we can liken these events to changes of status and carbon transfers.

The challenge is thus not to incorporate carbon into the economy, but the economy into carbon.

The logical approach would be for humanity to adopt a carbon currency, similar to other currencies. An attempt could be made to assimilate emission rights into the new currency. However, their limited character only very partially confers on them the characteristics of currency, if only because societies do not have a carbon accounting system alongside their conventional monetary accounting system.

Nevertheless, rural areas would have everything to gain in promoting this type of currency, for the simple reason that they could be the issuers. A carbon currency would logically be backed by carbon stocks. And these stocks would logically be the biomass accumulated in well-managed rural areas.

Rural Areas, Small- and Medium - Sized Local Authorities and World Governance

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Lettre ouverte aux scientifiques. Alternatives démocratiques à une idéologie cléricale

[*Open Letter to Scientists: Democratic Alternatives to a Clerical Ideology*], 2011;

La Tourmente alimentaire [The Food Turmoil], 2008;

Une agriculture pour le XXI^e siècle [Agriculture for the 21st Century], 2007.



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