LASCAUX and food security law around the world

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The intellectual history of an atypical legal research programme

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The LASCAUX European research programme took place over five years, between February 2009 and January 2014. It was one of the "IDEAS" programmes of the 7th Framework Programme of the European Research Council, selected in 2008 for an ERC Advanced Grant following an international tender. The Lascaux programme was hosted by the University of Nantes and the *Maison des Sciences de l'Homme Ange-Guépin* (MSH) humanities institution in Nantes.

The Lascaux programme is concerned with food issues, "from plough to plate", from a mainly legal perspective.

Law is both a gateway to this landscape, and the landscape itself. This is evidenced by the key-words from the Lascaux programme. For these key-words point up the host of complex problems with serious consequences that the law is there to help resolve:

Agricultural development : land-grabbing, agro-ecology, smallholdings, intensive/industrial agriculture, agricultural biodiversity, climate, sustainable development, agrarian law, land law, women's rights, inputs, international investments, farm seeds, farmer's seeds;

Agri-food trade : short supply channels, fair trade, international trade, competition, agri-food industries, free trade, physical and financial markets, World Trade Organization, prices, North-South relations, speculation;

Agricultural and agri-food products : appropriation of living organisms, biodiversity, patents on seeds, certification, consumer-citizens, geographical indications, consumer information, quality labels, proprietary plant varieties, quality, quality marks, transparency, environmental and social values;

Food security : access to food, access to land, access to water, supply, food crises, Human Rights, famine and starvation, malnutrition, globalization, rural and urban poverty, health safety, under-nutrition, sovereignty.

The nuclear core of the program is based on the concept of "food security", according to the definition from the Food and Agriculture Organization of the United Nations (FAO): "*Food security exists when all people, at all times, have economic, social and physical access to sufficient, safe and nutritious food to satisfy their nutritional requirements and food preferences to enable them to lead an active and healthy life*"»[1]. Historically speaking, there has been a trend of development from agri-food law towards food security, and so the Lascaux programme took agri-food law as the starting point for its study.

First of all, it must be said that food security draws very little interest among European law academics, food being mainly studied in higher education for its scientific aspects, food technologies,

[1] World Food Summit, 1996 : http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf

health and nutrition. Indeed, even rural law is hardly studied, with the exception of Italy where it is more developed than elsewhere. Food law is starting to develop, though generally outside law faculties (among agronomists and veterinarians) with the exception of a few universities like Nantes and Paris 1 in France or Wageningen in the Netherlands. Some European universities such as Liverpool Law School and Trinity College Dublin recruit food law experts, but they lack any proper research teams in the subject. Beyond food law, agri-food law, meaning the specific law applicable to the agri-food economic sector, is nearly inexistent in European law faculties. As for *food security law*, we need to go all the way to America to find it. There is no interdisciplinary complex in higher education dedicated to food in Europe aside from the group of 35 research centres in Nantes. This is largely because law faculties in Europe have traditionally been structured on a formal division of the subject matter: private law/public law, civil law/commercial law, national law/international law, etc. A course of study which cuts across these formal divisions has little chance of being accommodated, with inevitable consequences in terms of research.

On the American continent however, the academic landscape is very different. First of all, the distinction between private and public law is not very clear-cut, nor is that between civil and commercial law. Then there are many academics directly interested in food security, irrespective of their field and including law specialists. For the latter, this derives partly from the fact that "social sciences" in the broad sense are often grouped within the same university.

For example in Argentina there are 8 chairs specialized in food security and food sovereignty. In Canada there are several chairs that concern food security from the standpoint of access to land for farmers such as the chair of legal diversity and indigenous peoples at the Faculty of Law of the University of Ottawa or, among others, the chair of food security law and that of the comparative First Nation peoples' condition at Laval University in Québec. Several professors are specialized in agri-food law and food and nutrition law at the University of Costa Rica, in the faculties of law and of agri-food science. This university even hosts a national council on food and nutrition that is composed of colleagues from all fields. Several universities in South America include the same law specialization (incl. Peru, Venezuela, Colombia, and Brazil).

The United States is also in the forefront, with dedicated institutions and training courses, particularly at Harvard (Food Law and Policy Clinic), the UCLA School of Law (Resnick Program for Food Law and Policy), Michigan State University, the University of Arkansas, Drake University (Iowa), the World Food Law Institute of Washington State, Howard University in Missouri; some of these have links with the law faculty of the University of Nantes.

It is also on the American continent, from north to south, that there is the greatest number of research centres or law faculties specialising in Human Rights applied to food, farmers' rights to land and the right to their land for indigenous peoples. In other words, it is on the American continent that scientific thinking on the question of food security is most developed.

For it is certainly in Latin America that the key-words of the Lascaux programme are most reflected in legal texts, whether they be local, national, continental or international laws, and where law professionals are most ready to lend a listening ear.

In truth, food security is demanding: being at the meeting point of different areas of law, but with no clear and indisputable way to identify a special field of the law that could be named *food security law*, its recognition and effectiveness depend on bringing together a vast set of coordinated

rules which must be revealed or thought up. Although these rules are not clearly identified today, at least not at the academic level, it is possible to hypothesize such a set, and it is armed with this hypothesis that we must address the areas of law that go to make up food security.

This approach to food security conditions the working methods adopted, so that these have to take account of other academic fields and concrete realities (I) and also the stages to work through from an epistemological perspective (II) in order to achieve the goal of our research (III), i.e. identifying the legal conditions for achieving food security.

I - Methods

Methodological difficulties begin as soon as one starts to define the area of law concerned. These difficulties are due to the fact that Law tends to have a minor role when the laws of the market (the economy), of nature (science) and of morals (ethics and religion) are in the limelight. They are also due to the very composite and heterogeneous nature of the areas of law which must act together. Concerning the conduct of legal research, then, the Lascaux programme had to adapt to these two difficulties which became apparent during the first few months of the research.

a) The first difficulty stems from the fact that legal research in the Lascaux programme, which encompasses legal issues which are not just technical but societal, is conducted with regard to socio-economic issues, and therefore concrete reality.

When the research is focused upon legal technicalities and positive law, the job of a legal professional is conventional by its very nature. For example when analysing forward contracts, public order, European food law, patent law, and so on. When analysing contracts used in forward markets in agricultural raw materials, the research remains the same whether drawing conclusions in favour of financiers, producers or consumers. The research investigates the nature of those contracts and the rules governing them. It is generally speaking a single-disciplinary task, dealing with the theory of music rather than the music itself, to draw an analogy. Such an approach is relatively 'neutral' in the sense that the value of the rule is not measured in the light of the material results which it produces. This work is important in identifying the legal causes of food insecurity, but is inadequate for identifying the legal means for remedying that insecurity.

Addressing a socio-economic problem from a legal perspective necessitates going beyond a purely technical approach. Take a problem such as studying from a legal point of view the causes of the "mad cow" disease scandal; the imbalance in North-South trade in agricultural produce; free trade and globalisation with regard to food security; or food crises in developing countries. In such cases, reality must be examined by means of legal knowledge and legal methods, in order to ascertain how the application of rules and regulations contributes to the shape of reality: for example, is a certain set of rules one of the causes of food crises, and what should those rules stipulate in order to improve people's food security? **A legal professional's work is thus focused on a reality which law helps to shape.** If volatile agri-product prices are socioeconomically detrimental, we may ask ourselves whether the system of forward contracts has something to do with it, and how these contracts should be regulated so that their detrimental effect is attenuated or eliminated. This approach is not at all 'neutral' since it identifies a social problem which the law contributes to. This results in a critical approach to the law. When he or she asks why nearly a billion people in the world are hungry, or how "mad cow" disease came about, the legal professional's work is not the same as when making a doctrinal analysis of an article of law.

This sort of research focused on reality has at least two methodological consequences.

The first consequence is that it is necessary to go beyond the academic research and work in the field, just as anthropologists do, and for the same reasons, especially since it is the only way to find out how law shapes practices – how it uses them or gets round them – to bring about food security or insecurity. That is the only way in which food security may be apprehended, in the manner of an ethnographer, as a "total social phenomenon" as Marcel Mauss put it in his Essay on the Gift (*Essai sur le don*), by seeking, as a legal professional, to discover what that total social phenomenon or situation communicates to the law and about the law. We now know that it is this change in mentality and method which makes the transition between labour law and trade-union law, between criminal law and criminology, between agricultural law and food security law.

Field-working is all the more important because such phenomena occur in the area of economic law and should therefore be subject to a "substantial analysis" as Gérard Farjat termed it, a concept since developed in the doctrine of economic law, where the Nice school [2] is a leading authority. Farjat's lesson is simple: seek out the realities, observe them, but be sure to go armed with a legal hypothesis. This concords, in terms of the needs of economic law, with what Carbonnier said of legal sociology right at the start of the first chapter of *Flexible droit*. For Farjat, the hypothesis we need "*is composed of substantial law*". Now the law concerning food security is complex, heterogeneous, multiple and diversified, and it is precisely realities which lend it some semblance of order and enable us to find ideological, theoretical or practical convergences. Even so, it is important to anticipate them and build the necessary concepts for addressing social problems.

Thus, food security, in a formal, classical legal analysis, is a complexity of realities (access to sufficient food, etc.). It is a tangible reality. But in a substantial analysis, this reality is seen as a legal concept. It is the aim of the human right to food. It is also the hub at which converge disparate rules which, originating in many different areas of law (land law, intellectual property, international trade law, etc.), make up a "law of food security". In this conception of economic law, the question is not to ascertain whether food security law exists as a particular, autonomous area of law. Its existence is a legal hypothesis which enables us to assess the degree of convergence of the disparate rules making up such a body of law. Seen from this angle, the *Legal Dictionary of Food Security in the World* is the result of substantial analysis which assesses this convergence from the standpoint of legal issues linked to food security.

The second methodological consequence is that it is pointless to try to apprehend the legal problems of food security by means of a single-disciplinary approach. In this regard, the Lascaux programme owes much to the work of Polanyi[3], Weber[4] and Ellul[5], and to the philosopher Jeanne

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[2] For this reason, from the start, the Lascaux programme worked in close collaboration with Laurence Boy, professor at the Law Faculty of Nice and general secretary of the International Association of Economic Law. She collaborated on the Lascaux programme right up to the last moments of her life, in February 2013.

[3] Particularly *La grande transformation*, Gallimard, 2009 and *La subsistance de l'Homme - La place de l'économie dans l'histoire et la société*, Flammarion, *Bibliothèque des savoirs*, 2011. Polanyi explains how land law and the phenomenon of enclosures led to the development of an industrial society and a job market, founded on three fictitious 'goods': nature, the workforce and money (*La grande transformation*, esp. chap. 7 on "the Speenhamland law"). Polanyi also played an important role in demonstrating the distinction between the two meanings of the concept of economy: formal economy and substantial economy (see esp. chap. 1 of *La subsistance de l'homme*).

Hersch. It also owes a lot to the other social sciences since the greatly differing degree of food security enjoyed by different peoples is closely linked to their history and geography.

b) The second difficulty, which is directly linked to the way the programme needed to be managed, concerns the fact that the Lascaux programme cuts across a large number of areas of law governing the production and sale of agricultural raw materials and foodstuffs:

For their production, land, water, inputs and money are all needed. So our research includes land law, the law pertaining to water, intellectual property law (with seeds, Proprietary Variety Protection certificates, biodiversity, and so on), environmental law (with chemical inputs, pesticides, fertilisers, etc.), international investment law (with land-grabbing, for example), rural law, public economic law, and so forth.

Concerning their sale, there are imports and exports, international trade, local and national trade, subsidies, etc. Thus our research is carried out in conjunction with international trade law, business law, public economic law, intellectual property law (with quality marks, brands, etc.), rural law, retail law, consumer law, etc.

In the area of interdisciplinary work, much needs to be done in the areas of contract law, the history of law (especially concerning property), comparative law, public international law, the law of Treaties, and so on.

Furthermore, attention must be turned to customary law in some regions of the world; the fact that in Africa it is often women who are the farmers while men are the landowners; the question of the status of agricultural labourers; the need to guarantee suitable food for children, for elderly people; food riots and the risk of civil war. In fact there is *a priori* no limit to the number of areas of law which may be concerned.

Given this complexity, the Lascaux programme did not set out to recognise the existence of a new area of law. It was necessary first of all to highlight convergences, over and above the vast number of rules to be harnessed in the service of world food security, by using reality to test the coherence of the law and lend it some semblance of order.

That is then what the Lascaux programme sought to shed light on, in its successive intellectual stages.

II. The stages

The Lascaux programme took as its starting-point the existing rules concerning the agri-food sector, be they general or specific, and analysed their pertinence, coherence and efficiency, and

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[4] Particularly *Economie et société* (Plon, 1971 / Agora, 1995) for the importance attached to values as the basis of law and for a non-dogmatic approach to the relationship between law and social practices. But Weber also showed that there is not only one model of law for regulating a free-market economy.

[5] Particularly for the analysis of the transition from capital to technology as a basis of power (see esp. *La technique*, Economica, 2008 and *Le bluff technologique*, Fayard, 2012), which is highly significant for agriculture and food as they rely more and more on technology.

modified them or drafted new ones. However, first it was necessary, by means of an epistemological approach, to detail and then work through the intellectual stages which would enable the transition from agricultural law to food law, from food law to agri-food law and finally from agri-food law to the law of food security.

a) The first stage leading from agricultural law to food law

Historically, socially, economically and legally speaking, what we now know as food law was long subsumed in national rural law. At that time, health issues were the prerogative of national jurisdictions. European food law originated with the "Cassis de Dijon" ruling, which laid down the principle of the equivalence of national food legislations. This ruling meant that every national jurisdiction acquired a Community-wide effect since the mere fact of complying with a given national law enabled a product to be legally offered for sale in the other EC states. However, although they had the same "Community value", the national legislations were very different from one another, so European food law was heterogeneous.

Consequently, in 1985 the Commission proposed a 'new approach'. This rethink led to the passing of the Single European Act in 1987 and the forming of a "single market". Between the signing of this Act and 1993, EC food legislation was backed up by a policy of harmonisation of the conditions of production, supply, control and importation of agricultural products. Food quality control and consumer protection were thus largely achieved through "agricultural" regulation.

However, two decisive events in 1996 came to seal the fate of this new approach. One was the dispute following the European ban on meat from the United States from animals bred with hormonal treatment. Europe lost this case when it came before the World Trade Organisation's dispute settlement body in 1998, because lawyers failed to justify the application of strict food safety regulations based on scientific data. The other was the "mad cow disease" crisis, which triggered a deep mistrust on the part of European consumers concerning food safety and quality, and an even greater mistrust of European institutions generally. In order to justify the application of strict food safety laws internationally and restore consumers' trust in the European project, it was necessary to make a radical change in policy and completely restructure European food legislation.

Thus from 1997 on the Commission was completely reorganised to separate its legislative, scientific and control functions, and food safety issues became the responsibility of the Directorate General for Health and Consumers, rather than that of the Directorate General for Agriculture. And in terms of processes, the Treaty of Amsterdam, which came into force on 1 May 1999, extended the procedure of collective decision-making, which had previously been restricted to measures aimed at building the internal market, to decisions "in the veterinary and plant health fields aimed directly at the protection of public health" (Art. 4-b).

In this new context then the European Union proceeded to overhaul its food legislation. Following a "green book" published in 1997 and a "white book" in 2000, the implementation of this new legislation began with the passing of EC regulation n° 178/2002 of the European Parliament and of the Council, of 28 January 2002, *laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety*. This reform, which came into force in January 2005, renewed the whole mechanism for legal regulation in the food sector. It did so in terms of institutions, processes and substance. In institutional terms, the European Food Safety Authority (EFSA) was created, responsible for assessing

risks and for scientific expertise in the European Union (Art. 22 to 49). In process terms, regulation 178/2002 created a rapid alert system and organised procedures for managing crises and emergencies (Art. 50 to 57).

But it is above all in terms of substance that the greatest change was wrought. The EU acquired a new food legislation which was complete, all-encompassing, unified and relying on regulations rather than directives, with a pyramid structure. At the apex of the pyramid is regulation 178/2002, creating its own hierarchy of standards, laying down general principles (explicitly – such as the precautionary principle, the principle of consulting citizens on food legislation, the principle of informing citizens and consumers about risks, the principle of risk analysis and the principle of protecting consumers' interests), general obligations (concerning imports, exports, international standards) and general requirements (concerning the safety of foodstuffs, the safety of animal feeds, traceability, the presentation of foodstuffs, the responsibilities of food business operators and States). Below this in the pyramid, the EU is gradually acquiring a set of implementing regulations – albeit small in number.

b) The second stage leading from food law to agri-food law

The new food law was applied to all foodstuffs whatever their origin, agricultural or industrial. Thus food law and rural law together led to the concept of "agri-food law", sourced from agricultural law and extended by food law.

In practice this approach meant that the same law was applied to two different types of protagonist each working under different constraints and subject to different sets of rules. For though food law applies to farmers as an extension of rural law, it also applies to many other operators to whom rural law does not apply: from small food retailers, through medium-sized businesses, up to the big multinational wholesalers and retailers, for whom food law must needs be an extension of *business* law.

However, rural law and business law have very different agendas, and these are often opposing ones: a social agenda for agriculture and a market-oriented agenda for industry and commerce. These two agendas are set against each other and come into conflict, and if no rules can be found to reconcile them, European subsidies play the part of the intermediary between the social nature of the first and the free-enterprise nature of the second. And for this reason, when such subsidies are ended or reduced, the conflict between the two agendas becomes evident: farmers are left without protection from industrialists and intermediaries who buy their produce at market prices, which are sometimes lower than what it costs them to produce. Strengthening and reorganising the industries concerned will not counter this difference in agenda, because the industries have little interest in reducing the effect of the difference in relative power, and their reorganisation does not effectively make for fairer profit margins for all the protagonists.

The conflict between these two agendas within "agri-food law" removes all homogeneity and coherence from this "area" of law. Their coexistence implies either the use of subsidies, as in Europe and the United States, or the implementing of other public policies such as the policy of supply management in Canada, that of price support in China, and the dual support of both smallholding and intensive industrial farming in Costa Rica. Nevertheless, the coexistence of agricultural law and industrial law is purely formal and does not lead to the creation of a substantial agri-food law capable of forming an autonomous area of law.

c) The third stage leading from agri-food law to food security law

Our journey finally leads us to “food security” and this concept is based on the concept of “security” which is well known to legal professionals, however the latter do not normally invoke it to guarantee sufficient food for everyone. The Lascaux programme chose to address the concept of food security, give it a legal dimension, and assess that dimension by using the method of substantial analysis.

Considering the objective of food security, we need at the very least a multiform law: a law of production and trade, a land law, a rural law, a business and consumer law, an environmental law, a health law, and so on. We need a law capable of dealing with normal situations as well as crises. We need a law which promotes the production of farm goods while conserving the available land and water in order to guarantee people’s food security and so guarantee the right to food for all.

This requires three concepts to be correlated: those of needs, rights and goods.

Firstly, food security is defined in terms of the satisfaction of people’s basic needs, in this case the need for food. All civilised societies recognise such needs, and although it may be argued scientifically or politically which human needs are basic, there should be no disagreement over the fact that the need for food is the one that the law should in no case neglect, since food is necessary for life.

These basic needs coincide with equally basic rights. In terms of food security, we can speak about the right to food, to water, to land, to decent means of subsistence, etc. That these basic rights exist is certain, and they are internationally recognised. However their role must be defined. One such definition might be ‘the means of implementing food security’. According to this definition, food security law would be nothing more than the implementation of basic rights. However, this would be a hasty definition since, as they are considered as essentially individual, basic rights are not adequate to deal with systemic problems such as those involved in food security. Defining food security in terms of basic rights does however present two major advantages. The first stems from the very aims of these rights which, beyond their intrinsically legal value, bear witness to the human and social values at the heart of our political and social organisations. And the second is the link which they enable us to make between basic needs and the resource-goods which aim to satisfy such needs and thus acquire specific qualities which call for a specific, appropriate set of laws.

In that case, following our hypothesis, should not these resource-goods also be considered basic, and therefore legally “special”? Here we cross over into very different territory. The recognition of the existence of basic goods would lead us inevitably to regard our relationship with the land and the resources it holds or produces in an entirely new light.

The question actually leads us to consider the wider issue of *commons*, and thence to a reflection on ownership and the monopoly status of an owner.

In reality, whether or not they are destined to be appropriated, the essential thing is to affirm that agricultural products are not goods like any others. As they are necessary for guaranteeing peoples’ food security, they could lead to the creation of a “food exception” which would be at least as legitimate as the cultural exception which exists in international trade. What is valid for the soul is surely valid for the body, and a measure which is considered important for preserving culture is surely even more necessary for saving lives!

When all is said and done, this is the object of the convergence which is found within the complex set of values which may be termed food security law: the triptych basic needs/basic rights/basic goods. And it is this triptych which is the thread running through the research work carried out by the Lascaux programme.

III - Results

Over 200 researchers contributed to the results of the research conducted in the Lascaux programme. They come from different Social Science disciplines and from every continent. The majority are legal professionals but very few are specialised in food security issues. They come from every branch of the law, with an open mind to the issues of food security.

a) The Lascaux programme aimed first to **analyse and publish existing European food law.**

The analysis and publication of this European food law[6] is first and foremost useful for firms involved in intra-European trade in food products. It is also useful for European trading partner countries to know the conditions of access to the European market for foodstuffs and animal feeds. Hence the drafting of a **code of European food law** bringing together texts with legal provisions and not only technical standards, including the relevant major legal precedents.

This Code of European Food law, which Lascaux has published in French, English, Spanish, Dutch, Chinese and Portuguese, is supplemented by various doctrinal articles and especially by three doctrinal works which are the result of doctoral theses. Two of these together cover European food law, one from the standpoint of production and the other from that of consumption. The third, in English, compares European food law with that of the United States and China. In this way, European food law has found its place in the libraries of Law Faculties in many parts of the world.

b) Regarding the building and publication of an agri-food law, the aim of the research was to enable the coherence of this law to be verified both in view of its publication and also in order to make it available for social debates on the subject of agriculture and food. However, as we have seen, the association of agricultural law and food law, as the name *agri-food law* implies, does not produce any clearly defined area of law from a doctrinal point of view because of their contradictory agendas. Each area which makes up agri-food law follows its own agenda and has its own coherence, whether it be rural law, economic law or consumer law. This was borne out by our findings in ***Aspects of competition and consumer law and agri-food law***, and also when we compared ***The production and sale of foodstuffs and market law***.

However, in approaching agri-food law from the substantial standpoint of food security, a set of areas of law is revealed which display at least some convergences, a set recognisable by the common, convergent effects they produce on the phenomenon of food security (or insecurity). This convergence is nevertheless relative and limited. It is distinguished above all by the fact that it raises a set of legal issues involving food security, which the Lascaux programme presented in the form of a ***Legal Dictionary of Food Security in the World***, published in three languages (English, French and Spanish). This work was prepared and written by various experts who explained and illustrated each of the broad aspects which go to make up food security law.

c) Regarding intellectual property rights, a work dealing with ***Legal Considerations of the promotion of Food and Agricultural Products*** illustrates one of the major issues concerning bilateral free trade treaties between countries and regions of the world. Economic development enables countries to sell and export goods with added value instead of raw products, and enhancing the

[6] International law is not included because in 2010 WTO itself published the applicable texts as a complete body of law: see World Trade Organisation, *The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts*, WTO Publications, 2010, 742 pages.

value of agricultural products is a major aspect, in particular, in the treaty signed by the European Union and central America, as well as in that signed with Canada. The most important Lascaux works in the area of intellectual property applied to agriculture, however, are the two theses ***Access to food and intellectual property rights*** and ***Industrial property rights in agri-food products***. The first shows how the rules concerning patents and proprietary plant varieties can be detrimental to food security, while the second demonstrates the negative interference between the law on brands and quality marks.

Concerning economic law, it was difficult to determine whether it constituted a factor of security or insecurity. In reality, it all depends on the power States have to intervene and the measures they are able to take. It also depends on whether it is indeed States which are best placed to act in favour of food security. The conclusion of the research here (***Economic Law and Food Security***) is that where food security is not achieved, its achievement depends on the possibility of implementing a public economic policy which aims in particular to ensure that at least part of a nation's production finds its way onto national markets, and WTO law formally forbids this by preventing States from imposing quantitative restrictions on either imports or exports. Food security also hinges on whether States have the means to implement social policies to satisfy the basic needs of their populations. And it further requires environmental policies enabling a country's natural resources to be preserved in order to ensure long-term food production capacity. Such policies are necessary not only in poor countries. They are just as necessary in developed countries – to wit, the generous subsidising of agriculture in Europe and the United States, or Canada's protectionist supply-management policy. Indeed the latter is very efficient: it ensures that national production goes to supply national markets while at the same time guaranteeing a decent income to producers (***From Sovereignty to Food Security***). However this policy – as well as EU subsidies – depends on the implementation of the free trade agreement between the European Union and Canada and the accompanying national measures.

It is the effects on food security of the speculative trade in agricultural raw products which are most disputed. Operators on the financial markets affirm that agricultural raw materials financial markets have no negative effect on the physical markets – they even have a favourable effect in the sense that they enable farmers to hedge against price volatility and uncertainties in production. But according to others, economists and legal professionals and also NGOs, speculative markets have a negative influence. A work dedicated to this issue, ***Law, economy and agricultural raw produce***, has helped at least to clarify the facts in this vital debate and proposed minimal measures to limit the possibility of negative effects.

d) The Lascaux programme also aimed to identify the non-commercial values which would enable different models for international trade in food and agriculture to be defined, models suited to different cultures and compatible with the different legal systems in force in the world. This was certainly the most tentative phase of our research programme.

For this we first had to determine common values which could be universally applied due to their association with the great international organisations such as the UN. Some of these values are vectored by the international concept of sustainable development; others are found within the concept of Human Rights.

From the Human Rights perspective, the analysis concerned those rights which promote values such as the right to food, to water, the right of indigenous populations to their lands and natural resources, and so on. These values, originating in the realm of Human Rights, are barely reflected at all in the rules of positive law, although the overall picture is not negative, as we were able to report when investigating the questions of access to land, water and food in ***From land to***

food, from values to law and from the standpoint of economic law in ***Basic rights, public order and economic freedoms***.

From the sustainable development perspective as it is applied in the agri-food sector, it must be said that the results of our research are more negative than positive. In reality, sustainable development is virtually absent from binding international law. One clear example of this is the difficulty in coordinating international negotiations. Thus in 2009 the fate of the world's natural resources hung on three international negotiations which directly or indirectly concerned food issues: the negotiation on the trade in agricultural products at the WTO in December 2009 in Geneva, the FAO negotiation on food security in November 2009 in Rome, and the negotiation on global warming in December 2009 in Copenhagen. These three negotiations in fact concerned economic issues (Geneva), environmental questions (Copenhagen / the IPCC) and social concerns (Rome / the FAO) – in other words, the three pillars of the concept of sustainable development. Crucially for this concept, these three pillars must be interlinked – and the three international negotiations patently disregarded this factor by mutually ignoring each other. The negotiations failed, and if they continue to ignore each other they will continue to fail. For it is impossible to reach agreement on limiting the causes of global warning unless agreement is also reached on the way the least developed countries can develop in order to feed their populations; and this in turn cannot be achieved if no agreement is reached on alternative modes for international trade in agricultural products. Ultimately, our research led to the understanding that, in order to resolve the issues of global warming, food insecurity and economic development, the implementation of sustainable development is not simply an objective we should try to achieve, but a prerequisite, a *sine qua non*.

No doubt the concept of sustainable development is indeed present in Europe. But it takes the form of a strategy implemented in compartmentalised policy areas, designed to motivate national and European law-makers. However, sustainable development only informs rural law or food law sporadically and in particular cases. This is the unambiguous conclusion of a collective work on ***European Union external relations law*** and also of a doctoral thesis on ***Sustainable development and the development of rural law***.

It is true that the focus is now on ecological, environmental and energy transitions, respectively. These transitions are really another form of the environmental aspirations vectored by sustainable development. The future will tell if social and environmental values find more fertile ground in this way.

e) The above research logically led us to **put forward proposals for legal models** capable on one hand of regulating the whole sector (production and trade) of food and agriculture products in order to improve food security, and on the other hand of encouraging the development of world agriculture. This entailed carrying out a prior diagnosis, since law is also part of the problem: if there is so much food insecurity in the world, both quantitatively and qualitatively, it is because law permits it, lets it occur or simply offers no provision. However, law is evidently also part of the solution, and it was thus appropriate, while identifying the legal problems to be faced, to draw up proposals aiming to make the necessary changes. It was therefore necessary to understand in what conditions law might contribute to preserving natural food resources, to achieving a fairer balance in international trade in agricultural raw materials, to the development of food and agriculture in Southern countries and to upholding the quality of food and nutrition for all populations. This led to the publication of two volumes entitled ***Imagining a food democracy***, which illustrate the diverse problems considered and reflections submitted by the network of 200 researchers from all continents who contributed to the Lascaux programme over a 5-year period.

Although most of our results concern doctrinal analyses of the problems and their possible solutions, some concrete proposals were made which could readily be implemented.

One of these proposals is to revisit the Havana Charter of 1948, which would have governed international trade, with special rules and exceptions to free trade for primary commodities, i.e. the products of agriculture, forestry, fishing and mining. This re-examination is accompanied by complementary proposals for enhanced legal regulation of the international speculation on such commodities.

Another proposal is for a legal system providing for a "food exception" on the model of the cultural exception enshrined in the 1995 Unesco Convention.

Yet another aims to provide a stricter legal framework for the contracts supporting international investments in agriculture made in developing countries by companies or countries in the richer parts of the world.

In the end, these three proposals bring us back to the basic needs/basic rights/basic goods triptych, by opening avenues to

- Protecting food needs by means of an exception

- Strengthening basic rights, starting with giving States the legal means to guarantee the right to food and food security on their territory

- Protecting basic goods, first and foremost of which are land and its resources.

The basic needs/basic rights/basic goods triptych is actually the main conclusion of the research work carried out in the Lascaux programme. The role of the law is to organise the correlation between the three in the service of food security internationally. It is this correlation – which is still very weak – that the Lascaux dictionary spells out in its international context, and it remains a fruitful area of research for legal professionals.

This work must now be pursued. After having examined the issues of food security in the interaction between international, continental and national law in the first phase (2009-2014), it is necessary to investigate how these issues play out in individual local communities. Taking examples from France and abroad, the research will investigate local experiments which implement innovative economic and legal models: public policies, enterprise projects, initiatives of groups and associations. Such "grass-roots" models aim in the same way to improve food security in their areas.