ABSTRACT
Nowadays, agriculture and food policies are trying to re-organise and re-shape production, processing and consumption of food in Europe. These regulations answer to different models and come from different regulatory actors, such as the State or the European Commission. They promote specific institutional frameworks that may support the creation of nested markets controlled by local communities or commodity markets controlled by agro-food empires. Our paper demonstrates that nested markets are the right response for market failures. They successfully support local food governance, and promote sustainable territorial development through the collective management of the common pool resource (CPRs).

We will explain and analyse the case of the Stichting Waddengroep or Waddengroup Foundation (WF) and the Echt Texels Lamsvlees project (Real Texel Lamb); a successful initiative for local food governance located in the Netherlands. The WF is an organisation that stands for economic sustainable development in the Wadden region, and they use their own label to support new nested markets for local products and services. The WF is an example of resistance against imperial dynamics. They managed to increase the quality of the local products and the added value through a negotiation process among actors within the supply chain. They also promoted self-regulation within the supply chain, which increase the autonomy of the actors and the stability of prices. Although our research is still going on, we would like to share some of our last findings.

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1 This research is the outcome of a project founded by the I+D program titled “La producción de calidad: nuevas estrategias rurales para nuevos consumidores” Ministry of Science and Innovation. I+D (CSO2010-22074-C03-01) and Talentia Program of the Andalusian Regional Government. These projects are implemented by TECUDE Research Group (P.A.I. SEJ-418)
1. INTRODUCTION

This research aims at studying practices of local food governance and their contribution to the sustainable development of the territory. Rural development is a highly controversial and contested concept, so we defend the easy but complex idea of rural development as the development of the rural (Ploeg and Marsden, 2008). The problem goes back to the old question of “what is the rural?” There are many different ways to approach this question, but not all of them provide a definition that will help us to accomplish the task of understanding the contribution of local food governance to the sustainable development of the territory. Hence, we define rural as “a place where the ongoing encounter, interaction and mutual transformation of man and the living nature is located” (Ibid, 2008).

This definition of “rural” underlines two important elements: society and nature. These two elements and their interrelations are the key for the idea of sustainable development. Society and living nature interact in particular forms (Marsden et al, 2001). The contribution of local initiatives to these particular forms of interaction is the central question in our framework. Two concepts are important to analyse that contribution: co-production and co-evolution (Ploeg, 1997). Co-production concerns the ongoing interaction and mutual change of human and living nature (Ploeg, 2008). It is the process where “living nature is used, reproduced and transformed into a rich variety of often highly contrasting expressions” (Ploeg and Marsden, 2008). Existing practices of rural economy, like farming, forestry, agro-tourism, hunting, cheese making, etc., are expressions of co-production. In the same way, it is expected that the social and the living nature co-evolved in a “specific, and often mutually reinforcing, way” (Ibid). However, some practices may change this co-evolution, and subdue living nature to society in such a way that the cycle of co-production is broken. This has been the case of the agro-food empires raised in the last decades. They change pattern of co-production and co-evolution of nature and society, disconnecting agriculture and food from the living nature (Ploeg, 2003).

Therefore, sustainable rural development are those practices and dynamics that preserve and enhance co-production and co-evolution of man and living nature in a given place (Ploeg and Marsden, 2008). Furthermore, in the case of the local food governance, sustainable development would be those practices that
enhance the creation of *nested markets* able to preserve and reproduce *common pool resources*\(^2\) (CPRs) (Ventura and Ploeg, 2010).

The notions of nested market and CPRs are based in Polanyi’s approach to economy as socially constructed realities embedded in specific sets of economic and no-economic institutions (1944). The concept of nested market links local food governance and territorial development (Shanin, 1973). They are defined as *places* where specific transactions take place between specific suppliers and specific consumers who are linked through specific networks (Polman *et al.*, 2010). However, the way this transaction are coordinated is a key issue. There are four types of coordination according to the Convention Theory (Vihinen and Kröger, 2008): Market coordination, industrial coordination, domestic coordination and civic coordination. We understand the last two types are suitable for promotion territorial development through local food governance.

2. METHODOLOGY

Nested markets are, at an analytical level, new *institutional agreements*. It means that they are new rules of the game between the different actors involved in producing, processing and consuming the products. The process of setting these rules is an exercise of re-thinking and re-designing the reality where the product is embedded. We approach them as instrument of territorial development because they allow actors (1) to market their products with a better position in the globalized economy, (2) to re-define farming and processing practices within the supply chain and reduce transaction cost, and (3) to preserve and reproduce their CPRs.

We chose an actor-oriented approach (Long, 2001) to study these processes in order to understand the complexity of the process from an internal point of view. We needed to understand the practices and sense given to them by the people involved in the project. Our research was divided into 3 different phases: documents and literature review, fieldwork, and data analysis. During fieldwork, quantitative and qualitative techniques were implemented in the observational unit (Error! Reference source not found.). Texel was chosen for two reasons:

\(^2\) For further and theoretical discussion of the CPRs concept see Ostrom, 1990. A theoretical and analytical discussion of the concept in relation to rural development can be found in Polman, *et al.* 2010
(1) the existence of local projects within the agro-food sector to respond to problems generated by global market dynamics, and (2) the explicit reference to the sustainable development of their community and territory in the projects.

Figure 1 Texel in the Netherlands

The first phase of the project identified 2 different groups of key actors: those involved in the supply chain (producers, processors and consumers), and the satellite actors (organizations that mediate, support or promote the project). A set of semi-structured interviews was carried among them using a snowball strategy with two starting lines: the farmers and the WF. The information obtained was continuously reviewed using external resources, such as newspapers, official documents, and other interviews. Group discussions and participant observation complemented the phase of data collection. Participant observation gave us a better insight perspective, and generated the necessary trust to obtain the information during the formal interviews. Group discussions (formal and informal) facilitated local actor interface.

3. THE WADDENGROUP FOUNDATION
In this part of the paper we will introduce a brief description of the Waddengroup Foundation (WF). Although they are not involved in the supply chain *per se*, they are the key actor in our case study. They mediated among the different parts of the supply chain in order to make the new agreements; which are the infrastructure of the nested market that support the premium price and reproduce the CPRs.

The WF was created by two organisations in 1996: *Sint Donatus Foundation*, an organic dairy farm founded in 1976 in Texel; and *Stichting Wraldfrucht*, a Frisian organisation for the promotion of organic growing, processing and marketing of fruit crops. The sustainable economic development of the Waddenregion is the main objective of the WF according to their statutes; and they achieve it by stimulating an environmental friendly agriculture, the processing of raw materials produced by the primary agricultural sector, and the promotion and sales of local products and services that accomplish two requirements:

a) They must be produced in the Waddenregion.

b) They have to be produced in a sustainable way, which must be certified by an independent certifier.

The internal structure of the WF includes a Supervisory Board, an Executive Board, and a group of technician contracted by the former. The members of the Supervisory Board are local people with good reputation and knowledge of the area, and they offer insight and advice to the Executive Board. The members of the Supervisory Board are volunteers, and have to ensure that the Executive Board follows the guidelines of the foundation. The Executive Board is responsible for the implementation of the strategies agreed within the foundation, the promotion of the foundation, and the financial support. They can be dismissed by the Supervisory Board, but only as a group, not individually. They contract the technicians that complement the team. The WF is certified by the *´Stichting Streekeigen Producten Nederland* (SPN) as certifier entity for regional products. In 2003 they created the label Wadden Goud (Wadden Gold).

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3 The Waddenregion is a heuristic territorial reference used by the organization. It is assumed that includes the Wadden Islands from The Netherlands to Denmark, the Wadden Sea, and 25 km of the mainland from the coastline.

4 The SPN was founded in 1999 by the WF together with several regional organisations for the certification and development of regional typical food products.
and they use it to certify those products and services that follow the philosophy of the foundation.

The island of Texel and the Texel sheep constitute the CPRs of this nested market. Texel is one of the Wadden Islands located on the northwest of the Wadden Sea in the Netherlands, and it belongs to the province of North Holland (Figure 1). The island is approximately 25 km in length and 9 km in width; and there are 13,600 inhabitants and 7 villages. The town-hall is situated in Den Burg, the biggest village with almost 7000 inhabitants. The landscape of the island is the outcome of co-evolution between the farmers and the clay soil that characterise the island. At the west coast of the island, we can find dunes, which were developed in the 17th century by the inhabitants. The dunes are a natural protection against the sea, and created possibilities for the gaining of new land. There are two polders in the northern part, which used to be small islands, but they were connected to the main island by building dikes around them. Texel thus has a wide variety of soil types, resulting in great mix of landscapes; dunes, beaches, forest, meadows and fields, with many possibilities for tourism and agriculture.

Figure 2 Barn of Sheep farmer
Many tourists from the Netherlands and Germany visit the island every year. 4 million overnight stays can be counted every year. Approximately 1 million people visit the island (including one day visits). Tourism accounts for 2000 jobs according to the VVV. They are divided in different places, such as camp sites, hotels and restaurants. Thus, tourism is the most important sector for generating jobs (seasonal as well) and profit for the island, and agriculture is the second. Livestock farming consists of (dairy) cattle, horses, goats, but mainly sheep. On Texel there are more sheep than people: around 30,000.

The Texel sheep is a famous breed. It is known for its high quality meat (Figure 3). The breed is the outcome of a cross between a Dutch breed called ‘Pijlstaarten’ and different British breeds. The loss of importance of wool due to synthetic textile industry reinforces the meat orientation of this breed during the last 20 years. Although this breed is worldwide available, the sheep born in the island have a distinctive flavour and texture. It is said that when the lamb is born and raised on Texel, local people describes it as ‘pré salé’, a French notion, meaning ‘pre salted’. This is a highly contested notion, however, some cooks say that it is impossible for meat to be pre salted, but people from the island disagree. Eating grass from the salty soil in combination with other traced elements may make changes in the structure and flavour of the meat. It may be
paradoxical, but lamb is not very important in the local cuisine. Indeed, the tourist and the mainland are the consumers of this delicatessen.

5. THE TEXEL LAMVLESS, AN EXAMPLE OF NESTED MARKET
In the 1979 Sint Donatus and other local actors created the Verening van Echte Texelse Producten (Association for real Texel products) (VETP), the objective of the project was to differentiate the products that were really from the island from the rest. Tourism was already important in those years, but the main profit was usually going with the boat instead of remaining in the island. This initiative proves the local awareness about the loose of potential added value for the local economy has a long trajectory, so does the attempts for internal organisation of the local market. Nowadays, the VETP accounts for 45 local products and services certified, although they have not been certified by the SPN yet.

The Echt Texels Lamvless was institutionalised in the first years of this decade, but at the end of the 90s there was already an informal supply chain in the island for this product. However, not much added value was created within. At the beginning of 2000 the VETP ask Marc van Rijselberghe (from the WF) for help to formalise this supply chain and create added value for the actors involved.

The WF worked simultaneously with two lines, they apply for subsidies to the Local Action Group, and start to meet with each group of the supply chain to unfold the rules and agreements that will guide each step. 12 farmers join the first round of meetings and design the rules that will have to be follow in order to join the initiative. Later they were passed to the slaughterhouse, the butchers, and some restaurant. They were allowed to ask for changes and discuss them once again. Both lines of work produced the right outcome, and eventually, they manage to obtain financial support and defined a code of practice that satisfied everyone (Figure 4). This process took two years, and the transaction costs were assumed by the WF. Several organisations and associations were contacted at the local, regional and national level for support and advice. Although most of them could not do much for the project, they became an informal network for further collaboration and co-operation.
Figure 4: Texel lamvless code of practices

- The lambs should be born on Texel, and live their whole life on the island. The father should be a pure breed Texel sheep;
- Fodder should be from the island (e.g. grass and maize), extra feeding with products that can add an extra flavour to the meat, e.g. onions or flower bulbs, is forbidden;
- Medicine and hormone use according to EKO guidelines;
- Lambs are in the field for at least 100 days, when the weather conditions allow it, but anyway between 1 May and 1 October. In the stables, lambs should live in a group, having enough space, day light, fresh air and water;
- Transport of the animals according to legal guidelines and only from and to producers which are certified and thus part of the ‘Real Texel Lamb’ network;
- EKO/Milieukeur guidelines apply to the use of pesticides;
- Bird nest protection and dry manure instead of slurry in favour of the birds as well.

The present landscape elements have to be preserved (e.g. schapenboeten and tuinwallen);
- The farm has to look tidy and clean;
- Slaughtering and processing takes place on Texel. The meat has to be marked, to be recognisable as ‘Real Texel Lamb’. All involved businesses have to be HACCP certified.

Nowadays, the project includes 29 farms, one slaughterhouse, one trader, two butchers, 6 butcher shops and 36 restaurants (Figure 5). Every year more than 3000 lambs pass through the supply chain, and the added value in comparison with the local lambs that are not included in this chain is more than 15% in each stage. It is also important to underline that the fluctuation of the price is lower than the conventional price. The stability of the supply chain is related to its shortness and to the weekly routine of the exchanges. This last part is a key factor for the management of the CPRs, every Monday and Wednesday the trader visits the farms to collect the lamb that the restaurants and shops need. The following morning they are taken to the slaughterhouse and then to the local butcher. Although the cost of slaughtering in the island is higher than in the main land, it is compensate by the cost reduction in transportation and transaction cost.
This supply chain is more efficient than conventional supply chains, and the amount of wasted meat is almost non-existent. In contrast with the conventional supply chain, the lambs are selected by the trader among the herd available in the farms every week (Figure 6).

Figure 5 the socio-material infrastructure of the nested market

Figure 6 selecting the right lamb
When the trader arrive to the farm there is a pre-selection of lambs that are ready, and the trader takes only those who are at the right moment for slaughtering. The skills of the trader are very important in this process. He has to touch and feel in his hands the meat under the wool. In contrast with the conventional supply chain, there is not feeding place for the lambs before the slaughterhouse, they go straight from the field.

When the system works for a while, practices become institutionalised and positive outcomes start to rise within the nested market. The added value is one of them, and soon or later it becomes a temptation for other local actors. They may try to get advance of the reputation that the CPRs achieved, and that is when labels and certifications become necessaries. There is lack of strong regulations against this kind of “fake” replications in the Netherlands; which makes necessary that the actors involved in the project make visible the boundaries of the nested market by themselves. The WF plays a very important role in this task. Each actor of the supply chain is certified by the WF as part of the *Echt Texels Lamvlees*, and devices such as flags, plates or diplomas identify them as part of the project (Figure 7). In this way, the nested market became visible for consumers.

![Certificates and plates from the WF](image)

*Figure 7 Certificates and plates from the WF*

Source: own design
We found that the supply chain goes further than the material exchange of goods; there is a triple complex process of exchange (Figure 8). One level of exchange is the material one, where resources as meat and money move from one side to the other between the three stages. Then, overlaying this one we find an exchange of meanings over quality, where definitions and expectations move as information between the different actors. The last level of exchange is symbolic, and it is the source of added value for this case. Texel is a tourist area, a place where people travel to enjoy and have fun with the family. Therefore, all these memories and experiences are consumed together with the material reality of the lamb. The existence of these three levels differentiates nested market from commodity markets, and also gives them qualities that the other ones cannot achieve. For example, the exchange of meanings for quality increases the adaptability of the system, and facilitates the re-definition of practices according to expectations. The information moves fast within the supply chain, and also the regulatory actor (WF) is in continuous contact with each part of the chain in case that anyone has a problem.

Figure 8 Multi-tiered processes of exchange

Source: own design
6. PRELIMINARY CONCLUSIONS

Our research demonstrates the existence of local initiatives that try to re-organise and re-shape the way food is produced, processed and consumed across Europe. These initiatives try to re-embed these processes within society and nature through the re-negotiation of practices and meanings. However, they need specific sets of rules and relationships to make a positive contribution to the sustainable development of their territory.

Local food governance is becoming a very important issue for the society as a whole and for rural communities in particular. Therefore, further research is necessary in order to design new policies able to support initiatives that try to re-embed commoditized markets within localised nested markets. At the same time, the overlaying of commodity and nested markets is another issue that need to be study to understand how local actors use them to market their products.

We found that concepts as the CPRs and nested markets can help us to understand how private partners can reproduce collective goods, such as landscapes or animal breeds. We need to focus in governance practices in order to unfold a better theory about the adequate way to maintain both, co-production and co-evolution, so rural economies can develop in a sustainable path.

We also found that self-regulation can be successful for local food governance, but no any kind of coordination. It is important to promote civic and domestic modes of coordination, because embedded markets can unfold from them. Furthermore, it is necessary to analyse how these modes of coordination link rural and urban communities in a material and symbolic way. In the case of the Texel lamb, we have underlined the importance of the tourist sector for this nested market. The tourists are the majority of the consumers of the embedded product that is the Texel lamb. They eat it when they are on holidays, and thanks to the use of internet, they also consume it when they are at home.

In summary, there are very important issues within local food governance, and many dichotomies to overcome. We found that local actors are re-embedding food within specific social and natural realities as a strategy for territorial development in Texel and other parts of Europe. We see how these practices are supporting the reproduction of CPRs without generating dependency on
government subsidies. Indeed, they can generate autonomy from food empires for farmers and other rural actors. However, it must be said that this strategy may not be suitable for every rural area within Europe.

BIBLIOGRAPHY
