The theme of food security is at the center of many discussions about the future of humanity, be able to guarantee it permanently is one of the greatest challenges that the world faces today, on a global scale. Looking at the different structures of the territories, there are many food chain that can converge synergistically within food systems geographically contiguous and therefore local. The approach proposed is based on these local food systems because, if correctly planned, can produce a territorial added value, interconnecting each other services, economic aspects, social and environmental implications. These planning processes are designed for the framework in which the local food system operates, going to affect the places of production, analyzing the relation between the production units to observe where the system already produces added value and where it's currently absent, and potentially able to grow. The planning process is made in each place through the participatory production of analytical, interpretative and design maps that, at the end of the process, merge into an unique scenario of territorial changes made interactively with local actors. The scenario will highlight the priorities and, on this basis, the local declination of responsible investment.

At the end of the planning the food system will be governed by a new governance, produced by the relationships that will be established between the local institutions, farmers, food entrepreneurs, economic and social actors, through access and the strategic use of information and knowledge, improving decision-making process and negotiation with the most vulnerable actors to ensure their active participation in the governance of the local food system.

This methodology also contributes to entrench a strong local competitiveness, functional to make food production sustainable and resilient, while reducing inequality, improve local development and ensuring food security, in a perspective of growing the territorial heritage.

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KEYWORDS
responsible agricultural investment, governance, territorial approach, food value chain, local food system, territorial value, strategic scenario,

ABSTRACT
1 ESTà is a non profit association that works to promote the culture of a socially and environmentally sustainable economy. ESTà collaborates with institutions, as well as social and economic actors by providing strategic support, researches, training, coaching, communication and networking services. ESTà operates with a local approach to development and sustainability, supporting small communities as well as international organizations and institutions.
Introduction
The theme of food security is at the center of many discussions about the future of humanity: being able to guarantee it permanently is one of the greatest challenges that the world faces today on a global scale. The intricate network of factors requires a new multidisciplinary and integrated governance, that the international community has identified in the CFS Committee on World Food Security. This multilateral platform has recognized the importance of finance, besides globalization, for responsible agricultural investments.
If the debate is crushed to the big players, a serious interpretation of the global food system has revealed that 85% of farms is small in size, promoting the local approach to strategic centrality. This approach is organized at the territorial level through coherent planning processes, which are articulated on food value chains planning, able to define an overall scenario for declining locally the responsible agriculture investment and ensuring locally the food security.

The approach here proposed is based on a planning methodology, already tested in other disciplinary settings, having the aim to bring out the local food value chains, interconnecting with each other the available resources, in order to produce territorial added value. This process will be the result of a path that will strengthen a territorial governance and outline a strategic scenario of transformations to be implemented, in a perspective of economic development and towards the creation of a local food system.

The methodology consists of four stages, leading and consequential, each of which is based on the use of specific instruments to structure their content. This approach was developed in Italy into different processes of territorial planning and was revived in some areas of the Hispaniola island in Haiti and the Dominican Republic in a set of international cooperation activities, aimed to increase the food security levels. This experience took place in the developing countries of the Caribbean, but the importance of the dynamics on the ground means that it can be adequately reproduced in other geographical contexts.

The creation of local food systems is a process of interaction between local and regional actors in which each food value chain is a component of the system, this approach depends on territorial, environmental, and social dynamics. These systems are designed and governed by a "territorial board" which is responsible for identifying, organizing and strengthening the food value chains, to facilitate the definition of a development plan, in which to identify local development goals and run their process implementation. This is done in order to improve and increase the type, quantity and quality of local products and the related market channels (local, national and international). To ensure their sustainability, this process should be carried out/run by the various institutional levels in their respective planning and related policies. This task is facilitated by the role of the territorial board which should already include the institutional actors.

To realize the above objectives, technical tools for designers and public makers are needed in order to create a concrete development process, aimed at defining the local food system. The territorial approach can not disregard the mobilization of a plurality of actors who, through paths of participation and institutional consultation, can contribute to define together a common scenario at the base of the local investment, This scenario aims to consolidate production and consumption food systems as much as possible based on local cycles.

1. Preliminary phase
The preliminary stage is is the first step of the methodology and therefore of interaction with local actors in order to design a territorial board able to lead the process. The term "board" is defined in different ways depending on the customs of different countries, it is a concertative table, able to assume the leadership of local food system. In the Anglo-Saxon context these territorial boards take the name of "Food Council", in the Mediterranean countries of "Productive Districts", in Latin America "Local Economics Development Agencies". Obviously each of these definitions responds to specific and different needs, but the goals are in line with territorial board, that is a space where to compare and launch the local initiatives to enhance the local resources (environmental, social, business, institutional, etc...).
This projectuality can be retrieved by promoting a **territorial board** able to build various institutional actions and public-private agreements within a **single development platform**. A serious interaction between the actors will also defuse potential phenomena of micro conflict between the various actors in order to build common ground before the work starts. In different contexts, there are various elements and players on which to build this structure, the starting point being the identification of the institutional set up to **catalyze consensus and share the intent** necessary to implement the board. The goal of development policy is not just the content of actions put in place, but is also the building and consolidation of this **structure**. This platform could be a strong producers cooperative or a local development agency, in the absence of specific institutional capacity, or alongside the institutions, the territorial board can be identified also by strengthening the connections between local actors, in some cases is a local organization or a municipality, or a regional government.

Once the promoter has been identified as responsible for initiating the process, an intense work of **weaving the network of actors is needed**. This is a map of many voices of the problems and resources of the territorial context in order to draw together a package of answers: an **atlas of the territory and its communities**. A participatory mapping of the territory represents a first basis for understanding the complexity of the relationships between the various actors, active in the field. These applications, tested in different contexts (national and international), often prove as a great attraction for the people, decision makers and technicians involved and can be composed of the following elements: conceptual map of the institutions and relations with the context; policies already in the field and lessons learned from them; social system of associations and organizations operating in different sectors (education, health, emergency, cultural, environmental, etc ...); economic system of companies and enterprises, listing products and knowledge acquired; system of settlements with zoning to understand the complexity of the elements, positive and negative, that insist on the territory in question.

These elements, once **mapped**, should also show the relationship existing between them. This map is a **flexible and continuously upgradeable tool**, available to the territorial board to identify the various actors who participate, assign functions, support the overall framework of relations. The mapping will catalyze, in the board, a group of local actors able to impact on their territory and able to **design and address** the development of food policies at the territorial level towards **converging goals**.

For a proper monitoring of the territorial board, it could be useful to produce a **short document** containing the mapping of the actors and the methodology of implementation step by step.

In this manner, through concertation and design meetings, a public-private **platform to design and develop food strategies** will be built and consolidated, serving as board of local ad regional scale and interpreting the fundamental roles, such as:

1. **supporting actors who intend design development schemes**, providing them appropriate technical support to integrate their activities in more comprehensive planning framework;
2. **designing the territorial board**, also using institutional tools to bring together in the territory public-private investments and create local structures to support the same board.
3. Ensuring adequate **support for negotiations with other big players**, which often can not be intercepted by individual actors as municipalities, national associations, cooperatives sector, large public and private companies, logistics operators, universities and research centers, banks, other institutions, etc...
4. Monitoring implementation of policies designed by the **monitoring system** that allows to recalibrate and redirect activities during construction as not to miss their goals;
5. Identifying and integrating other element in the **local food system**, food value chains and services that may be involved and address issues;
6. Activating the **resources and expertise of sectoral policies already active** in the territory, coordinating institutions variously involved;
7. involving business activities, financial and banking to **turn and address the resources available** or potentially interested in creating development to convey them and make them work together in an integrated way as resources for the incubation of enterprise, national funding, the funds of the regular budgets, and also the attraction of private investment capital; 

8. creating the conditions for **dialogue and public debate** on local development issues with focus on food.

The result of the territorial board must be the **design and implementation of an overall design of context** involved in which to plan investment and generating from them the greatest possible impact in other sectors. More generally, the territorial board must work for **greater integration and cohesion** of the territories in order to counter the **fragmentation of the shares**.

An **unitary board of actors, funding and policies** that, in addition to interpret the roles mentioned above, aims specifically the construction and consolidation of relations around the subject driving, is able to create autonomous public and private which can compete other actors.

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**Image 11 Map of the local actors and their relation. Project of international cooperation in Dominican Republic and Haiti, 2012.**

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2. **Analytical phase**

The second phase consists of collecting and organize a **set of information** to identify the current state of the food value chains and the local food system, for defining its different components. The tools produced will need after, during the interaction with local actors, to show them the set of factors in field and the goodness of the interaction process itself. We refer mainly to the **cartographic analytical**, since this type of representation immediately evokes a **holistic understanding** which is difficult to acquired through reading of databases and reports.
The maps will be produced through the acquisition of information contained in the database of the Spatial Data Infrastructure (SDI), from which to derive the shapefiles necessary to build mapping using GIS software. These tools allow to perform a set of readings designed at highlighting the different systemic components of the territory and of the different food value chains.

This will produce a systemic framework of territorial structure. Representing all this is not an empty exercise of style, but it will allow actors to gain a greater awareness of local relations between the following elements, which need to be geo-referenced: residential assets; manufacturing facilities, commercial and craft, systems for public and private services, infrastructure, wooded areas, grassland, vegetation areas, water system, areas protected, agricultural land use and main productions.

Such a complex cartography, in addition to share a common vision of territorial assets and common goods, will be used as cognitive support to interact and get involved with other non-local stakeholder. Introducing the territorial board with a map will thus acquire greater authority as actor conscious of the local context.

The tools for map production are now diffused in each context and there are national structures active on the systematization of geographic data. However, this kind of tools can return us only a general overview of the territorial context. Therefore, it appears necessary to develop a further data collection process, by local producers involved in the food value chain. This can be done through interviews facilitated by a georeferenced questionnaire, focused on issues of quantity and quality. In this way the actors of the food value chain such as as producers, processors, traders and logistics operators, will be the central players in the process of reconfiguration of the local food system dynamics.

The objective of this stage is to reconstruct all the passages of the production chain. The collection of information will therefore be directed to the realization of this set of data. A tool that responds well to this need is the questionnaire, which should include specific questions in order to:

1. estimate the importance of the food value chain in the social context, considering the amount of employees, their age and gender, as well as the impact from the families who derive income from activities associated with the food value chain. Ultimately it should be checked if this activity is the main source of income of their family;
2. understand the production and marketing system, considering the amount of farms and farmers and their distribution in the territory, the amount of product annually produced, the presence of negative elements such as parasites or recurrent problems, the sales channels used or the intermediaries of transformers;
3. estimate the impact of the chain in the environmental context, assessing the relations established between the food production and the environmental implications related;
4. understand the needs perceived by the producers, considering the problems both personally encountered in their activities and perceived as members of a food system.

This toll will be useful to gain an overview of the local food system and of the different food value chain. The structure of these questionnaires is designed to facilitate an exchange of information, potentially geo-referenced so optimal for cartographers, because we consider that individual producers and actors of the value chain are repositories of knowledge in the various setting of inquiry. It's believed that each actor is a bearer of knowledge, organizational, economic, historical and cultural resources, all key elements to consider when interpreting territory. The direct interaction with producers is functional to prevent and correct the risk of self-exclusion, which is the condition under which many local actors overestimate the technical skills that are not really required and, according to this opinion, does not consider it appropriate to participate in the discussion and comparison with the institutional actors.

The subministration of these questionnaires, whose contents will be discussed and negotiated within the territorial board, will be through direct talks between the project staff and each actor selected. This tool also allows you to establish a more direct relationship and trust among the designer, territorial board and all local stakeholders involved.

The results of this investigation will thus be systematized through shapefiles necessary for the production of maps, developed through GIS software. This operating mode allows a constant update, being the shapefiles not static tools but letting the revision of data contained therein, and this is crucial for the monitoring of activities.

The results of the questionnaires will then be collected in a special mapping tool able to collect quantitative data and territorial through the placement of the activities of individual producers and by lines and arrows showing the relations established among them. These thematizations appear extremely interesting as allow to understand the current state of the food value chain in the local food system, for the project staff and local actors.

This analysis should be extended to all local food productions as the territorial approach considers the territory as the set of all relationships acting on it, it will produce an analytical corpus, functional to design and interpretation of the local food system in its complexity. In general terms the objective underlying development of analytical maps is basically to describe the territorial system and the food value chain, highlighting the constituent parts, focusing on the aspects that will treat during the interaction with the actors, to interpret the context, and planning the changes.
Image 3 Analytical map on production system of food value chain. Project of international cooperation in Dominican Republic and Haiti, 2012.

Image 4 Analytical map on environmental system of food value chain. Project of international cooperation in Dominican Republic and Haiti, 2012.
3. Interpretative phase

Studying a food value chain means to decode its various components, to identify the structural codes in order to produce added value. The interpretation needs to highlight the potential and the real problems encountered, or the constituent elements of the chain, to enable the next phase of interaction for increasing the quality of the relationships among the various steps of the chain. At this stage aspects that base the designing part start to emerge. This operation is linked from the need to identify the different features and problems, for defining a first set of addresses aimed at enhancing the quality and containing the negative phenomena.

At this stage it will be useful to develop a final process of interaction and participation made up of a series of meetings extended to different stakeholder. The interaction will be a discussion of the materials produced, the aim being to persuade the actors of the goodness of the process also in order to assume the commitments later.

The interpretation phase is, in synthesis, a kind of "black box" in which to develop, through the design creativity, a complete framework of the factors in field to integrate each other.

4. Project Phase

The outcomes of the interaction with local actors and their interpretation have been considered as the starting point of the design moment, aimed at defining the strategic scenario of the food value chain in the local food system. The planning framework will be based on trends and potential previously observed by prioritizing toward a scenario imagined, considering the consequences of various actions in the overall system.

Designing means setting goals in a holistic system, indicating means, resources, tools and actions to achieve them in the medium and long term. A similar process does not eliminate the uncertainties about the future, as it acts on a set of significant factors independent of local actions. However, the presence of a scenario shared between the stakeholder and ad influential territorial board, allows the food value chain to ensure sustainability and resilience, making production processes more coordinated and rational.

Today we see many processes based on the acquisition of greater awareness of the actions on the territory. Often these practices are abandoned once reach the goal, this should rather be referred to a constant evolution towards a global effort and local responsibility. From this effort can derive the acceptance on a personal responsibility for individual actors, addressed in a coherent development of its territory.

The main tool of the design phase is the scenario of transformation that consists of a mapping tool to allow a systemic understanding of all actions that complement each other in the process of development of the local food system. The representation of this tool must be oriented towards a universal visual language directed to the best aesthetic quality of communication. The graphics will therefore be intuitively understandable paying attention to individual signs design. This in order to facilitate the use and understanding, that the targets contained herein may be converted into concrete and effective actions the constitution of the design of food value chain.

The horizon of the scenario is likely to set of a new territorial and food system order as represented all the processes of territorial transformation and therefore is a good tool to identify local investment.
The implementation of development strategies in the scenario will not happen only at the central level but will be shared between all players in field and it is necessary to define a mandate for territorial board will thus have a new function, the declination at the local level of the investments necessary to implement the process of change. At this stage the local actors of the territorial board starts to implement autonomously a **process of advocacy among all stakeholders** (institutional, public and private) to plan and set the priorities to local actions.

This tool brings with it instances referred to a socio-economic dimension and a territorial dimension. The scenario planning should be described on the basis of a double articulation that transcribes firstly the deepening socio-economic organization of the local food system, the other on territorial dynamics that should transform to grow the food system and create that territorial added value.

**Socio-economic dynamics**

The socio-economic organization in the value chain is essential because in his presence creates virtuous mechanism that underlies the approach. It can be summarized in four pillars defined as follows:

1. **Consolidation of territorial board** able of representing the instances of all producers, is the place where decisions are made for the entire value chain and food system.
2. **Improvement of technical skills** through courses aimed at normalizing food productions, also in a qualifying certification.
3. **Tools and infrastructure** for the farmers and all the actors of food value chain.
4. **Access to markets** for the commercialization of the food product.

A food chain is based on the relations among the local actors, and they must be aware of the role assigned to them. The territorial board will be crucial, not only to **founding the process** of food value chain, but also for its **resilience**. It will be the basis of strengthening local stakeholder, will continue to serve as a board of the territorial competent. It will be the interface among local actors and big player, national or global, from institutions to other organizations, for market channels of local, national and international level. Should be implemented a **training process** to form individual producers and normalize production techniques, also with a view to obtaining certifications qualifying. Parallel to this individual action, the food value chain need of a series of **collective infrastructures** aimed at making more efficient the chain itself, the aim is to reduce costs and **compartecipare development** of the territory. Last aspect will be commercialization through access to markets at local national and international scale, the territorial board will produce a **marketing plan** will have to shoulder a food system structured and resilient, able to produce food locally and close the production cycle, generating good results in the territory in which it is inserted.

**Territorial dynamics**

All the needs identified during the analysis and then interpreted in the interaction with the actors in field have allowed the designer to build a **holistic picture of local situations**. They will be represented in a holistic manner in a cartography able to find solution to the critical and greatly empowering the resources available. Each territorial transformation introduced must be well specified in a legend and self-explanatory, if you need further study, within a document attached aimed at detailing specifically what has been entered into the map.

Following the path of interpretation to interpret the complex relations in field, the potential and critical issues deriving from skills of the actors, it is necessary to **identify a design response** can respond coherently to the reading of the area conducted so far.
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