

## **Socio-Agricultural Bridging Park: A Conceptual Urban Project in Suburban Area**

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### **Abstract**

Suburban development in large urban region of Europe, North America and Asia continues to erode forest and farm, disrupt hydrological patterns, and weaken the overall ecological integrity of the region. Fragmented landscapes and equally fragmented communities isolate citizens from nature as well as from one another. Alternative design approaches and models for creating sustainable communities are urgently required to address these problems. This paper presents one such conceptual ecological project model, named Socio-Agricultural Bridging Park (SABP) using criteria developed from a wide range of exemplary sustainable community approaches employed over the world. The basic of this project concept is to ascertain a high level of sustainability and to improve a community's sense of the civic and sense of place. As a part of the study, a suburban area of the city of Milan was selected. In this paper, a local problem of a Suburban area Municipality (Municipality of Settimo Milanese) is addressed and the concept of SABP is approached to solve the problem of fragmented suburban area. The project concept is also linked with the global event world expo-2015 as Milan will host the event.

### **Introduction**

In the process of urbanization, the fringe area falls under pressure of development and there arise the potentiality to abolish the identity of rural area. The area under this identity crisis is known as periurban area on the edge of the city. An effective system of urban and periurban area can play a vital role in alleviating food insecurity and enhancing the nutritional status of urban poor and marginalized people (Drescher and Iaquina, 1999). Besides, the urban, rural and periurban areas should be considered as a system and this system should be linked with the urban planning and rural development activities (David L. et.al, 2000). But the activities or interventions in one arena have consequences in the other, often negative. On the other hand, creative policies can turn liabilities into resources and bridge the rural urban divide. There is an increasing perception that rural, periurban and urban environments operate as a system rather than independently and that rural development and urban planning are necessarily linked activities. In this study, the rural urban division and their role to a specific global event as a system were analyzed through a conceptual project to ascertain a high level of sustainability and to improve a community's sense of the civic and sense of place as a part of comprehensive development theme for Milan prior to the global event of Expo-2015.

Milan is going to be the host of world expo-2015 with a global theme "Feeding the planet energy for Life". On this issue, the Italian government introduced in its budget and economic forecasts a package of financial support amounting to Euro 1.4 billion out of Euro 3.2 billion total investment (Expo Milano-2015, Seminar 4-5Feb, 08). Global event can usually be seen as a contribution to urban development. City sanitation, city improving infrastructure, city enhancement and city transformation are examples where an event can be used to reach these goals (Vrijaldanhoven,

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2007). Considering the dimension and extension of expo-2015, it has a far reaching impact on the total city system during and after the 6 months period of expo. In this context, the Milan is now preparing itself considering different dimensions of city development and planning focusing especially to its periurban area. But the development in suburban or periurban area results as the abolition of the countryside. Julliard (1973) argues that the urbanization of the countryside can be interpreted either as the obliteration of the countryside or as the cooperation of rural and urban inhabitants, resulting in the disappearance of the town/country dichotomy. On the other hand the periurban environments are dynamic and complex, where social forms and arrangements are created, modified and discarded due to its proximity to a central place, community size, population density, total population and economic and socio-economic factors (Hewitt, Marla, 1989). In such a context, the study objective was to develop a design concept that will not promote urban rural dichotomy only, but will comprise a good development component in relation with the Global Event World Expo-2015.

### **Study Area and Dimension of Problem**

The municipality of Settimo Milanese, Milan was selected for study purpose as it is a strategic area, for its proximity to the New Fair place (Rho-Pero) of the future Expo 2015 site and for the future stop of the T.A.V. (Treni ad alta velocità, High Speed Trains). The municipality of Settimo Milanese is located about 9 km west of Milan, which is separated from the west bypass of Milan. This city has a variety of resources (planning resources, availability of open spaces,) that can be activated, in order to enhance the level of the life for the inhabitants.

A very local problem of Settimo Milanese that came in the front at the beginning is to develop the design concept that can meet the study objective. The problem is about the existing location of five farm houses inside the city. The Mayor of Municipality of Settimo Milanese identified this problem, and discussed the issue in a number of meetings with the farmers to reach an understanding of the ways for solution. Finally based on this local issue and solution, a scale up concept and programme was developed. Considering the local and global context some general factors were synthesized in case of the farmers. The farmers are facing difficult time or different forces to possess affordable land especially near the metropolitan area. Urbanization brings land use conflicts; and regulatory uncertainty creates the impermanency in the agricultural activities of the edge of the city. At the same time, the urban area is coping with the diet and exercise related health problems. A dearth of fresh food shortage in low income communities and insufficient access in parks and open space contributes to social ills. In such a context, generation of urban project in periurban area focusing on the dichotomy of urban and rural area was the prime concern of the study. The realization of World Expo-2015 become as an additional force to confront the study objectives.

### **Methodology**

To formulate the project concept different issues of the subject area were synthesized in two contextual levels: one is local context and another one is global context. Besides, the methodological characteristics of this conceptual project involved literature searches, site visits and documentation, and interviews with stakeholders involved in the projects. In the local context, the identified and visual problems were the primary step to formulate the project concept and programme. Other factors related to alternative farming practices were reviewed as case studies such as the energy efficient farm of Missouri, Minnesota and Florida, USA; Educational Farm: Fairview Garden of Goleta, California, Agricultural Tourism Park and Interpretive park programme of Fremont, California. In the global context, the dimensions of the programme and project formulation are centralized as the issue of the upcoming Expo-2015. The goal is fixed up to stand the programme to a standard from where the theme of Expo-2015 can get some indication about the effort to be a model to the international community. In this methodological approach, the generated project concept is "The socio Agricultural Bridging Park". The concept stems from

the simple idea to create a common ground for the farmers and to make a link with the society to give the area a live environment. Under this concept, the programs with different dimensions are fixed up. The dimensions, programmes and features of the conceptual project are discussed here.

**Socio-Agricultural:** In the concept, the term socio-agriculture stands as combined activities of society by which society itself acts as the promoter of agricultural activities. The idea is to form a community of the farmers and creates a linkage with the rest of the society of urban areas through some mass-oriented programmes. The emphasis is given on agricultural practices considering social importance by promoting educational, recreational functions within the area.

**Bridging Park:** The park stands for a place, where it accommodates small firms, public areas and natural habitat to support fresh food, education, environmental and aesthetic amenity for nearby communities. So it is a concept of making a relation to the rest of the communities as a place for supporting the urban activities. It is a concept to hold the identity of the existing farms on a regular basis and facilitate and promote them in such a way that they get the nature of a bridge between rural and urban areas maintaining their dichotomy. In short, the bridging concept focused on the followings:

- a. Bridging agricultural practices to EXPO virtues and activities;
- b. Bridging farms' cultural heritage to modern innovations;
- c. Bridging urban rapid lifestyle to rural qualitative lifestyle;
- d. Bridging farms to consumers;
- e. Bridging farms to consumers;
- f. Bridging agriculture to tourism;

Figure 1 presents the concept generation flow chart will that explains the methodological approach of the generated concept.

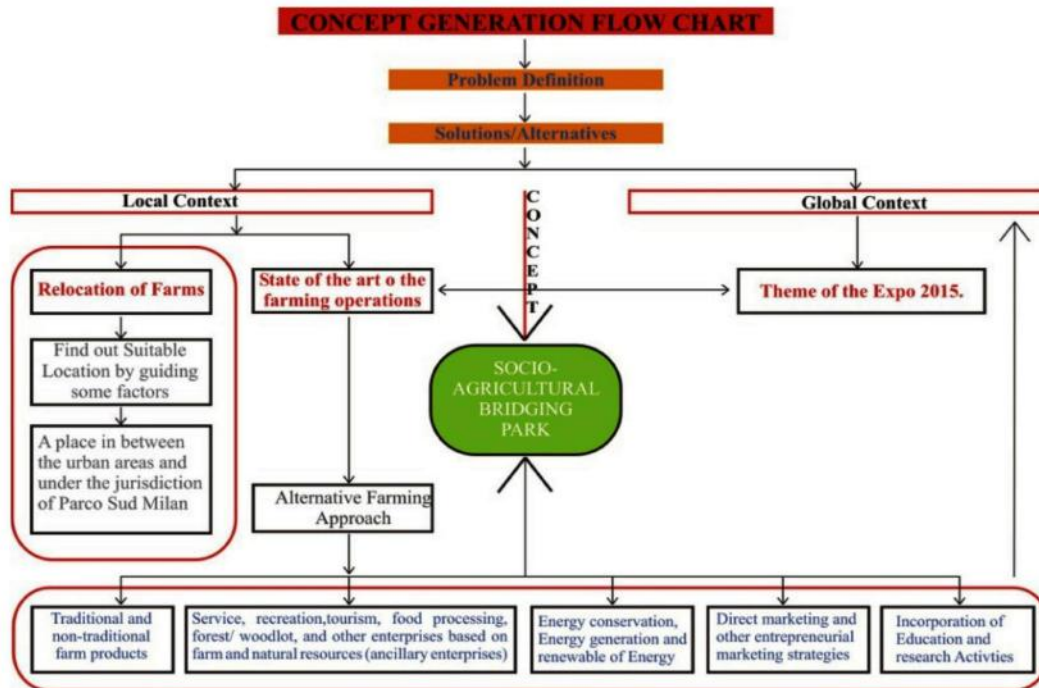


Fig. 1: Concept Generation Flow Chart

### General Framework of the Conceptual Project

Based on the conceptualized project, some definitive programmes are framed. The general framework of this conceptual project is divided into three components. Under these three components, each activity dimension is framed. The three components are:

#### a) Agricultural Component

In the framed project, the agricultural component is supported by production, technology innovation and market activity dimension. All of those activity dimensions will act as to maintain and promote the regular agricultural as well as innovative agricultural activities.

#### b) Park Component

Service and cultural activity dimension is considered under this component. The main idea is to activate all of these activities through some umbrella programmes with the development of an eco friendly environment.

#### c) Management Component

This is the component that is directly related to the development and operation issues of the proposed conceptual model.

### Agricultural Components

In the proposed conceptual model, the agricultural component is described under some programmes that reflect the three activity dimensions production, Technology innovation and marketing. In the following, this component is discussed in broad headlines.

#### *Farming Practice*

In this conceptual model, farming practices are suggested based on the local demand assessment and available practices. Following are the mentionable farming practices in the conceptual SABP (Socio-Agricultural Bridging Park):

**Conventional Farming:** Conventional agriculture has come to refer primarily to agricultural operations that are already going on within the area. The aim is to maintain the traditional culture and agricultural practice as well as to maintain the continuation of the previous production activities. In the conceptual model, the idea is to transfer each individual farm house with existing set up with all their conventional technologies.

**Diversified Farming:** Diversified production is a key strategy for small farm success. The term commonly refers to the production of a wide array of products by a single farm. It also means the production of differentiated specialty crops and of value-added or farm-processed products, such as jellies, pastries or flower arrangements (SAGE, 2005). In the developed conceptual project with the traditional farming practice, the diversified farming practices are addressed to give the farmers in the way to more financial certainty. The other aim is to introduce the different technological innovation in diversified farming practices. As a part of diversified farm production, there is considered production of bio-fuel crops as specialty crops, ornamental flowers, horse breeding, organic and bio-gas production.

**Educational Farming Practice:** An educational farm is a farm whose mission is primarily educational. Such farms cater to school and other organized groups, and are also open to the public. Educational farms usually are operated by non-profit organizations, allowing them to provide services and programs that farms on land zoned only for agriculture. Their mission is often specifically focused on the education of urban residents and they often have a goal of increased food access at their heart.

**Sustainable Farming Practice:** In the conceptual model, all farming practices are treated as the sustainable farming practices. The object should be to promote sustainable agriculture practices in all sphere of agriculture production. Sustainable agriculture refers to an agricultural production and distribution system that integrates natural biological cycles and controls, protects and renews soil fertility and the natural resource base and minimizes adverse impacts on health, safety, wildlife, water quality and the environment (SAGE, 2005).

In global context, the practice of sustainable agriculture is an issue to make the model as an exemplary project. So in farming practices, the application of sustainable practices is a common issue to make it standard in global context. Among the different approaches of sustainability in the conceptual model of socio-agricultural bridging park, the most important one is Permaculture. Permaculture is unique in its emphasis on design. It is the location and interdependence of each element in a landscape, and the evolution of the landscape over time. The goal of permaculture is to produce an efficient, low-maintenance integration of plants, animals, people and structure applied to an area as small as a home garden or as large as a big farm (SAGE, 2005).

### **Product Marketing**

Creation of market and promotion of product's market is an important task in the conceptual model. The main idea is to promote direct marketing. In a traditional marketing scheme, a farmer might sell to one or just a few wholesalers or brokers. In this Socio-Agricultural Bridging Park, farm could take advantage of a variety of ways to earn income for the farmer while providing visitors with fresh food and a farm experience, in keeping with its mission as a park. Two broad strategies common to small farms are:

**Diversified Marketing** means selling products through a variety of marketing outlets including wholesale outlets, retailers, and brokers. However, implicit in a diversified marketing strategy is the use of a number of direct marketing outlets, which maximize return to the farmer.

**Direct Marketing** is the sale of products directly from producer to consumer via farmers' markets, farm-to-school programs, community supported agriculture, farm-to-restaurant programs and a variety of agricultural tourism strategies. These are most appropriate to SABP setting, and are described in more details below:

**Farmers' Markets** are a common and rapidly increasing form of direct marketing. For farmers, the markets allow frequent and regular contacts with many consumers. For shoppers, the markets provide fresh food, the experience of seasonal eating, and an opportunity to learn from farmers.

**Agricultural Tourism and Marketing** (Agritourism) invites visitors to learn about farms while enjoying the experience of a working agriculture operation. Scenarios include u-pick operations, which allow visitors to harvest farm grown produce for their own use; guided tours and tasting; seasonal activities and working farm stays. Agri-tourism also promotes the farm's products to an interested market and generates additional income. Agri-tourism works well when operated as part of a regional marketing effort. A farm-trail organization can encourage tourism to multiple farms; an appellation can call attention to a region's products.

**Farm-to-School** programs facilitate sales by local farmers to school food programs. Many of these programs are incorporated in a curriculum which may include school gardens, cooking classes, nutrition education, and visits to farms and farmers' markets.

**Farm-to-Restaurant** programs support local farm products. Restaurants buy top quality fresh foods directly from the farmers. The products may be custom grown or harvested to the restaurant's specifications, for a menu that appeals to a socially and environmentally conscious customer base. A parallel trend is the emergence of Farm-to-Food-Service connections.

### **Park Components**

In the conceptual model the park component include service and cultural activity dimensions. These activities are arranged in the following two broad headlines.

#### ***Recreation Services***

The provision of recreational services considered in the conceptual model with two-fold objectives. One is to establish the direct relation with the rest of society and to promote marketing of the farms' product through the agri-tourism facilities. The other is to create a base for the integration of rural culture and nature with urban life style. In the conceptual model the following are considered as the facilities for recreation services.

**Trails:** In the conceptual model of SABP there is included a kind of path for visitors' recreation around and through the farm and park areas. Trails are typically well-marked with informative and helpful signage (Figure 5).

**Picnic Areas:** Sheltered, scenic locations provide SABP visitors such as neighbors, families, and school groups, a place to relax and enjoy the outdoors, and to snack on foods from the farm and café. These spaces are also adaptable for special events. (Figure 5)

**Water-Bodies:** A system of water-body can be an aesthetic element and a practical component of a working farm. In the conceptual model a system of water body is designed as a part of recreation services.

#### ***Cultural and Interpretive Programmes***

Cultural and Interpretive programs promote understanding of scenic, natural, scientific, cultural and historic features for park visitors. Such programs might include talks and lectures by SABP farmers, administrative staff or invited speakers; the presence of docent-lead tours and demonstrations; or field trips for student visitors. Many of these programs can enhance the educational value of an SABP. In this case the provision of educational farming practices act as the way to promote and support the idea. On a field trip, for example, students might enjoy a docent-guided tour of the SABP farms and gardens those are especially designed and prepared for education purposes; visit a historical farm house to view exhibits and displays; listen to a talk on different cultures' agricultural practices; participate in a demonstration of historical farming techniques; and take a self-guided tour of the SABP grounds guided by informative signs and markers.

### **Management Components**

The management component of SABP is divided in Two Levels. As the Park will be on the public land, the Jurisdiction as a whole and management of park component should be under Public Agency. On the other hand for initial implementation, oversee and ongoing management the public agency will be coordinated by SABP association. In the following the general structure and functions of these two levels management are discussed.

#### ***Public Agency (First Level Management)***

In case of this SABP the total management should be vested on that public agency which have the ownership authority on the subjected land area. In this case the Parco Agricolo Sud Milan can be the best option to become as a public management authority of such type of SABP. In overall the public management authority should have the following area of interest:

- local, regional, state, and national parks agencies
- open space and agricultural preservation districts and authorities

Considering these two facts of interest PSM (Parco Sud Milano) can be the most suitable authority for the overall management and control of the SABP.

**Functions of the Public Agency in case of managing the SABP:** The concerned public agency in this case the PSM will have to perform the following functions concerning the development and management of SABP:

**SABP Planning:** The PASM will develop the plan and environmental review of the total development of SABP. Strategic development and long range planning issue of SABP should be addressed by the PSM. PSM will have to act as main actor to implement the concept of SABP.

**Infrastructure Development:** The PASM will have to take the responsibility to develop the basic infrastructure of the SABP. The successful development of basic infrastructures such as roads, fencing, landscaping, utility system and public buildings is the most import of the extent of the main plan. So, the authority who is vested for doing the plan should take the responsibility of basic infrastructure development.

#### ***SABP agency (Second Level Management)***

The scale of SABP should be considered as national rather than local. In this context an association (can be named as SABP association). The SABP association would have as its core mission the conceptualization, planning, initial implementation, and operations of the SABP. (Conceivably, a separate SABP Development Organization would be created to manage conceptualization, planning, and initial implementation of first-time SABP).

This organization would likely be a non-profit which would enable it to obtain grant funding and humanitarian support. The Association would be governed by a board which would include representative members from the public agency (PSM), from the pool of SABP farmers, from local agricultural institutions and organizations and from other relevant urban and rural community partners.

### **Spatial Representation of the Formulated Concept**

To prepare the conceptual master plan there are analyzed the amalgamation of function and space, function and function and individual spatial cross linkages of different activity dimensions.

#### **Function and Space Amalgamation**

In the formulated concept there are identified five activity dimensions: Production, Service, Technology, Culture and Marketing. In the following diagram the function and space linkages are established based on the spatial expression of each activity dimension. In the first one the production is considered at the core of all functions. In this condition when the production is taken place in the space the other expression in the space will come with this dimension. In this way this dimension is expressed by farms, production processing unit and production bed. In the same way the service dimension, technology and innovation, Cultural and Marketing dimensions are expressed in the rest four diagrams.

#### **Function and Function Amalgamation**

In case of function to function linkages each function is analyzed in relation with the other functions. How each function is influenced the other functions and which way is the each function is related with the other functions. The production dimension is directly influenced by the technology. In the concept level the production dimension is treated as traditional production function and innovative technology application. On the other hand the adoption of technology is certainly influenced by the existing market of the output product or chance to develop the market of the product.

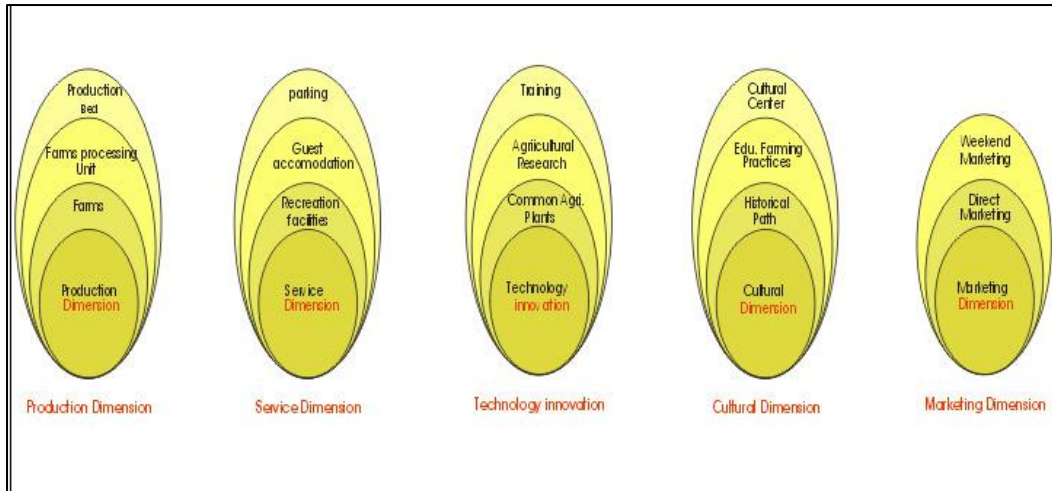


Fig. 2: Conceptualized Amalgamation of Function and Space

Service Dimension influences the cultural dimension and combination of these two dimensions will influence the marketing dimension.

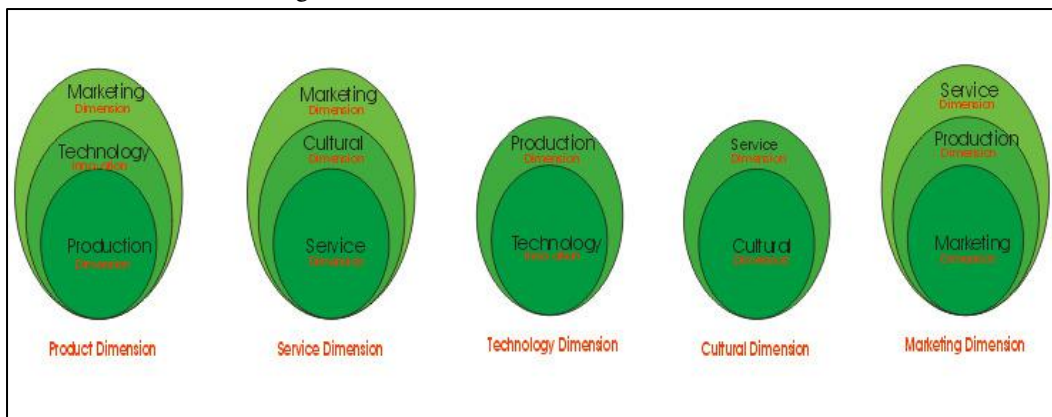


Fig. 3: Conceptualized Amalgamation of Function to Function

**Compositional Set of the Activity**

Each of the activity dimensions is considered as a set of functions. Considering the each dimension as functional set, a composition is made. From this compositional drawn up, there is identified the common set of activates which are considered at the final conceptual model to make it functional.



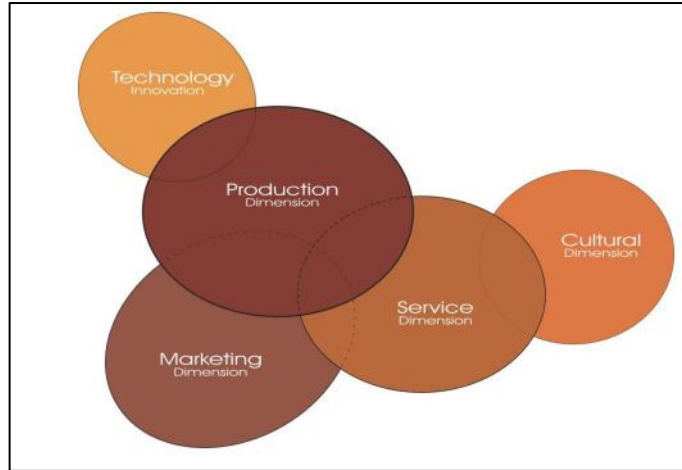


Fig. 4: Compositional Set of Activity Dimension

### Conceptual Master Plan

After analyzing all activity dimensions and space relations, a conceptual master plan was developed to make a clear picture of spatial formation of the SABP concept (Figure 5).

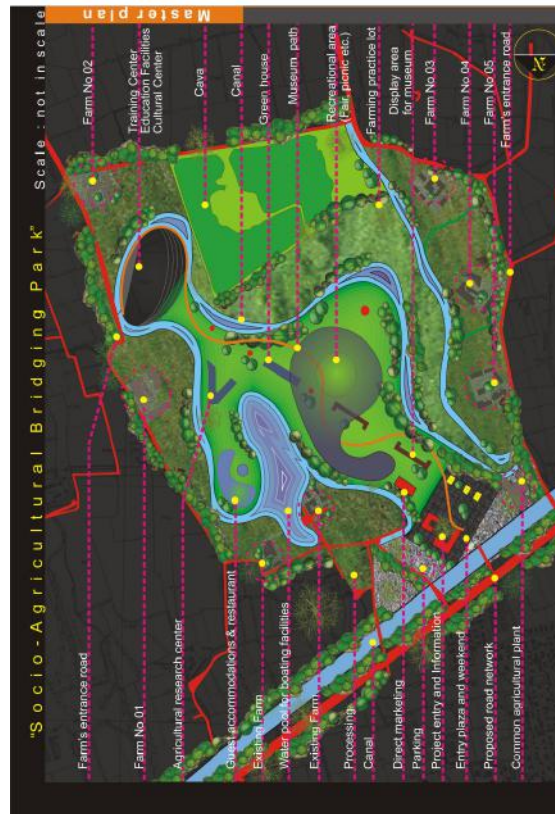


Fig. 5: Conceptual Master Plan of Socio-Agricultural Bridging Park

The Concept of SABP arose from a very local problem of the Municipality of Settimo Milanese. But its implementation dimension is not local rather it is regional in periurban context. Here some key issues of this concept are addressed, but this is not enough for implementation. These issues will guide in details in demonstration phase. Each and every component that is addressed here is subject of detail study at feasibility level, which is out of scope of this paper. However, certainly the role of both community of the farmers and the public agency will be decisive for the implementation of this project. Indeed, on the one hand, the community of the farmers should be able to innovate their practices to enhance the level of the quality of this project, but at the same time, teach the visitors on how to improve their lifestyle; on the other hand, the public agency (that should be the Parco Agricolo Sud Milano), has the relevant task to try to employ a variety of specialists to guarantee the effectiveness of this project. The spatial placement and development is the main factor of concern to make the concept of SABP as a factor of amalgamation between urban and rural area in periurban context.

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