

# **Research on the Social Network of Community Gardens with Different Organizational Structures**

—A case study of 4 Community Gardens in Milan, Italy

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## ABSTRACT

Community garden has already experienced more than several hundreds of years in Western Europe and North American. To many people, it is no more than a piece of contemporary land in city in the second world war or the economic depression in 1930'. While the recent ten years have been the witness of the community garden reemergence all around the world, especially in its origin land. The reasons are complex and various from continent to continent, for example the food security in North America and organic and healthy life style in Western Europe. The citizens' eager to control their own right to food and land conjunction with complex political environment in the present day are also an important reason.

In the literature, the various beneficial social effects of community garden are most cited by scholars, while there is still a question have not been answered: whether different community gardens share the same level of social benefits when they have different organizational structure and management style? If they do not, why? Which kind of community garden has the most possibility bringing bigger social benefits?

Based on this white spot, this thesis firstly analyzes the real concept of community garden and summarizes the most effective way to study its social impact. Then, 4 community gardens in Milan, Italy are identified as cases for deeper comparative analysis. Their differences of organizational structures and social network characteristics are detailed studied. In the last, the thesis tries to explain the social network differences, considering different organizational structures being the main reason.

The main conclusions are as follows:

- 1, Until now, there are at least two kinds of organizational structures for community garden. The first are "collective vs individual" pattern. The second are "self-organizational vs been-organizational" pattern.
- 2, Despite different organizational structures, community gardens could bring social benefits by building relationships among residences and social entities. However, different community gardens have different levels of social benefits.
- 3, Compared to community garden of individual and been-organizational structure, that of self-organizational and collective pattern have higher level of social benefits.
- 4, For a better organized community garden, its benefits could spread across its own neighborhood, reaching to the whole city or even more broader geographic space.
- 5, The differences of individual and collective patterns have impact more on the relationship among the core cultivators. While the self-organizational and been-organizational structures have the influence more on the relations between the core cultivators and the other citizens or social entities.

**Key Words:** Community Garden, Organizational Structure, Social Network, Milan

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## CHAPTER 1 INTRODUCTION

### 1.1 The interest of the theme/research origin

#### 1.1.1 Reemergence of community garden in English-spoken countries in the last decades

The community garden origins from the Western Europe and North American. It has been experiencing dramatic changes for centuries. In the last decades, with the development of the food system planning in the global north, as a creative agriculture way to produce food in dense urban environment, community garden and its conception spread all around the world rapidly. In Italy, there is going to have a 3 year-long community garden program in the Duomo square for the 2015 EXPO (commune di milano, 2013).

With the increasing practice of community garden, more and more scholars come to realize its diverse effectiveness in terms of the social, economic, culture etc. For instance, the health literatures point out that the garden cultivators eat organic food produced from the garden and take outdoor activities, thereby improving both their physical and mental health(Donna, 2000; Teig and Amulya et al., 2009; McCormack and Laska et al., 2010).The environment education literatures state that the community garden can help the citizens to learn the conception of sustainable development, to keep a healthy life style and got the real spirit of democracy(Glover and Parry et al., 2005; Levkoe, 2006). Political movement literatures argue that community garden is the social and political process of democracy and bottom-up governance, especially when they face city development pressure (Schmelzkopf, 1995; Schmelzkopf, 2002; Smith and Kurtz, 2003; Irazabal and Punja, 2009).

Compared to the above effectiveness, the social impact of community gardens attracts more attentions and researches. The community garden helps neighborhood development, community building, recreating social relations and improving social inclusion etc. In a world, it can produce and improve social capital. Some scholars even argue that in the contemporary society, its social impact is far more important than the other effectiveness such as agriculture economic and ecological benefit ( Holland, 2004; Saldivar-Tanaka and Krasny, 2004; Agustina and Beilin, 2012). If or not the community garden can produce social capital is seen as criteria to judge an urban agriculture program could be defined as a real “community” garden (Hancock, 2001).

However, to what extend the community garden can produce social capital remains a white spot in the current relative literatures (F E Baum, 2003). If the social capital produced from varies community gardens share the same level? If not, why? Some scholars point out that the organizational pattern of community garden for example the distribution of rights and obligations, could affect the garden member relations, thereby influencing the social capacity (Holland, 2004). But what is the organization pattern of community gardens? And how do different garden organization structures affect garden social capital? Finally, what are the social capital differences of various community gardens? These above questions have not been carefully and deeply researched until now. So, in this thesis, it is necessary and meaningful to study the different social capital of diverse community gardens, with the help of social network analysis method.

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### 1.1.2 Emerging urban agriculture activities and study academic study in China recently

In terms of academic study, community garden remains a relative new norm to Chinese scholars, especially for urban planners. Now, the community garden literatures in China are merely the introduction and translation of literatures from English-spoken countries. Most of the Chinese literatures concentrate on the community garden history study(赵继龙与史克信等, 2011) and how to integrate it into urban space(王雅雯与张天新, 2013). However, the community garden in English-spoken countries has been experiencing dramatic changes. It has developed from a geographic neighborhood confined definition to a more social conception in terms of its various social benefits.

In terms of practice, on one hand, there are many informal agriculture activities in urban China which are ignored by urban planners and city managers. And there is no regulation and law to formalize it. Most of the agriculture gardens are cultivated by elderly people and urban poor.

On the other hand, influenced by the international fashion of community garden, many mega cities in China for example Shanghai and Beijing have already built many privately developed and rent out agriculture land. They are located in the suburban area and most of their consumers are the middle class. While in English-spoken countries, community garden are located not only the outskirts of city, but also in the dense urban environment. Most of the garden rent is really low, some of them even are free for all the citizens. Diverse activities are held in the garden open for the public so as to improve the social inclusion and community social capital.

In a world, both Chinese community garden research and practice lags behind. Deeper research needs to be done.

## 1.2 The research purpose and questions

Based on detailed study on different organizational community gardens, this thesis tries to deeply analyze different features of community garden social networks, thereby reflecting their diverse capacity to develop social capital.

The research questions are as follows:

What are the organization patterns of community gardens?

Do different community gardens share the same social network features? If not, what are the differences?

From the perspective of organization pattern, what is the reason of the social network differences?

## 1.3 The key definitions

### 1.3.1 Community garden

In this research, community garden is the organization garden program cultivated by a group of people purposely in urban environment for agriculture or horticulture production. It has a organization structure, is a program. More importantly, it can not be cultivated by specific garden

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employees or merely by the garden land owners. (see chapter 2, set 2.1 in detail)

It includes not only the traditional allotment in UK, but also the neighborhood garden origins from USA. In special location, it includes gardens in private and public institutions such as school, hospital and prisons etc. And those in public land like parks, abandoned places and contemporary places could be also community gardens.

### 1.3.2 Organization pattern

In this thesis, organization pattern is the abstract organizational structure among member units in community garden. It represents both the structure among cultivators, and also among many sub-organizations for instance the relations between the landowners and the cultivator group. ( see chapter 2 section 2.2 in detail)

### 1.3.3 Social network

In this thesis, the social network means the network consists of cultivators, other related organizations/groups/teams/institutions etc. and their relations. ( see chapter 2 section 2.3 in detail)

## 1.4 The research object

Four typical community gardens in Milan are identified as study cases. The cases are chosen because:

The community gardens in Milan could represent those in Western Europe and North America. Specifically, Milan has the similar allotments as those in UK which are now wide spread in Europe. With more than 3 decades development, systematic community garden manage policies in Milan is already built. Moreover, in recent years, the new community garden in America has already spread into Milan and several new ones emerge here. So first hand data could be collected here.

The social network is easily changed by different culture traditions. These four cases are all in Milan, in one country and city, which avoid interruptions (culture backgrounds) to community garden social network.

These four community garden are very important and diverse:

Libre is the ever first garden recognized by city government and managed by the NGO.

Garden in zone 2 is the last government built and managed garden which distributed to citizens.

Isolapeverde is the first community garden initiated by citizens and legalized by city government, which help to build shared garden policy.

Coltivando is the first university community garden in Europe.

The four cases share the similar location, city environment, area, the landform and cultivator numbers. Specifically, they all have flat ground. Despite of Libre, the other three are all located in



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dense building environment and residential area.

Table 1-1 selected garden cases information<sup>1</sup>

Community gardenm	Cultivator number	Area(m <sup>2</sup> )	Area per cultivator(m <sup>2</sup> )
Isolapeverde	19	1500	78.9
Coltivando	20	1400	70
Libre	40	3500	87.5
Garden in zone 2	30	1594	53.1

## 1.5 The research approach and methodology

Literature review, case studies are the main methods of this thesis. This thesis is exploratory study with both qualitative and quantitative approaches. In terms of data collection, face to face interview, questionnaires, Website information search and field observation are used. Various data collection methods are used for each main sector as follows:

For community social network, deep face to face interview to the cultivators of each community garden, important persons, analysis of the website information are the main methods. Specifically, 5 garden managers are interviewed. They are Isolapapverde Association chairman Africa and vice-chairman Kathy.Mayoh, Coltivando initiator David Fassi who is professor of Politecnico of Milan, Libre manager who is the chairman of Italia Nostra Association, and officer Luiginaemilia.Costi working in green department of Milan government and also the manager of Garden in zone 2. They provide me a lot of useful information about the history, the cultivators and the cooperated third parties of each community garden. Since various activities are the main form each community garden build relations with the third parties, different activities information through garden websites and interviews are collected (see Appendix B and Appendix B in detail).

In terms of the garden organization pattern, data is collected through different garden documents such as agreement signed between the cultivators and the garden association, the garden association and the city government, different regulations about the enrollment fees, punishment etc. Interviews about garden roles, right distribution, cooperation and management form are considered and analyzed.

For the community garden history and policy in Milan, since academic literatures and documents are limited, community specialists Mariells.Bussolati<sup>2</sup>, green and agriculture department officer Marco.Lucini are interviewed. They provided valuable documents.

Some other methods are used such as taking part in the garden activities and being the garden association members. So the mutual trust between garden participants and me is possible. Deep understanding, overall and true garden information collection could be much easier.

## 1.6 The thesis structure

This thesis has 3 main sections proceeding as follows (figure 1):

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<sup>1</sup> Source: improved by author based on data provided from green sector of Milan government

<sup>2</sup> MARIELLS BUSSOLATI is one of the most famous Italian community garden researcher. She wrote the book of *L'Orto diffuse* which introducing Italian community garden in history.

The first section (chapter 2) is literature review. The fuzzy definition and deep concept description of community garden is firstly reviewed. Then, the community garden pattern, community garden social network and their relations are reviewed through the current literature.

In the next section, after a general statement of the community garden history, current situation and relative city policies of Milan, three sub-sections are analyzed based on 4 case studies. Organization pattern is studied from the both the micro (several sub-organizations among one community garden) and macro (community garden as a whole organization) perspectives. And then, the social networks of the 4 cases are deeply studied. Size, structure and geographic characters of the garden social network are analyzed. This section is the focus of thesis.

The third section tries to find the organizational reasons for different garden social network features.

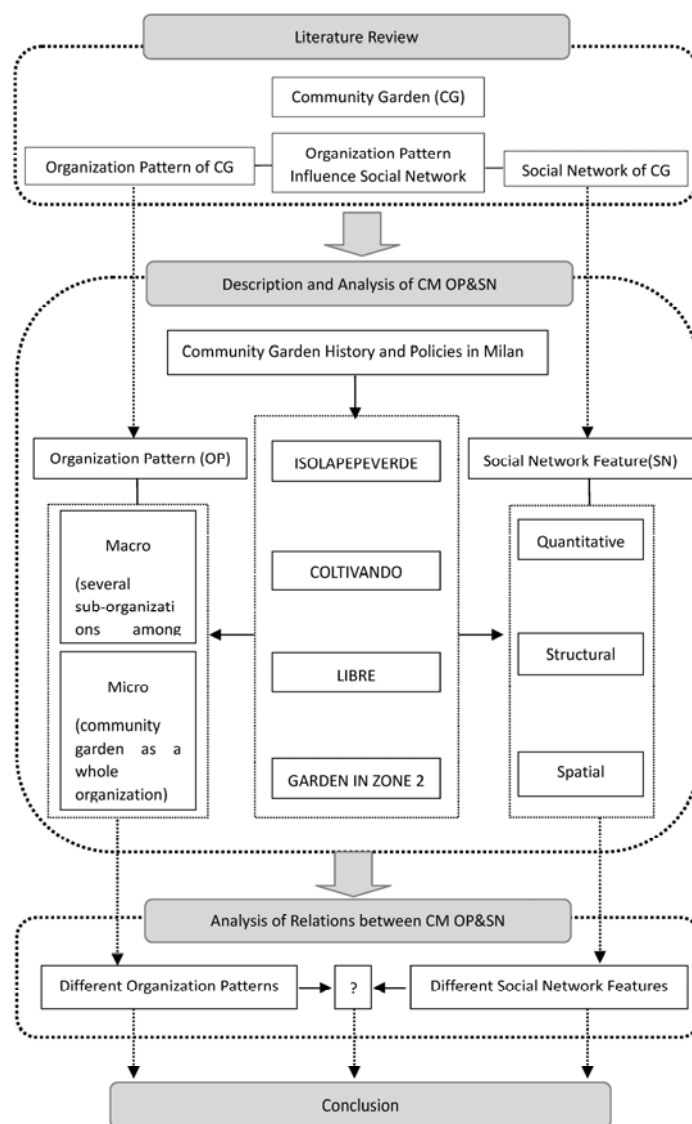


Figure 1-1: thesis structure

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## CHAPTER 2 LITERATURE REVIEW

### 2.1 Theorizing community garden: the debate and an alternative definition

Literally, community garden is the combination of “community” and “garden”. So in theory it can be understood as any plot of land which cultivated by anyone or anybody for flowers, fruits or vegetables. For more than 300 years from it was born in western Europe, it has experienced dramatic changes in terms of its social background, practice and academic study focus. In a world, community garden has changed from a geographically unified conception to a word which is defined by many dimensions.

#### 2.1.1 Community garden as an evolving definition

##### (1) Its origin

England is the mother land of community garden in Western Europe. In 18<sup>th</sup> century, it derived from allotment which was far away from home and distributed to adjacent peasants (Edmonds and University, 2004; 钱静, 2010). In 1922 Allotment Act, it was firstly defined as “an allotment not exceeding forty poles in extent which is mainly cultivated by the occupier for the production of vegetables and fruit crops for consumption by himself or his family” (1998; 钱静, 2010)(1998; 钱静, 2010).

In North America, the community garden origin from the United States since the First World War when it was called “neighborhood garden”. It means a plot of land belongs to individual and managed by a group of people (Lawson, 2005). The earlier community garden in Canada was called “community open space” (City Farmer, 1998) in 1970<sup>th</sup> after the oil risk when many families produced their own vegetables to prevent higher food price.

The earlier practice lead the geography defined definition of community garden that it should be somewhere near to a neighborhood and used by nearby residences---community garden is a green open space managed by residences living nearby (The Shell Better Britain Campaign, 1999) and used for agriculture production activities (Irvine and Johnson et al., 1999). Francis summarized and pointed out several characteristics of a so called community garden as follows (Francis, 1987):

- A well managed neighborhood open space
- Flowers and playground maybe included
- On private land
- Not be recognized as formal urban open space
- Have to move way or stop just because of real estate development or business project

##### (2) its geographic spreading

Since its flexibility in design, community garden could be grown in any place like ground, up on the roof or elevated plant containers (MA and BS et al., 2003). Any possible land in cities could

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suits community garden and it integrated well into the existing urban environment for example school, park, hospital and prison etc.(Irvine and Johnson et al., 1999). More and more academic researchers realized that it was not always the case that community garden were located near neighborhood. The people who use it gradually became the focus of academic research and “collectivity” was identified as the core characteristic of community garden which distinguish it from many other similar urban agriculture activities. Schukoske used “community space” instead of “neighborhood garden” and hold the opinion that it should be a space managed and cultivated collectively including individual plots and common space like children play ground (Schukoske, 1999).

### (3)“community” produced from “community garden”

More and more scholars came to realize that the people who cultivate the garden and the participants and also the social capacity produced from it were the most valuable part. What was more, the participants probably not came from local residences, and their interests may not accord with the local needs. Put it in short, there were new community come from the community garden (Yotti Kingsley and Townsend, 2006).

Specifically, the garden participants gradually developed closed social ties with each other through diverse garden activities. And these new and massive social ties formed a new complex social network which was a new community and different from the pre-existing local one.

Based on its relationship with the local neighborhood, placed-based and interest-based community garden were identified by some scholars. Placed-based community garden share closed relation with the local neighborhood. Most of the time its participants come from the local residences and the new formed community share the similar interests with the local people. The interest-based community garden could have totally different task or main aim from the local needs and its participants probably mot come from the local people (Firth and Maye et al., 2011) .

#### 2.1.2 An alternative definition of community garden

##### (1)Community garden as an ambiguous phrase

Despite the changing conditions of collective garden practice, “community garden” remains the enduring phrase in academic and non-academic literatures to denote everything from neighborhood vacant lot to school garden. This world was even transformed into different versions all around the world which resulted in ambiguity.

For instance in UK, “community allotment” was developed from the combination of its traditional “allotment” and relatively young “community garden”. Specifically, it represents the collectively cultivated allotments because the old allotments denote the individually used garden (Wiltshire and Geoghegan, 2012). In the USA, the ACGA (American Community Garden Association ) gave a wide definition of community garden: any plot of land cultivated by anyone. It may be in city, suburb or countryside. It can produce flowers, vegetables or a community. It could be a common cultivated yard, or divided in several plots. It can be in school, hospital or in a neighborhood. Its products could be sold out (ACGA American Community Garden Association, 2011).

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Since “community garden” can not generalize so many different gardens practice and its ambiguous transformation in different countries. Ferris et al. noted the existence of “a wide range of perspectives on community gardening” and went further in saying “[i]t is not very useful to offer a precise definition of community gardens as this would impose arbitrary limits on creative communal responses to local need”(Ferris and Norman et al., 2001).

(2)“organized garden projects” as an alternative definition

Given this tangle of “community garden” possibilities, in 2008, Pudup (Pudup, 2008)advanced a new concept “organized garden project” as a better way to understand the geographical spaces. And this alternative definition of community garden won wide acceptance in academic area.

Pudup (Pudup, 2008)went further noted that this concept has three main axioms:“a) a group of people are organized in some way. It is organizational... b) the group involved in cultivation has espoused a set of goals for its gardening practice...In short, there is a project. ...c)the cultivated space is not typically devoted to third party gardening, i.e., gardening by people other than the owners of and/or custodial employees on the property”.

### 2.1.3 research evaluation

Given the changing practice of community garden and its evolving academic study, the above literature review shows that the phrase of community garden can not accord with the gardening practice in contemporary era. Organized garden project as a simpler and generalized definition allows for community but not mandate or assume its existence. It places analytical emphasis on the building of organizations and discourses. There for, it includes not only the traditional UK allotments and also the fashionable school garden, hospital garden and neighborhood garden. In this thesis, the “community garden” is “organized garden project”.

## 2.2 Research on the organization pattern of community garden

As “organized garden project”, how is the garden project organized and what is its organizational structure? Even though these questions have not been answered by the current literatures, scholars provide some valuable information in terms of the main garden roles, the bottom-up and up-down organizations of community garden which lay the basis of studying its organizational pattern. While the systematic analysis still needs deeper study of some organization theory and its research method.

### 2.2.1 The current community garden literature review

(1)The main roles in community garden

a) the leader and managers

LAWAN notes that in the united states, community garden has a long history of more than 100 years and its numbers increased with that of its manage group(Lawson, 2004). In the period of social risk for example economic depression or wars; community garden would increase providing food and jobs, releasing social problems. All sorts of garden organization group would appear and tried their best to lease land out in cities or directly providing land freely to gardening

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and also helped to organize cultivators, build up garden groups and manage daily garden affairs. However, after the social risk, the garden organizer transformed to their previous tasks. The garden projects decreased dramatically with the decrease of garden organizers. Burtscher goes further notes that the importance of garden organizer is not only their endeavor legalizing the garden land rights, but also deterring the regulations, rules and cultivation form in a garden(Burtscher, 2010).

There are various types of community garden organizers including public institution, private group, non-profit organization etc. Public sector includes governments in different levels, public schools, churches, militaries, public hospital, prison etc. Private sectors include private landlord, railway factors and private companies etc. Non-private organizations include specific garden association, for example the USA vacant lot association, German community horticulture organization, but also some non-specific garden team for instance the USA woman association and UK early local churches(Bb, 2007).

#### b)the land owner

The land owner is also the key role to community garden. Lawson points out that the drawback of garden land by the land lords for other use ranks the most important reason why so many community gardens disappear after social risk in USA (Lawson, 2004). What is more, the land lord owns the right of the land, so many of the case they set up the regulation and the main roles of the garden. For example, they do not allow the permanent structures on the land, some time even not allow digging into the soil.

Specifically, the types of land owners vary. Mainly, they are different levels of governments, private or public sectors. For example, in UK, the early allotments get lands mainly from the private land owners, churches and the local governments (Poole, 2006). In German and Holland, the governments are the common sector providing land while private associations and individuals are in USA(钱静, 2011).

#### c)the cultivator

Without doubt the cultivator is the basis part in a garden project. The types of cultivator change a lot in garden history. For instance, Lawson describes in her book argues that in the economic depression period, the garden project participants is the unemployment, half employment workers and their families. In school gardens, the main growers are the students and their parents. When it comes to the 2 world wars, the participants come from all works of life and then become the inner city poor residences and immigrants after wars. Now again it become the hobby of all kinds of people. In UK, the garden growers origin from the poor farmers in the countryside, rich craftsmen and businessmen in cities(钱静, 2010). Later it become the working class in the late 19 century (Archer, 1997). In economic depression and war period, it is similar to that in USA. After the second world war, they gradually change from poor residences in cities to young and middle class (Wiltshire and Geoghegan, 2012).

#### (2) the bottom-up and top-down

Lawson (Lawson, 2004) argues that in the united states there are at least 2 kinds of organizational patterns: the bottom up pattern and the top down pattern. The top down pattern refers to that

the community garden is organized by the third organization. And the participants should apply to the organizer for taking part in. While a bottom up community garden often initiated and built by the local people. The participants are both the leaders, managers and also the cultivators. Pudup(Pudup, 2008) points out that the earlier gardens are mainly organized by the third party, later on more gardens initiated by the local people appear, now more and more NGOs from different levels all around the world, the government and also the local people making the garden organizers more diverse.

## 2.2.2 the theory and research method of organization pattern

### (1) the definition of organization pattern

The organization pattern remains the research hot point of the organization theory since the publication of *Concept of the Cooperation* written by Drucker in 1946. However, there is still no a clear definition of organization pattern. Organization pattern, organization structure and organizational structural pattern are often used in formal and informal literatures, referring to the similar meaning(朱晓武与阎妍, 2008).

According to the definition of pattern given by Alexander, it is an concept abstracted from the daily life experience and also the special repeated phenomena in scientific experiences(张文泉与李泓泽, 2000). Thus, the organization pattern could be understand simply as the pattern of organization, which not only includes the pattern inside one single origination but also that among several different organizations(王恒与赵峥等, 2013).

### (2) the analytical framework of organization pattern

Yanwu Zhu and Yanyan (朱晓武与阎妍, 2008)suggest that organization pattern could be analyzed by 4 dimensions after their literature review of hundreds of relative academic papers from 1990 to 2006. The 4 dimensions are complexity, standardability, distribution of rights and coordination mechanism (Table 0-1) .

Table 0-1 organization pattern dimensions<sup>3</sup>

Explain	Dimensions	Summaries
The right form	Self-government right, authorization	Distribution of
Minimize individual	Normalization, standardization,	Standardability
Mechanism to realize	Personal ratios, differentiation, specialization	Complexity

Specifically, complexity refers to the number of and relations among the sub-units of a whole organizations system, which includes the horizontal subsystem and vertical system. Standard ability indicates the constraint type. Put it simply, it should answer the question of how the sub-units restrain the right and duty with each other. For instance if there are some formal and informal contract, regulation or any other form of restrain mechanism. Distribution of rights means how to organize the decision making right, possession of production and products division etc. coordination mechanism is the working pattern in terms of communication, cooperation and setting up working group etc.

Recourse: improved by author from Yanwu Zhu, Yan yan(2008)

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research evaluation

The above literature review shows that there are three main roles in a community garden which are the land owners, the leaders or the managers, and the cultivators. In terms of the organization pattern, the top-down and bottom-up pattern could not clearly show who is the leader or manager in a community garden. Specifically, in a typical top-down garden sponsored by the local government might be managed directly by the participants themselves, giving it a feeling of bottom-up to some extent. So deeper analysis needs to be done based on practical cases.

The above organization theory literature review shows 4 dimensions to analysis organization pattern which could be summarized into 3 key questions. Firstly, what is the role of each participant and their rights and obligations? In what way they define each ones right and obligations? How they cooperation to work with each other?

Moreover, not only one team or company has organization pattern, several organizations also have it.

### **2.3 Research on social network of community garden**

Social network analysis is one of the most important ways to study community garden social capital. In the literature review, what findings have the scholars got? What relative theory and methodology could be borrowed in this thesis?

#### **2.3.1 Community garden literature review**

In the current academic community garden literatures, social network is an frequently used study methodology. The scholars study the community social impact and the social capital contained in the social network created by the relations of the garden participants.

Flint Michigan finds the social capital contained in the community garden participants is far bigger than that in the non-garden participants in the neighborhood (Alaimo, 2002). The paper *Cultivation, Neighborhood meeting, Social capital* further points out that compared to the families who do not attend the community gardens and neighborhood meetings, the participant families have more social capitals in terms of bonding, bridging and linking (Alaimo and Reischl et al., 2010).

Glover and Parry study the relations among the community garden participants and how they active the garden building resource (Glover and Parry et al., 2005). They have rich findings. Firstly, sociality is the first reason why garden members do not leave and new members voluntarily take part in. secondly, the new garden members are not only those familiar with the old members, but also some strangers, who possibly help build new social relations.

Kingsley further studies the *sociality* and finds there are at least three kind of sociality benefits provided by the community garden (Yotti Kingsley and Townsend, 2006). The first one is social inclusion. All the cultivators share the same obligations so they easily got the consentient behavior norms, thereby further formalizing, restraining and improving their social relations. The second one is the social support. The garden members can got support and comfort from their



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other fellows when they are badly off or experience emotional problems. Social relation is the third one. But this kind of relations only exist among the garden members which means the community garden social capital can not spread out of the garden.

In 2009, Teig, Amulya, Brchenau, Marshal and Litt find out in what way the garden participants create social capital (Teig and Amulya et al., 2009). The garden voluntary activities, community activities and recruitment etc. promote 6 kinds of collective activities which are connection, mutual benefit, mutual trust, collective decision making, civic participation and community building. These above social processes not only help to the gardeners' health, but also are the processes creating social capital.

### 2.3.2 Social network theory and study methodology

#### (1) Definition of social network

Social network is the all the social relations formed by more than 2 social units which can be individuals, organizations and countries(李梦楠与贾振全, 2014). The definition origins from the UK in the early 20 century. Simmel Georg who is an anthropologist, holds the point that the society is an consists of complex social relations, which lay the basis of social network(肖鸿, 1999). As a theory and also and methodology, social network (analysis) has experienced more than 100 years. Now it plays an significant role in broad areas such as sociology, economics and business administration.

#### (2) The features of social network represent the social capital level

Jane jokbuse in her book *the Death and Life of American* points out that that network is the key part of community and neighborhood building. She emphasizes the social network is irreplaceable social capital. The social capital would disappear once the social network vanishes and it will not come again until the social capital gradually develops. Sociologists Lin Nan, Coleman and Pierre Bourdieu point out that the more social relations one have and the more different the one from the other in a social network , the more resource gaining capacity one will have.

From the above we can see that the social capital is not only the indicators of individual resources, but also the capital of a group, a community or even a whole country. Further, in a social network, the total number of all the members, their differences, and their mutual trust level etc. represents the social capital level (李梦楠与贾振全, 2014).

#### (3) the methodology of social network analysis

Lilin and Gubaoyan (李林与顾宝炎等, 2008)study the social network by telephone record. 5458091 telephones and 17630027 phone calls are been collected as data base. Each telephone number represents a social net node. 3 norms are been defined which are 度,度的相关性 and 群聚属性. 度 is the total number of each node's social ties. 度的相关性 is the identity differences of all nodes connected with one nodes. 群聚属性 can be understand as centralization which means the percentage of all nodes connected with each other by at least 3 nodes, including the tie strength.

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Huping and Wangwen (胡平与王文等, 2010) use the sample questionnaire survey to do the research. They find and create businessman social network in Xian (a provincial city in China) by contacting many citizens who are talking important issues with 331 companies' bosses in the last 6 months. In the research, the authors divide the whole network into 2 sub-networks which are the business network and daily life network. They use 3 indicators to study the network features. The first one is the network size. And the total number of the network size is all the relative citizens who have talked big issues with or uniformly contact the 331 companies' bosses in the last half years. The second one is tie strength which is to what extent the bosses familiar with or trust the citizens by subjectively judgment of the 331 bosses. The last one is the network density which is the percentage of existing social ties with all the possible ones.

From the perspective of each citizens, Zhang wenhong (张文宏, 2006) studies individual's social network by sample questionnaire survey to 1004 adults in Beijing, China. 3 indicators are identified to study the social network features. The first one is network size which means the average social members each citizen has. The second one is network density which is the percentage of citizens know each other. The last one is the network differences in terms of each citizens' education, age, sex, and social level. The paper finds each Beijing resident has 3.1 social nodes connected intensively with him/her, which is the network size. The number of mutual familiar friends of each citizen is only 1, which means the people in Beijing do not really like to introduce their friend to one another. In terms of network difference, the citizens have big difference in ages and sex, and little differences in social level and job.

### 2.3.3 Research evaluation

#### (1) Current community garden literatures

The above literature review on community garden social network can be summarized into 3 dimensions as follows:

Firstly, compared to non-community gardeners, the participants can gradually create a dense social network by all the garden members, thereby producing high level social capacity.

Secondly, the social network building relies on different kinds of garden activities and diverse social process. Moreover, the garden members consist of citizens who know each other before and also the strangers.

In conclusion, the network of community garden members is the core of the garden social network research. And this is also the emphasis of this thesis. However, the current literatures only answer the questions in terms of "if or not" and "how" close community garden network is created. To what extent the garden network develops remains white spot. And this is the core question this thesis will answer and comparative study of several garden cases will be the best way to do research.

#### (2) The social network theory and study methodology

The above literatures show that until now there is still not a universe methodology to study social network. However, it could be summed up that the features of the social network could be studied by 2 dimensions-the size dimension and the structure dimension. Specifically, the size

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dimension means the total number of all members of a social network and also their identity differences. The structure dimension represents the network density and ties strength. Moreover, macro and micro study perspectives are both used. It means not only one node but also all the nodes in a social network can be studied. Besides, sometime in order to simplify study, a complex social network can be divided into several sub-networks for deeper analysis.

The geographic consideration is missed in the current community garden social network study. While different geographic layout of the community garden network represent different social capital. Are all the community garden members come from only the garden proximity? Do all the garden have the similar garden member geographic concentration? So in this thesis, the dimension of geographic demonstration of the garden social network is researched.

In terms of data collection, sample questionnaire survey and deep face-to-face interview are 2 important and effective ways to get necessary information. Both qualitative and quantitative data should be collected and produced. The above are what can be borrowed in this thesis.

#### **2.4 Research on influence of different organization patterns on garden network building**

The current community garden literatures point out garden network building maybe influenced by different organizational patterns. For example, L.Holland argues that, garden participants enrollment conditions and their cooperation style are determined by leading and management style, which would directly influence the final garden social impact and result(Holland, 2004). However, the above is far from deeper studies.

The social network theory holds the point that the core reason for network building and expanding is the resource acquisition by individual in such network. The resource included in network various from instrument resource such as money, goods ,person and affective resource such as company and friendship(何雪松, 2005). Social activities are the normal form to build such network. Moreover, network is affected by different culture traditions, political regimes, social norms and moralities(刘倩与赵西萍等, 2012).

Based on the above research, this thesis starts from the resource acquisition by individuals in network, studying how different organization patterns influencing the individuals behavior, which finally affect the garden network building and expanding.

## CHAPTER 3 INTRODUCTION OF THE SELECTED CASES

In this chapter, the realistic background of the cases and research are laid by starting from the history of Italy Milan. And then, the policy background and development status of urban gardens are analyzed. Finally, the cases selected in this research are introduced.

### 3.1 History of urban community garden in Milan of Italy

#### 3.1.1 From the 1900s to the period before World War I

The urban garden project of Italy has a history of more than a hundred years, originating from cities with developed industry in the north of Italy in the 1900s, including Bologna, Milan, and Turin. With the urbanization and industrialization process of Italy, substantial rural population moved towards the city (F and G, 2010), and the factory owners of the city became the main pusher of the garden projects. They developed farmlands for workers and their families to plant in the suburbs close to the factory actively. On one hand, it could provide entertainment site for workers, beautify the environment and educate the workers, but more importantly, it made workers away from the political activities and prevent them from uniting together to go against the owners (M. 2012). During this period, garden turned to be the significant social welfare facilities, as well as the new tool of the thought 'garden city', and 'displayed the poetic root of the modern garden city movement' (Donadieu, 2006). Governmental agencies, private companies and churches were the main provider of the garden (Bussolati).

#### 3.1.2 During the World War II

The garden project developed greatly in time of world economic crisis in the 1930s. Italian government launched the national 'family garden' project in order to alleviate the employment crisis and poverty of the unemployed. The project was advertised, guided and supported technically by the state institutions, and as a result, 1800 gardens were built within two years after the launch of project. (Marcello, 2013)

The national garden project reached its peak in the World War II, during which, the Fascist government initiated the 'battaglia del grano' in order to reduce the import of wheat. The government would assign the lands for the garden project, for instance the People's Square garden of Rome (Fig. 3.1), Duomo garden of Milan (Fig. 3.1) and San Carlo garden in Turin.

The main pusher of garden project during this period was the government, and it was one of the tools to cope with the social crisis by the governmental agencies.



Fig.3-1 Milan garden in 1942<sup>4</sup>



Fig. 3-2 Roman garden in 1943<sup>5</sup>

<sup>4</sup> Data source: Sachero, A. (2011). Prove botaniche di sopravvivenza urbana. milano, Politecnico di Milano. Master

### 3.1.3 After the World War II till now

The garden project of the country faded rapidly after the World War II. Gardens managed by the retired and the poor were still kept in the city, and as a result, urban garden project turned to be the urban agricultural cultivation activities of low-income groups.

Till the 1960s, with the prevalence of petroleum crisis and environmental protection concepts, urban agricultural garden project drew people's attention again. The Italian government gradually admitted the legal status of urban garden project, and the garden project constructed by the government was introduced to cities including Milan, Turin and Salerno, etc. by Modena in the 1980s. More and more gardens constructed and managed by the governments, and assigned to the retired and low-income earners occurred in the north of Italy, and the first legal garden identified by the municipal government also occurred in Milan in 1988.

After the 2000, the garden cultivated collectively in such countries as America, was introduced into Italy gradually. As a result, spontaneous collectively cultivated garden occurred in Turin, Milan, Palermo, Padua, Rome, Bologna, etc. (Bussolati). It was not until 2005 that Milan showed such a trend, and till now, it has developed several municipal-level urban planation project networks, such as libere rape metropolitan, which can support the development and construction of garden projects at municipal level. The amount of urban garden projects is also on the rise every year.

## 3.2 Policies of urban community garden in Milan

Although the garden development of Milan has a history of more than a hundred years, but it was not until 1988 that Milan government started to issue corresponding urban policies to promote the development of garden, and the main garden policies were issued after 2000.

### 3.2.1 Policies of garden construction and management by the third party entrusted by the government

The policy was the first policy exploration adopted by Milan government for promoting the development of garden. The policy was formed in 1988, and at that moment, Milan branch of ITALIA NOSTRA Association filed an application at the Milan Government on behalf of the citizens to reconstruct the illegal garden in the suburban park as excellent legal garden. Both parties reached an agreement to entrust the right of use of the garden to the ITALIA NOSTRA Association, and it shall also be responsible for the daily management of the garden. Consequently, it formed polices concerning the entrustment of a third party to manage and construct the garden.

In this policy, the government and the third party will sign a land consignment agreement. The cultivator shall propose the application for cultivation at the third party and sign the agreement, and meanwhile, he shall also turn in the land rent.

### 3.2.2 Polices of direct construction and management of garden by government

After the leading card of the government's entrustment of a third party for the construction and management of garden, Milan government promoted the new polices in 2002, in which the government directly opened up the construction, and government of each district shall cooperate in the management of garden, and assign it to qualified residents.

In the policy, residents would directly apply at the government of each district, which may select the applicants according to the requirements and standard proposed by the municipal government, and prepare the agreement with the cultivator. The cultivator shall sign agreements with the district government, accept the management and pay the rent. At present, there are 13

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<sup>5</sup> Data source: Marcello, A. (2013). GLI ORTI COMUNITARI:STRUTTURA, MULTIFUNZIONALITÀ E DIFFUSIONE. IL CASO DEL COMUNE DI MILANO, UNIVERSITDA DEGLI STUDI DI MILANO.

such gardens in Milan, including 747 plots, known as the urban garden.<sup>6</sup>

Due to the constant emergence of other types of garden policies, Milan government decided to terminate the implementation of the policy in 2012, and the government would not construct and manage the garden directly.

### 3.2.3 Policy of 'shared garden'

In view of the constant growth of citizens' demands for garden, Milan promoted the new policy for vast citizens to participate in the garden at the end of 2012, namely the policy of shared garden<sup>7</sup>. It allowed citizens to seek for the abandoned urban lands and transformed them into free gardens for the first time. In this policy, interested citizens must file an application for the construction of garden at the district government in legal identity, and it shall be submitted to the municipal government by the district government, and after verification, the district government shall prepare the agreement and confirm the land entrustment agreement with the association.

The first experimental project of the policy was ISOLAPEPEVERDE garden. Located in the near center of the city, 6 shared gardens emerged within less than a year and a half.

### 3.2.4 Policy of 'Milan cultivation'

In order to response to the demands of citizens for gardens, as well as the theme of World Expo 2015 'Feeding the Planet, Energy for Life', the municipal government of Milan promoted the cultivation policies<sup>8</sup> in 2013.

In this policy, the municipal government would circle the land that could be applied as garden. In the first nine years, it was rent free, and after that, 300 Euros would be charged every year, and it launched open bid. Interested citizen shall form legal association to file application at the government, and the government would select among various associations, and eventually sign specific land entrustment agreement with the selected association.

Since it has just been implemented, there has not been any practice cases when the author started to conduct the investigations.

## 3.3 Urban community garden types in Milan

Till now, seen from the total plots in each garden, there have been 2203 plots in the urban completion area, about 160371 square meters (table 3-1). As for the spatial distribution range<sup>9</sup>, it is expanded from the downtown of Milan to the suburban areas. As for the types of urban land, it mainly locates in the green land, urban open space and abandoned land, as well as the affiliated lands of the urban public construction (for instance, the affiliated lands of the agricultural heritage construction in the city).

According to the standards for dividing garden, all gardens can be divided into four types (table 3-1). Firstly, it is the 'urban garden', namely it is constructed, led and managed by the government, and assigned to citizens for cultivation. The right of such garden belongs to the government. The land in the city is mainly the green land of the park, distributing in different urban areas. Secondly, it is school garden, namely the garden constructed, guided and managed by the school, and cultivated by teachers, students, parents and surrounding residents. The land of such garden belongs to the school, and it is the land for teaching, locating in the primary school, middle school, high school and university. Thirdly, it is the 'shared garden', namely the

<sup>6</sup> <http://www.agricity.it/?p=4815>, the Italian name of the urban garden is "ORTI IN ZONE", and the English name is "GARDEN IN ZONE".

<sup>7</sup> <http://www.agricity.it/?p=4815>, the Italian name of the urban garden is "GIARDINI CONDIVISI", "ORTI" is for farming, its English name is "SHANRED GARDEN".

<sup>8</sup> <http://www.agricity.it/?p=4815>, the Italian name of Milan cultivation policy is "COLTIVA-MI", and the English name is "CULTIVATE-ME/MI".

<sup>9</sup> <http://www.agricity.it/?p=4815>

garden led, managed and cultivated by citizens of Milan, and it is entrusted by the Milan government. The right of such land belongs to the government, and it belongs to the waste land in the category of construction land. Fourthly, it is the garden managed or led by the third party (individuals or groups), entrusted by municipal government of Milan or government of other levels, and assigned to citizens of Milan. Such garden mainly locates in the waste land or the park. The land ownership belongs to the government of each level or private person.

Table 3-1 Statistics of types of gardens in Milan<sup>10</sup>

Types of garden	Amount of garden	Total area (square meters)
Urban garden	747	53576
Urban garden	84	12795
Sharing garden	8	No statistics
Garden managed by the third party	1364	94000
Total	2203	160371

### 3.4 General situation of the selected gardens

#### 3.4.1 Zone bit of garden

The case selected includes the above mentioned four types of gardens in Milan. The organization patterns of the four gardens are diversified, with certain reputation and typicality. They are distributed in the center and suburbs of Milan (Fig. 3-3).

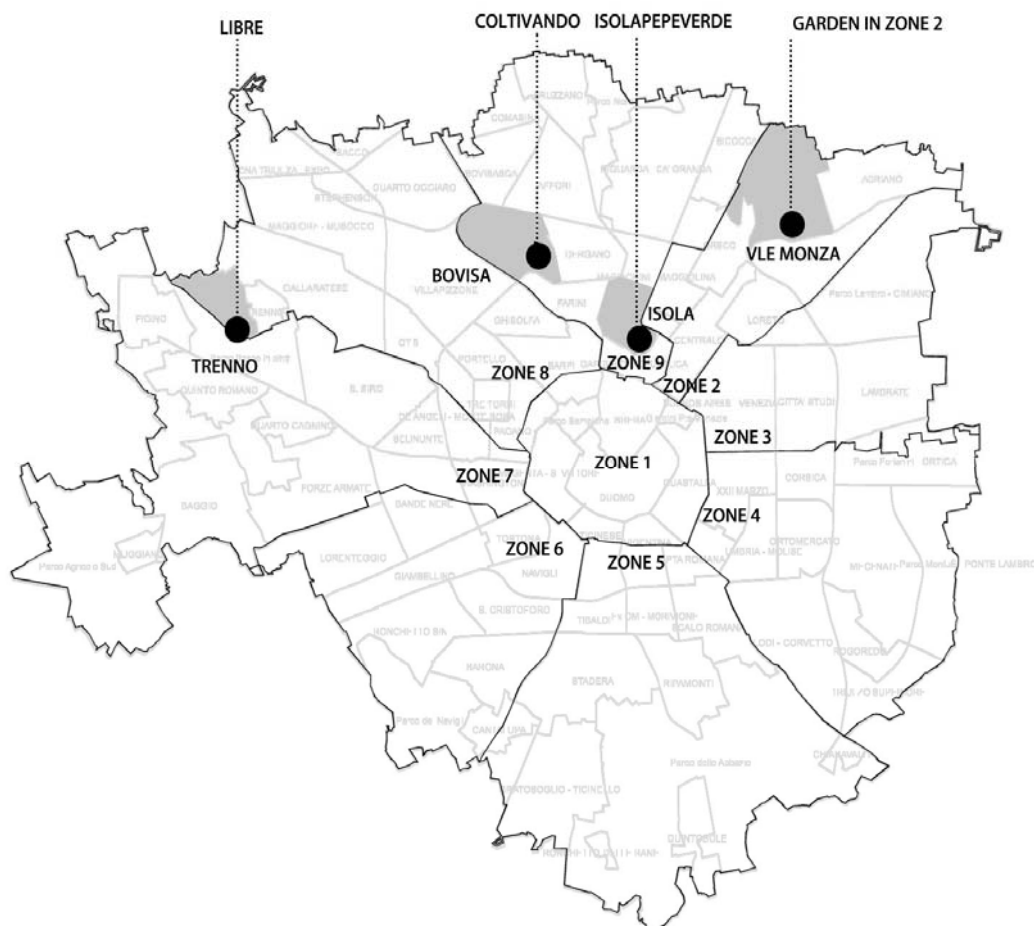


Fig. 3-3 Zone bit of the investigation case

<sup>10</sup> Data source: improved by author according to the material provided by the green department of Milan government



### 3.4.2 General situation of the garden

#### (1) ISOLAPEPEVERDE garden

ISOLAPEPEVERDE garden was the first legal garden constructed, managed and cultivated spontaneously by citizens in Milan. The major cultivators signed the entrustment agreement with the government on behalf of the association, and turned the waste land in the near center to be the urban garden. The fight for the right to use among in 2005 urged the Milan government to make policies for the shared garden. This garden was officially opened to the public in May 2013, as the first legal 'shared garden' in Milan. With a high reputation in Milan, Italy and even Europe, it has attracted numerous overseas visitors and learners.

Since the moment when community residents decided to re-construct the waste urban land to be a shared garden among citizens, it has already experienced three main stages in four years. In the first stage, it was the formation stage of garden association, in which the community residents integrated separate individuals into a legal community association, so as to fight for the legal right to use at the government much more effectively. In the second stage, it was the formation stage of the legal right to use, in which the community association fought for the support of vast citizens through constant conciliation with governmental agencies, and eventually formed the public policies of shared garden with the government under the help of other associations. In the third stage, it was the open stage, namely the garden was officially opened till now, receiving the community residents and citizens in various forms, such as diversified organizational activities, common laboring, reception and visit, etc. It could also serve the academic research institutions in other cities and even foreign countries.



Fig. 3-4 Inner landscape of ISOLAPEPEVERDE garden<sup>11</sup>



Fig. 3-5 Urban background of ISOLAPEPEVERDE garden<sup>12</sup>

#### (2) COLTIVANDO garden

COLTIVANDO garden was the first university garden in the university campus of the urban industrial and transformation updating region in Italy, and it was initiated by teachers and students of School of Design, Politecnico di Milano and co-constructed by surrounding community residents. The garden was firstly established in 2011, as the model and typical case of university garden.

From the idea of constructing a university garden among teachers and students in Politecnico di Milano to the construction, implementation and development of garden, it has experienced

<sup>11</sup> Data source: <http://it.paperblog.com/isola-pepe-verde-un-miracolo-di-giardino-tra-i-palazzi-2066583/>

<sup>12</sup> Data source: drawn by the author



three main development stages.

In the first stage, it lasted from September 2011 to March 2012, during which, professors and students in School of Design, Politecnico di Milano proposed the idea of constructing a garden in the university campus in the postgraduate course 'temporary urban solution', aiming to open the university campus to the community residents, as a common space of sharing labor, experience and knowledge, and to re-establish the relationship between the local residents and Politecnico di Milano which is isolated from the local history and culture. Moreover, it was a positive design and utilization of urban waste land, which can construct the urban public space innovatively and pleasantly. During this period, work in three directions had been conducted in order to verify the feasibility of this idea. At first, other experts in the campus, as well as other garden managers were consulted. Secondly, right to use and financial support of this land was applied at related departments in Politecnico di Milano. Eventually, the initiative of BOVISA community residents in participating in the garden was investigated.

In the second stage, it was the common design stage of community residents, during which, teachers, professors and students responsible for this project planned together, invited representatives from related institutions, associations and government departments, as well as BOVISA community residents, and held three large-scale common design activities from May to July in 2012, including four workshops. As a result, the graphic design, work and labor mode of garden was basically confirmed, and certain number of residents, about 18, were involved.

In the third stage, it was the official construction and cultivation stage, as well as the official start of cultivation. From October, 2012, teachers, students and community residents responsible for the project would conduct common labor activities on each Saturday, including the agricultural cultivation, as well as the construction of agricultural facilities and tools. Besides, a series of garden activities would also be held.



Fig.3-6 Inner landscape of OLTIVANDO garden<sup>13</sup>

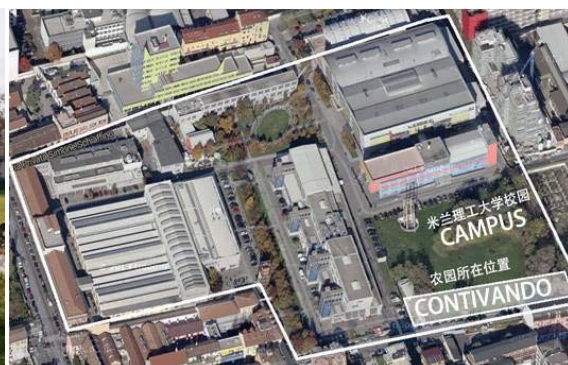


Fig.3-7 Urban background of COLTIVANDO garden<sup>14</sup>

### (3). LIBRE Garden

LIBRE garden locates in the suburb garden LIBRE of the city, and it was the first legal urban garden operated and managed by a third non-profit organization entrusted by the government. Established in 1988, it provided basis and examples for the government to develop and construct garden, and to assign cultivated lands for citizens in later stage in Milan.

<sup>13</sup> Data source: taken by the author

<sup>14</sup> Data source: taken by the author



Fig.3-9 Inner landscape of LIBRE garden<sup>15</sup>



Fig.3-8 Urban background of LIBRE Garden<sup>16</sup>

#### (4) GARDEN IN ZONE 2 garden

GARDEN IN ZONE 2 garden locates in the urban garden, established in 2009, and it was the last garden directly constructed and managed by Milan government, and assigned to the citizens.



Fig.3-10 Urban background of GARDEN IN ZONE 2 garden<sup>17</sup>



Fig.3-11 Inner landscape of GARDEN IN ZONE 2 garden<sup>18</sup>

### 3.4.3 Graphic design of garden

#### (1) ISOLAPEPEVERDE garden

ISOLAPEPEVERDE garden covers an area of 1500 m<sup>2</sup>, containing the indoor space, semi-indoor space and outdoor space. The indoor space includes the conference room and farm tool store room; the semi-indoor space includes the children activity site, storage site, conference and activity site; the outdoor space includes the storage space in the west, basketball site and garden space. The plants mainly include the trees planted in the sites and plants in boxes, bags and various pots.

This garden has independent rainwater collection and irrigation system, as well as the solar electric system. The entire garden has a fence formed by the wire entanglement and building material panel as high as three meters, and it is the fence remained in the site. The entrance of the farmland is on the south of the garden, but it is locked, with stipulated opening time.

<sup>15</sup> Data source: provided by the green department of Milan government

<sup>16</sup> Data source: drawn by the author

<sup>17</sup> Data source: drawn by the author

<sup>18</sup> Data source: provided by the green department of second district government of Milan



Fig.3-12 Site plan of ISOALPEPEVERDE garden<sup>19</sup>

### (2) COLTIVANDO garden

The COLTIVANDO garden covers an area of 1000 m<sup>2</sup>, consisting of an iron made plant box, compost containers, an instrument storeroom and some woods. The entire plot is in the campus of Politecnico di Milano, close to the entrance of the university (on the left), and the south of the garden is the iron fence of the university. The garden does not have fence, or plots with fences. The opening hours of the garden are the same to the opening hours of the university. The garden has water system and electric system connected to the university.

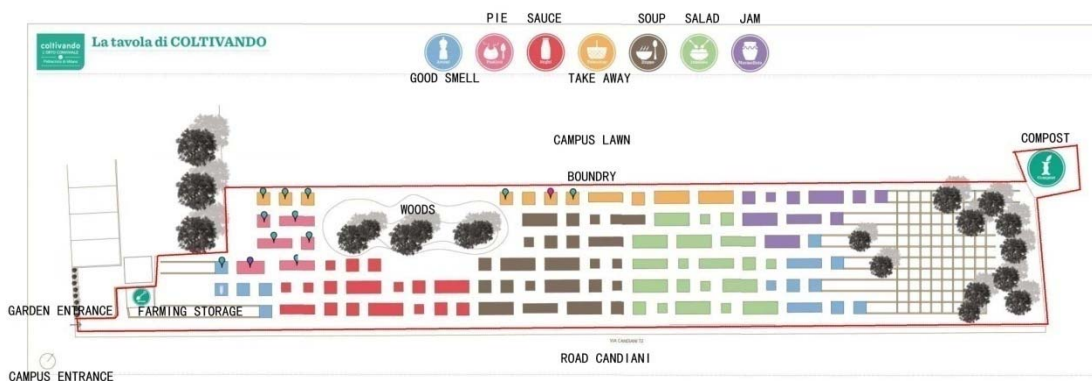


Fig.3-13 Site plan of COLTIVANDO garden<sup>20</sup>

### (3) LIBRE garden

LIBRE garden covers an area of 3737 m<sup>2</sup>, consisting of 40 independent cultivation plots and two public sites. There are knee-high fences between independent plots, and each plot has number plates and doors with lock, about 60-100 m<sup>2</sup>. The two public sites have trees, pavilions, lawns, barbecue sites and houses with farm tools. The entire garden is surrounded by brush hedge and shrub about 1.5 meters in height, there is a gate with locks in the north, and it also has opening hours. The garden is connected to the water system of the city, but there is no power supply system.

<sup>19</sup> Data source: drawn by the author

<sup>20</sup> Data source: categorized by the author from <http://www.coltivando.polimi.it/>



#### (4) GARDEN IN ZONE 2 garden

GARDEN IN ZONE 2 garden covers an area of 1594 m<sup>2</sup>, consisting of 30 independent cultivated plots and one public site. The independent plot is separated by the hollow iron gauze about 1.3 meters in height. Each plot has a door with lock, and farm tool locker and irrigation faucet is set inside the plot. The minimum plot area is 41.1 m<sup>2</sup>, while the maximum plot area is 59.15 m<sup>2</sup>. The public site is in the east of the garden, consisting of lawn and rest desk. The entire garden is in the public garden, with the north as open garden Greenland and the east as the entrance with locks. It also has opening hours. The garden is connected to the water system of the city, but there is no power supply system.

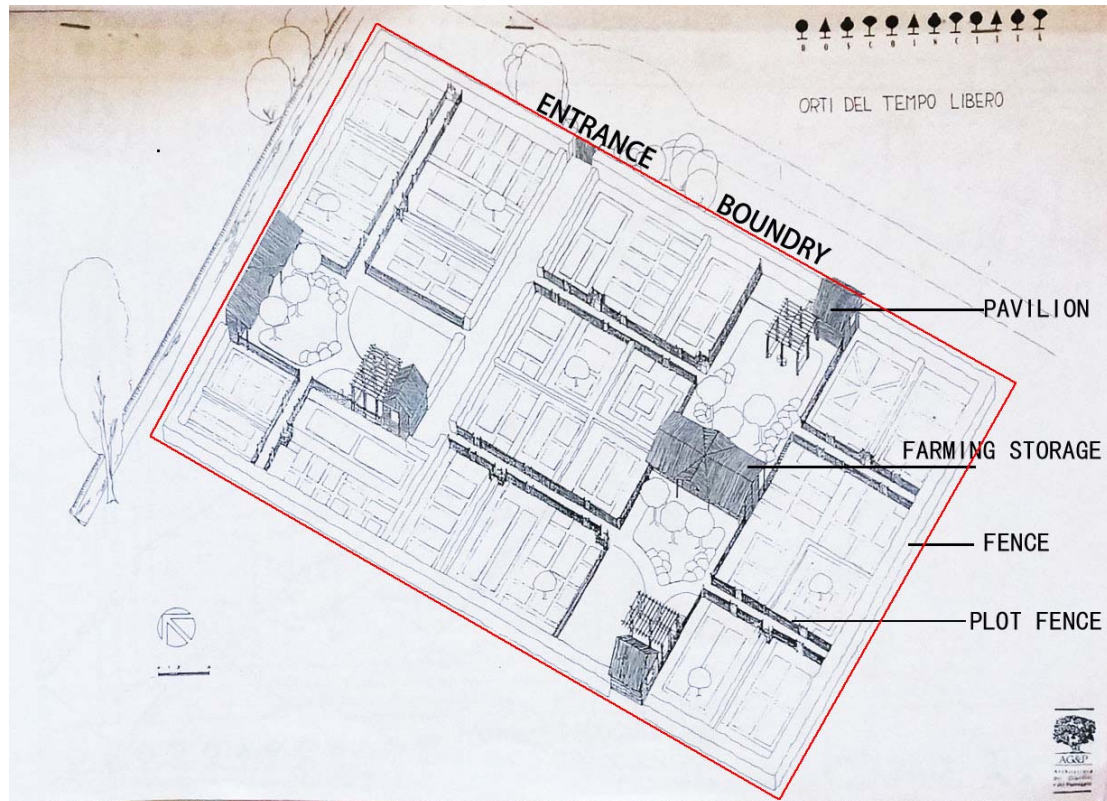


Fig. 3-14 Site plan of LIBRE garden<sup>21</sup>

<sup>21</sup> Data source: provided by ITALIA NOSTRA Association Administrator

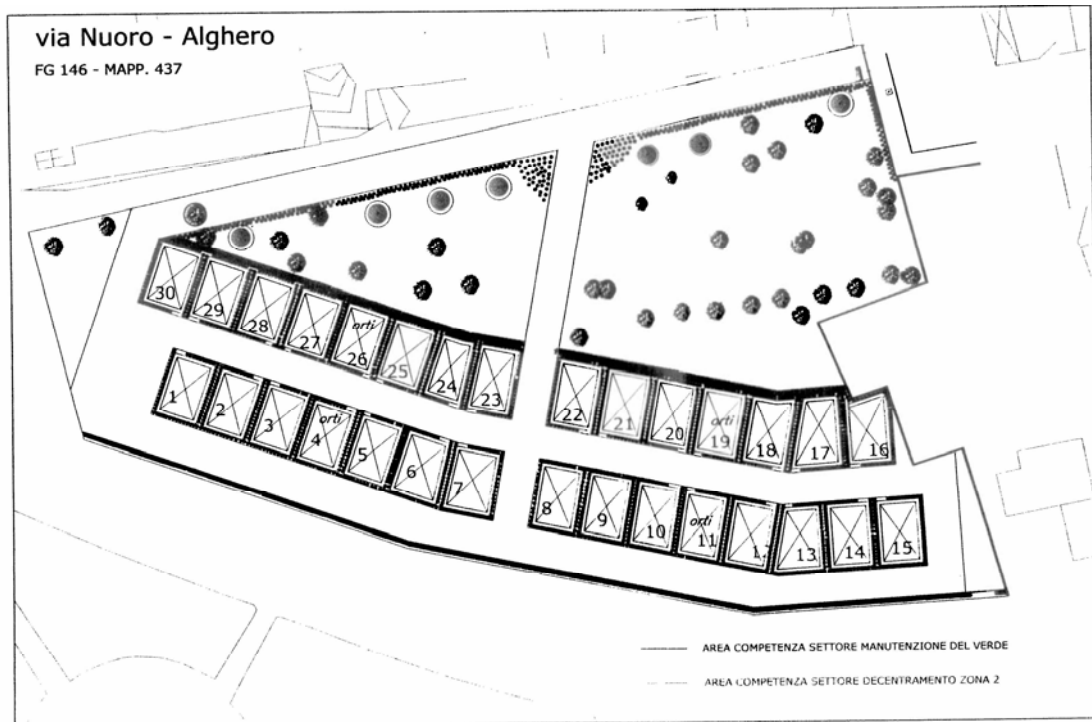


Fig. 3-15 Site plan of GARDEN IN ZONE 2 garden<sup>22</sup>

<sup>22</sup> Data source: provided by the green department of the zone 2 government of milano

## CHAPTER 4 ORGANIZATION PATTERNS OF SELECTED CASES

### 4.1 Introduction

Based on research method of the three main characters (land owners, leading administrators and cultivators) in the garden project and the organization pattern in the literature review, it attempts to conclude the organization pattern of the garden from two levels, including the organization structure of the main characters (from the perspective of the organization) and organization structure between the cultivators (inside the organization). Combining the research methods of the organization structure, it main conduct the organization structure analysis from three core problems specifically for each garden.

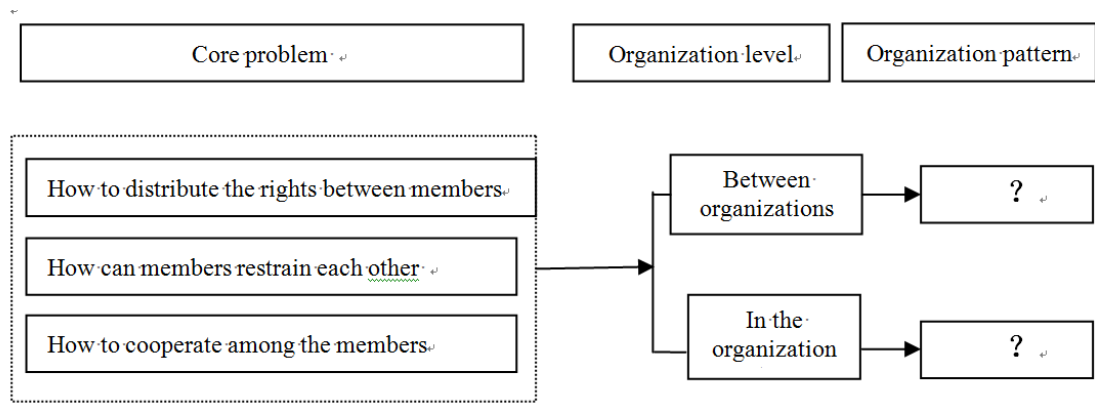


Fig. 4-1 Garden organization pattern analytical framework<sup>23</sup>

### 4.2 Organization pattern of investigated cases

#### 4.2.1 Organization structure of ISOLAPEPEVERDE Garden

##### (1) Outside the garden

The landowner of the garden is Milan government, and the leading administrator and cultivator of the garden are from the same group, formed by the ISOLA community residents. These residents are the core members of the garden. In order to communicate with the government better, they applied to be the non-profit ISOLAPEPEVERDE Garden association in October 2012.

**Distribution of decision-making power:** Milan government has absolute decision-making power in the legitimate right to use, and as for such problems, the garden association can only participate in the decision making. As for the specific design, construction, making of rules and regulation, leadership management, etc. although the garden association has dominant decision-making power, Milan government also proposed the regularity principles and restrictive conditions. In general, most of decision-making power is held by the garden association, and only a little is held by the government department.

**Constraint form:** Core members of the garden signed the legal entrustment agreement with

<sup>23</sup> Data source: drawn by the author

Milan government, for determining the relationship of both sides and agreeing the rights of obligations of both sides. The agreement was signed in May 7, 2012, lasting for a year. The Association must propose the application of continuing the agreement at the Milan government about three months in advance.

**Cooperation and coordination:** When great problems shall be solved, the garden association shall apply at the related departments of the government in legal identity, and the government shall invite the association in the form of conference to participate in it or approve in the form of documents. The entire process shall proceed according to the administrative flows of the government.

## **(2) Inside the garden**

The garden is an entire plot, the members will work together instead of working in a separate plot. The garden use right is shared by all members, in collective model.

**Distribution of decision-making power:** According to the stipulation of the association, as for the decision-making power and leadership administration authority, the association chamber formed by 18 people elected by association members shall be the decision-making power and administration subject, for deciding and organizing the main activities, financing, investment and election of new members or new core members. However, actually, besides main activities, not all events are organized or decided by the association members (for instance, join of new members, planting new plants, constructing children stages, etc.), and instead, it shall be decided and organized by seven to eight enthusiastic members, and noticed to few members. Therefore, the seven to eight association members turn to be the decision-making and administrative subject. Besides, any enthusiastic members can participate in the decision-making and administration, and as a result, the opportunities of distributing decision-making power and leadership are equally distributed among the core members. The decision-making group shall include less than 10 people.

**Constraint form:** Although there is legal association restraining the rights and obligations of association members, but actually, it does not completely follow the legal constraint, for instance, members must take each activity of the association, as well as the annual public conference, etc. In practice, not all members can fulfill it, and it will not impact the legal identity of members. The mutual constraint between members relies on the moral constraint, friendship and enthusiasm between them.

**Cooperation and coordination:** In daily operation of the garden, each member shall take the division of labor gradually and naturally according to their specialties in practical labor. A carpenter shall be responsible for the maintenance of electric system and making of garden tools, while an experienced member shall be responsible for the processing of compost treatment, and a student shall be responsible for the network maintenance and notification.

When it shall hold various kinds of activities or deal with emergencies, the association member shall contribute what they have to the association, such as labor, money, ideas, to get involved in the voluntary labor. Most core members with full-time jobs have held at least 100 social activities since the opening of the garden, and it mainly relies on the flexible and mobilizing cooperation

and coordination.

#### 4.2.2 Organization structure of COLTIVANDO garden

##### (1) Outside the garden

The garden is owned by Politecnico di Milano. The leading administrator and cultivator are from the same group, formed by the teachers, students and surrounding community residents.

**Distribution of decision-making power:** As for the land use right, Politecnico di Milano grasped the absolute decision-making power, but as for the rule-making, design and construction of garden, as well as the leadership administrative decision, the university has no intervening power, while the cultivating group has absolute decision-making right. In general, the power of the garden is concentrated upon the cultivation group.

**Constraint form:** The relationship between the cultivating group and Politecnico di Milano is confirmed in the form of teaching research project approval, and the rights and obligations of both parties shall be restrained with the teaching project as the basic requirements.

**Cooperation and coordination:** When it shall solve the problem with the school, teachers and students of the cultivating group would be responsible for the communication and exchange with related departments, while the school shall also contact the teachers or students in the cultivating group through related agencies when necessary. In short, both parties shall communicate with each other for coordination in the teaching and administrative procedures of the university education agency.

##### (2) Inside the garden

The garden is owned by all members, in collective model. The subject of the garden is 100 plant boxes, divided according to the usages of plants, and plated by all members.

**Distribution of decision-making power:** Everything of the garden shall be decided democratically by all members of the garden group. Although no all members have the time to get involved in the decision-making or administration process, all available and enthusiastic members have equal opportunities to get involved. Just like the ISOLAPEPEVERDE garden, the decision-making and administrative power of the garden is equally distributed to each cultivator.

**Constraint form:** Although at the beginning of the project, teachers and students design a set of rules and regulations for determining the rights and obligations of each member, for instance, at the first beginning, everyone must work at least 1.5 hours each week<sup>24</sup>, but in the later practice, these rules and regulations are abandoned. There are no constraints on new members, and members are completely restrained by their enthusiasm, emotion and morality.

**Cooperation and coordination:** In the daily cultivation, the relatively fixed division of labor would be formed according to the specialty of each individual, but not completely fixed, and other members can take the responsibilities when necessary. Specifically speaking, seven members of the garden will be responsible for certain affairs, for instance, a male professor shall be

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<sup>24</sup> Data source: <http://www.coltivando.polimi.it/>



responsible for maintaining the water system of the garden; an agricultural teacher shall be responsible for the selection and maintenance of seeds; a middle-aged male shall be responsible for the organic fertilization of garden; a female shall be responsible for the recording, photo-taking and network maintenance of daily activities; a man shall be responsible for the farm tools; and a man shall be responsible for the coordination with Politecnico di Milano.

When dealing with the emergencies and holding activities, just like ISOLAPEPEVERDDE garden, it also cooperates in flexible principle of 'contribute what you have'. In order to consider the work of members, the cultivation group shall take collective labor or activities in each Saturday. Within the two and a half years till now, the garden has already held 67 activities of all kinds.

### **(1) Outside the garden**

The land of garden is owned by Milan government. The leading administrator is the Milan branch of non-profit ITLIA NOSTRA Association. The garden cultivators are citizens of Milan.

**Distribution of decision-making power:** The decision-making power authorized by the legal utilization of land is grasped by the government. NOSTRA Association would fight actively and participate in the decision-making democratically. In rulemaking process, the government sector, resident representative and association representative shall negotiate together, but apparently, the government department takes the initiative. The chairman of association proposed to open the garden to young people, but it was rejected by the government, and it can be seen that the rulemaking of garden, as well as the selective standard of cultivators are concentrated in the government, while the post-stage garden design, construction and management decision-making power is grasped by the NOSTRA association. In conclusion, cultivators share the least decision-making power, while NOSTRA association has more management decision-making power, and the government has rulemaking power and decision-making power authorized by the legal land use right.

**Constraint form:** The garden mainly confirms the relationship through the legal agreement signed between the government and NOSTRA association, and between NOSTRA association and cultivator, for stating the rights and obligations.

**Cooperation and coordination:** Special principal shall be selected among the cultivators, for responsible for the water and soil. When there are problems, garden cultivator shall contact the man in charge informally and directly, and the man in charge shall be responsible for delivering the problem to the association. If it is a great problem, the association shall deliver it to the government department, and discuss for negotiating the solution, and eventually, it shall be delivered to the cultivator step by step.

### **(2) Inside the garden**

The garden is divided into 40 independent cultivating plots, and each cultivator has the use right of independent plot, and conduct the cultivating activities in his separate plot, as typical individual mode.

**Distribution of decision-making power:** By following the clearly stated rules and regulations in the agreement signed with the association, each member has the right to decide and manage all

affairs concerning the plot, rather than the right to decide or manage other cultivators and affairs of their plots.

**Constraint form:** The constraints of members are from the agreement between each member and association, and as a result, the cultivators are restrained by the legal entrustment agreement signed with the association.

**Cooperation and coordination:** When the cultivators meet problems, they may reflect the problem to the principal of the garden independently. When the association shall coordinate in the work, it shall connect the principal of the garden at first, and then the principal shall notice other cultivators.

#### 4.2.3 Organization structure of LIBRE garden

##### (1) outside the garden

The land of garden is owned by Milan government. The leading administrator is the Milan branch of non-profit ITLIA NOSTRA Association. The garden cultivators are citizens of Milan.

**Distribution of decision-making power:** The decision-making power authorized by the legal utilization of land is grasped by the government. NOSTRA Association would fight actively and participate in the decision-making democratically. The rulemaking power and selection standard of cultivators is grasped by the government, while NOSTRA association and citizen representatives shall participate in the decision making democratically. The post-stage garden design, construction and management decision-making power is grasped by the NOSTRA association. In conclusion, cultivators share the least decision-making power, while NOSTRA association has more management decision-making power, and the government has rulemaking power and decision-making power authorized by the legal land use right.

**Constraint form:** The garden mainly confirms the relationship through the legal agreement signed between the government and NOSTRA association, and between NOSTRA association and cultivator, for stating the rights and obligations.

**Cooperation and coordination:** Special principal shall be selected among the cultivators, for responsible for the water and soil. When there are problems, garden cultivator shall contact the man in charge informally and directly, and the man in charge shall be responsible for delivering the problem to the association. If it is a great problem, the association shall deliver it to the government department, and discuss for negotiating the solution, and eventually, it shall be delivered to the cultivator step by step.

##### (2) Inside the garden

The garden is divided into 40 independent cultivating plots, and each cultivator has the use right of independent plot, and conduct the cultivating activities in his separate plot, as typical individual mode.

**Distribution of decision-making power:** By following the clearly stated rules and regulations in the agreement signed with the association, each member has the right to decide and manage all affairs concerning the plot, rather than the right to decide or manage other cultivators and affairs

of their plots.

**Constraint form:** The constraints of members are from the agreement between each member and association, and as a result, the cultivators are restrained by the legal entrustment agreement signed with the association.

**Cooperation and coordination:** When the cultivators meet problems, they may reflect the problem to the principal of the garden independently. When the association shall coordinate in the work, it shall connect the principal of the garden at first, and then the principal shall notice other cultivators.

#### 4.2.4 Organization structure of GARDEN IN ZONE 2 garden

##### (1) Outside the garden

The land owner and leading administrator of garden is Milan government, and the main cultivator of the garden is citizens of Milan.

**Distribution of decision-making power:** Milan government has absolute decision-making power, determining the garden location, design standard, access condition of cultivator, rules and regulations that shall be abided by cultivators, etc. The cultivators of the garden are in passive position in the decision-making power assignment structure. As for the assignment of administration power, it is dominated by the district government of Milan, including the recruitment of cultivators, replacement and supervising the implementation of rules and regulations. The cultivators of garden have the right to establish management council, consisting of five cultivators selected, responsible for the cutting and maintenance of public part of garden (grassland, desk and chair, trees, etc.), and delivering the instructions from the district government, or requirements and problems from the cultivators. However, in practice, it fails to develop the council, and the management right is still grasped by the district government, and the overall decision-making power is still grasped by the government.

**Constraint form:** Milan government would sign legal entrustment agreement with each cultivator for standardizing and restraining the behaviors of both parties. The entrustment agreement clearly states the rights and obligations of both parties, and each agreement validates for five years. When it is due, the agreement can be continued, and the same cultivator shall not continue the agreement for more than two times.

**Cooperation and coordination:** The district government grasps the data of each garden, and it would contact a single garden if necessary. Although the garden has the right to establish management council as the intermediary for the communication between the government and cultivators, it fails to develop such an organization, and actually the cultivator would reflect the problems to the district government separately, and the district government would seek for solutions from the municipal government.

##### (2) Inside the garden

The garden is divided into 30 independent cultivating plots, and each cultivator has the use right of independent plot, and conduct the cultivating activities in his separate plot, as typical

individual mode.

**Distribution of decision-making power:** By following the clearly stated rules and regulations in the agreement signed with the association, each member has the right to decide and manage all affairs concerning the plot, rather than the right to decide or manage other cultivators and affairs of their plots.

**Constraint form:** When the cultivators meet problems, they may reflect the problem to the principal of the garden independently. When the association shall coordinate in the work, it shall connect the principal of the garden at first, and then the principal shall notice other cultivators.

**Cooperation and coordination:** In time of problems, cultivators would contact the green department of district government independently for solutions. When the government shall coordinate in work, the government department shall contact the individual cultivator directly.

### 4.3 Conclusive remarks

Seen from the organization perspective, the cultivators and leading administrators of the ISOLAPEPEVERDE garden and COLTIVANDO garden are in the same group, with relatively independent rulemaking and administrative power, while the leading administrators and cultivators of LIBRE garden and GARDEN IZN ZONE 2 garden are separated. Cultivators enjoy less rulemaking and leading administrative power, and they can only accept the rules and administration passively. In this paper, it is summarized as self-organizing mode and other-organizing mode.

Seen from the inner organization, namely the organization structure between cultivators, everyone in ISOLAPEPEVERDE garden and COLTIVANDO garden enjoys equal decision-making power over the entire garden. Their obligations and rights are mainly restrained by morality, and they mainly work after collective negotiation, while each cultivator in LIBRE garden and GARDEN IZN ZONE 2 garden enjoys independent decision-making power of the plot. Their obligations and rights are mainly restrained by agreement, and they could work without collective negotiation. It is summarized as collective mode and individual mode in this research.

Table 4-1 Organization pattern table of different gardens<sup>25</sup>

Community garden		Isolapepeverde	Coltivando	Libre	Garden in zone 2
Landowner		Government	Politecnico di milano	Government	Government
Leading managers of garden		Association	Cultivating group	Association	Government
Main cultivator of garden		Association	Cultivating group	Citizens	Citizens
Between organiza	Organization pattern	Self-organizing		Other-organizing	

<sup>25</sup> Data source: drawn by the author

tional roles	Distribution of decision-maki ng power	Decision-making power of legal right to use land	Government	School	Government	Government
		Decision-making power of making rules	Association+go vernment	Cultivating group	Government +association+ citizens	Government
		Decision-making power of leadership and management	Association	Cultivating group	Association	Government
	Constraint form		Leal consignment agreement	Teaching project approval	Leal consignment agreement	Leal consignment agreement
	Cooperation and coordination		Government bureaucratic process	School administrati on process	Government bureaucratic process	Government bureaucratic process
Inside the cultivato rs	Organization pattern		Collective		Individuals	
	Distribution of decision-making power		Equally distributed		Independent from each other	
	Constraint form		Moral		Legal	
	Cooperation and coordination		Consultation		Legal	

## CHAPTER 5 SOCIAL NETWORK CHARACTERISTICS OF SELECTED CASES

### 5.1 Introduction

According to the research directions and methodology in the social network research, the Social network is divided into three parts as follows: 1. The core members network consist of cultivators, 2. The organizations network between the community garden and the other social communities, 3. The citizens network between community garden and the other citizens. The network characteristics are focused on all net codes analyzed by their quantitative, structural and spatial features.

In this chapter, the number of the members, the social structural features and the spatial structural features would be deeply analyzed in the sub-network of the 4 selected community gardens.

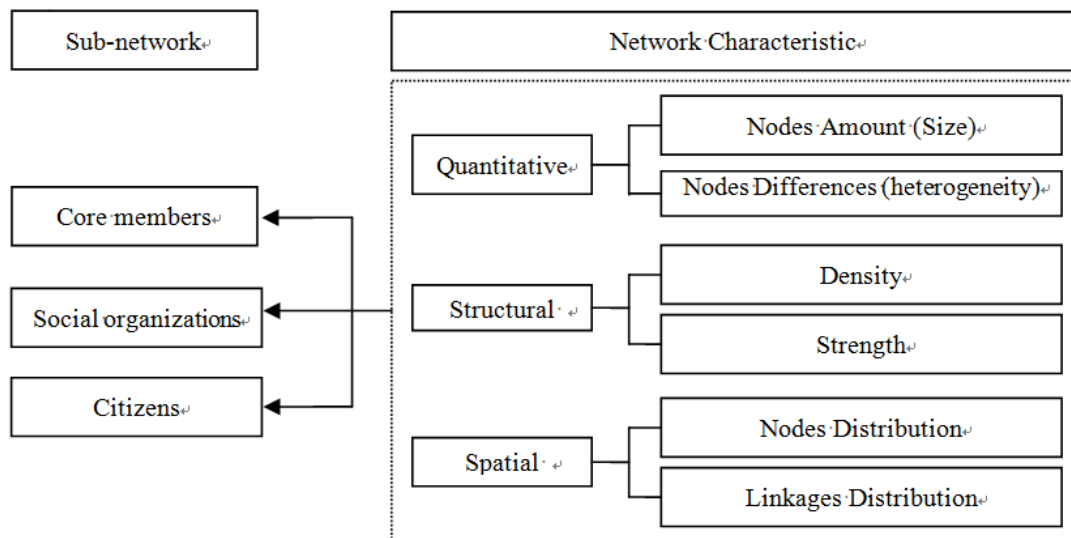


Fig. 5-1 the evaluation frame of social network characteristics<sup>26</sup>

### 5.2 Features of core member network

#### 5.2.1 The network quantitative feature

##### (1) The scale of the network

There is not too much difference in the core member numbers of the 4 community gardens. The core members in ISOLAPEPVERDE and COLTIVANDO are about 20, which is less than the number of in LIBRE, 40 and GARDEN IN ZONE 2, 30.

<sup>26</sup> Data source: drew by the author

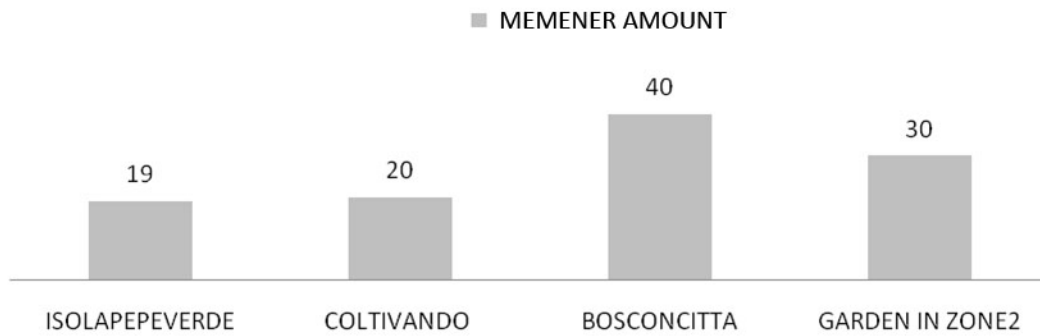


Fig. 5-2 the comparison of core members' number among 4 gardens<sup>27</sup>

(2)The characteristics of heterogeneity

LIBRE and GARDEN IN ZONE 2 show the same older feature in ages, which mainly concentrate on 50 to 90 and the people from 70 to 80 occupied the most large part. The age of the members in ISOLAPEPVERDE and COLTIVANDO decentralized remarkably and show comparatively high heterogeneity, most of them are middle-young people whose age range from 20 to 60. The age distribution in ISOLAPEPEVERDE is more balanced, the number of 30-40, 40-50, 50-60 years old people are 8 in every group. The 50-60 years old members in COLTIVANDO are the maximum group, but there are no 30-40 years old members in COLTIVANDO.

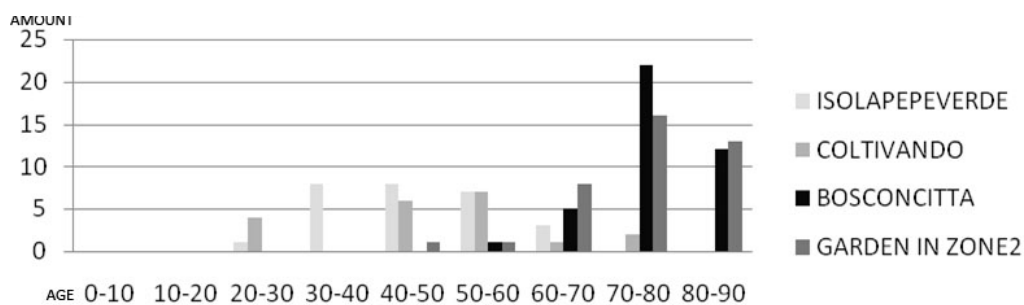


Fig.5-3 The figure of core members' age in 4 gardens<sup>28</sup>

The members of ISOLAPEPVERDE and COLTIVANDO garden share the same percent of man and woman. The men in the other two gardens are much more than women. In LIBRE male members are double the number of female, in GARDEN IN ZONE 2 the number is triple.

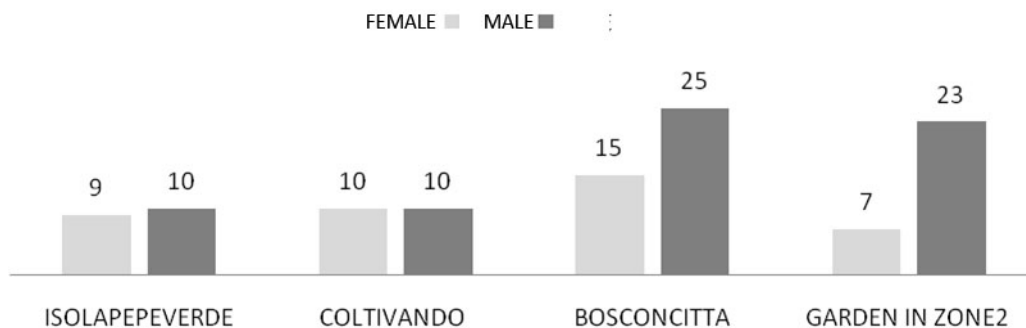


Fig.5-4 The figure of core members' gender in 4 gardens<sup>29</sup>

<sup>27</sup> Data source: improved by the author

<sup>28</sup> Data source: improved by the author

<sup>29</sup> Data source: improved and drew by author based in investigation

Most members in LIBRE and GARDEN IN ZONE 2 are retired people and have a same characteristic of low income. However, the members in ISOLAPEPEVERDE and COLTIVANDO show the different features. The people in ISOLAPEPEVERDE are consist of 6 architects, 3 artists, 1 translator<sup>30</sup>, 1 undergraduate, 1 unemployed black people, 1 freelancer<sup>31</sup> and 1 carpenter. In COLTIVANDO, they are 1 professor<sup>32</sup>, 1 agriculture teacher, 3 undergraduates<sup>33</sup>, 1 computer engineer and 2 retired people.



Fig.5-5 the members' occupations in COLTIVANDO(left) and ISOLAPEPEVERDE(right)<sup>34</sup>

## 5.2.2 The network structure feature

### (1) the density

All the core members in ISOLAPEPEVERDE can recognize the other members very well and know the home address and occupation in detail. In COLTIVANDO, most of the members in the same group such as the teacher' group and students' group can recognize the other member very well, but it's a little hard for them compared with the members in ISOLAPEPEVERDE. The members in LIBRE and GARDEN IN ZONE 2 can only recognize a small part of the other members, as for the detail information such as the home address, it's a little blurred, especially in the COLTIVANDO.

### (2) the members' connection strength

The members' connection also varies considerably. The collective activities hold by the gardens in ISOLAPEPEVERDE and COLTIVANDO are 110 times in 4 years and 68 times in 2 years. The average frequency is 27.5 and 34 times per years respectively. In contrast, the activities are hold 2 times in 26 years in LIBRE and the number is none in GARDEN IN ZONE 2.

Table5-1 The connection among the core members in the four gardens<sup>35</sup>

Gardens		Isolapepeverde		Coltivando		Libre		Garden in zone 2	
		4 years	Average	2 years	Average	26 years	Average	5 years	Average
Number of activities	Association organized	35	8.75	10	5	4	0	0	0
	Association	41	10.25	11	5.5	0	0	0	0

<sup>30</sup> She is the chairman of association ISOLAPEPEVERDE.

<sup>31</sup> She is Kathy who is the vice- chairman of association ISOLAPEPEVERDE.

<sup>32</sup> He is the sponsor of CONTIVANDO.

<sup>33</sup> Data source: <http://www.coltivando.polimi.it/>

<sup>34</sup> Photos took by the author.

<sup>35</sup> Data source: improved and drew by the author based on investigation



	participated								
Farm labour	Collective labour	34	8.5	47	23.5	0	0	0	0
In total		110	27.5	68	34	4	0	0	0

In conclusion, the core membership connection in ISOLAPEPEVERDE and COLTIVANDO is more frequent than the other two gardens in terms of connection intensity and times. There are some incentive connections in LIBRE and GARDEN IN ZONE 2, but they are minority groups with only a small part of members. Comparatively, the connection structure in LIBRE and GARDEN IN ZONE 2 are diffused and alienated, and the connection structure in ISOLAPEPEVERDE and COLTIVANDO are centralized and intimate.

### 5.2.3 The network spatial distribution feature

Most of the core members live nearby the gardens. In ISOLAPEPEVERDE, all the members come from ISOLA neighborhood and concentrated in 500 meters, the farthest member lives less than 1000 meters from the garden. In GARDEN IN ZONE 2, most of the members live in 500 metres and only a few members live in the other neighborhood.

The distribution of the members' living places in LIBRE and COLTIVANDO disperse a lot. Members from LIBRE live in two neighborhood and in a circle of 2 kilometers. Though most of the members from COLTIVANDO live not far away from the garden, there are also 4 members live out of the main built up area of Milano.

In general, the core members mainly live not far from the gardens and live in a centralized area.

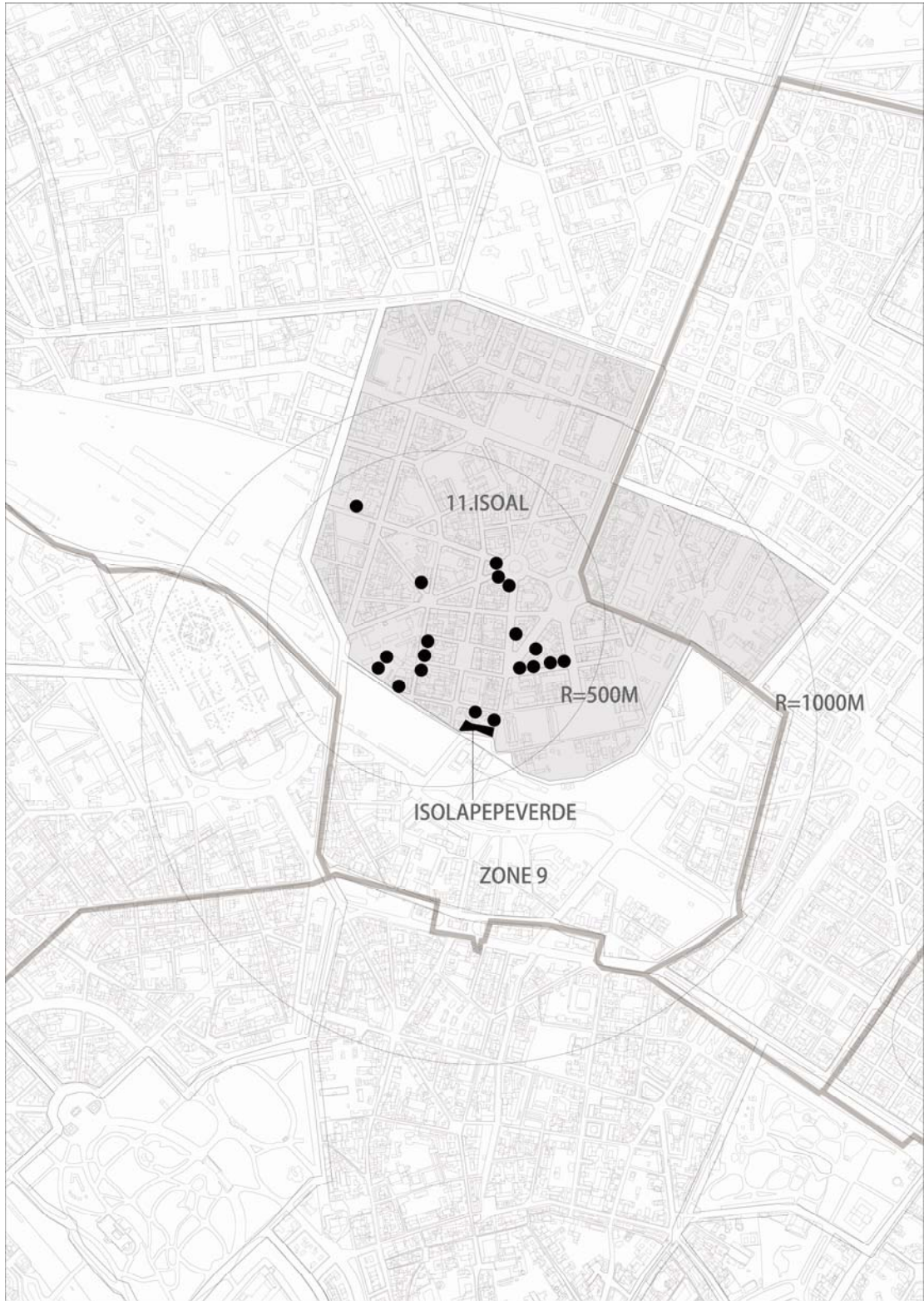


Fig.5-6 The living place distribution of the core members in ISOLAPEPEVERDE<sup>36</sup>

<sup>36</sup> Data source: improved and drew by the author based on investigation

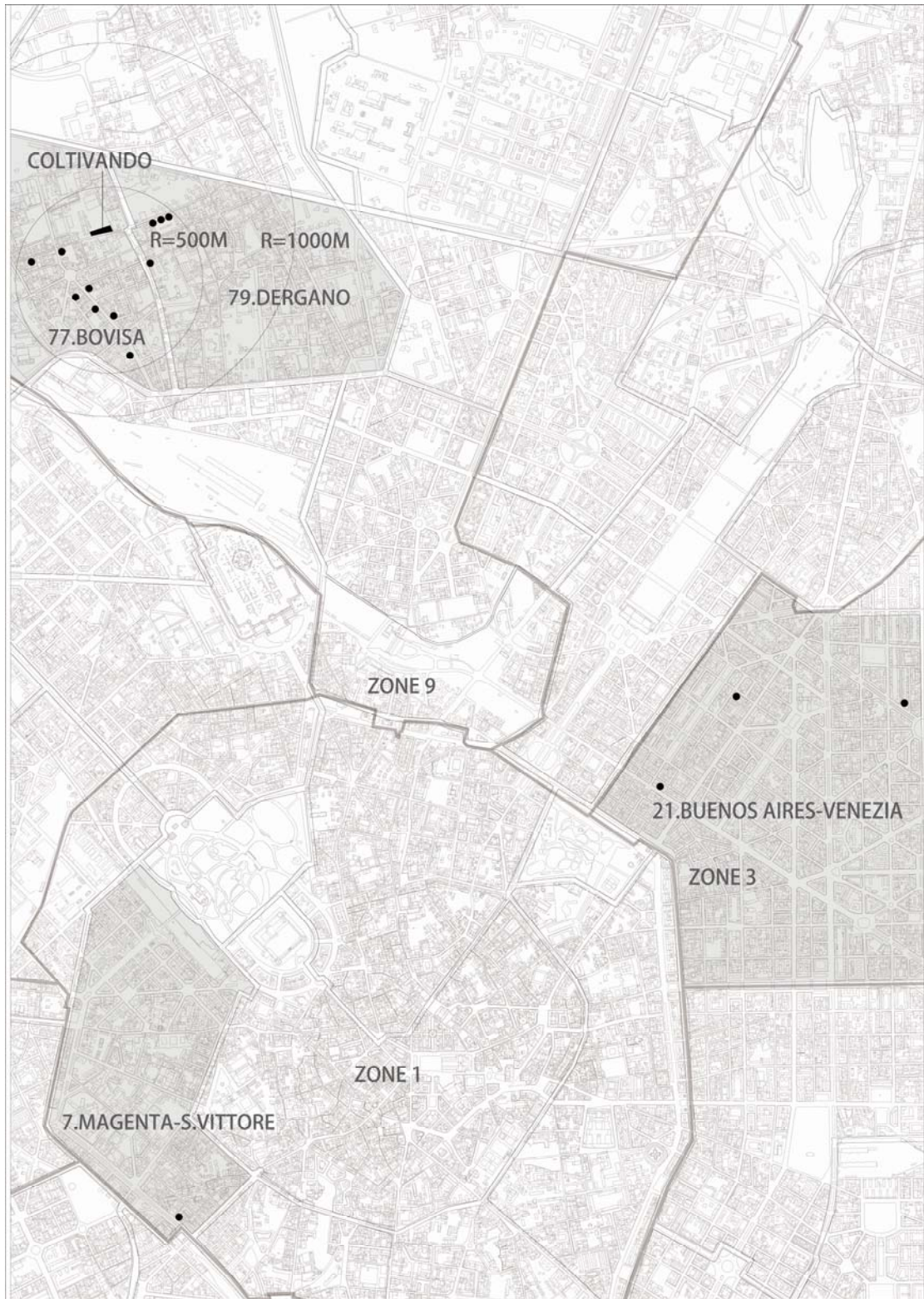


Fig. 5-7 The living place distribution of the core members in COLTIVANDO<sup>37</sup>

<sup>37</sup> Data source: improved and drew by the author based on investigation



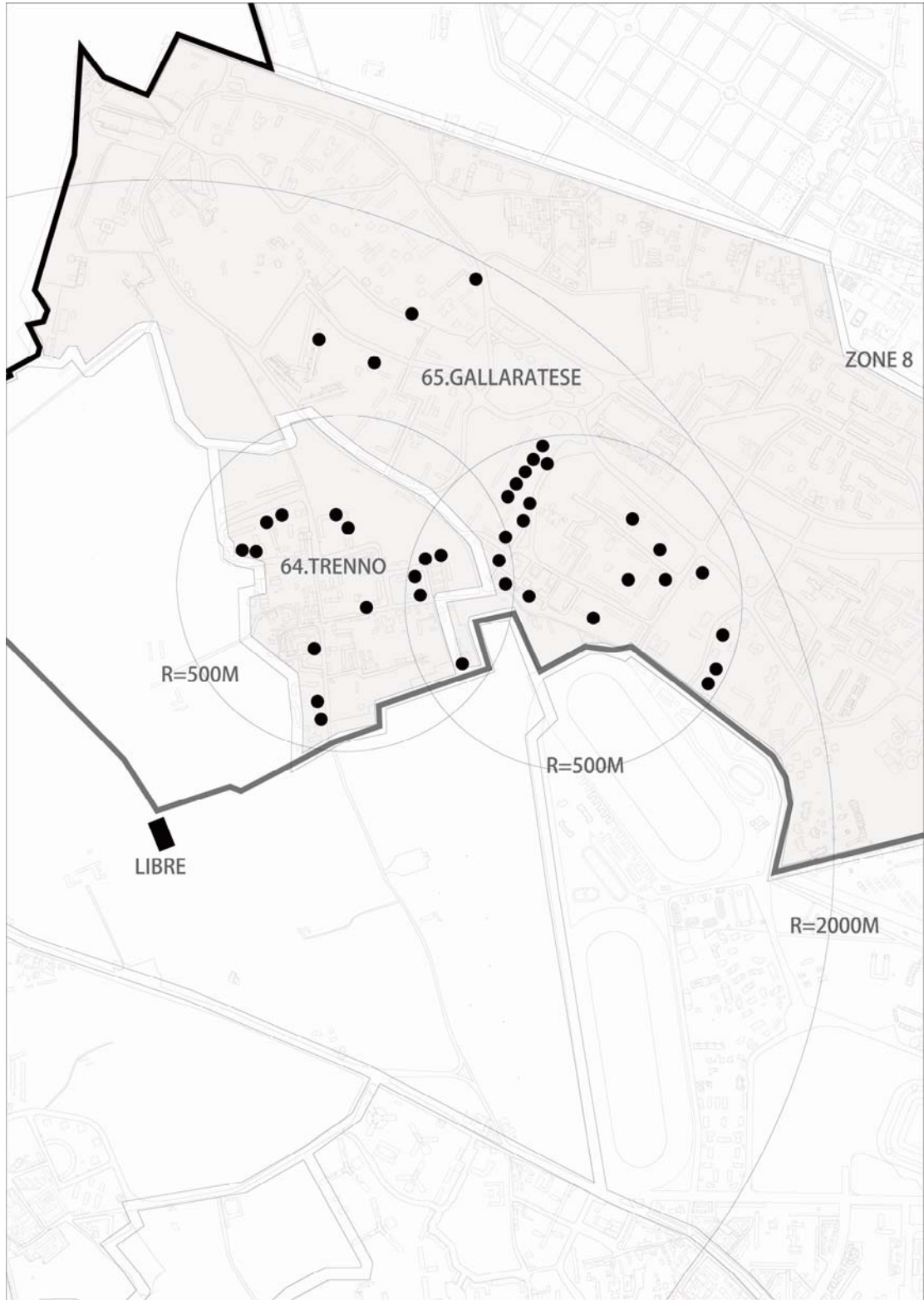


Fig. 5-8 the living place distribution of the core members in libre<sup>38</sup>

<sup>38</sup> Data source: improved and drew by the author based on investigation

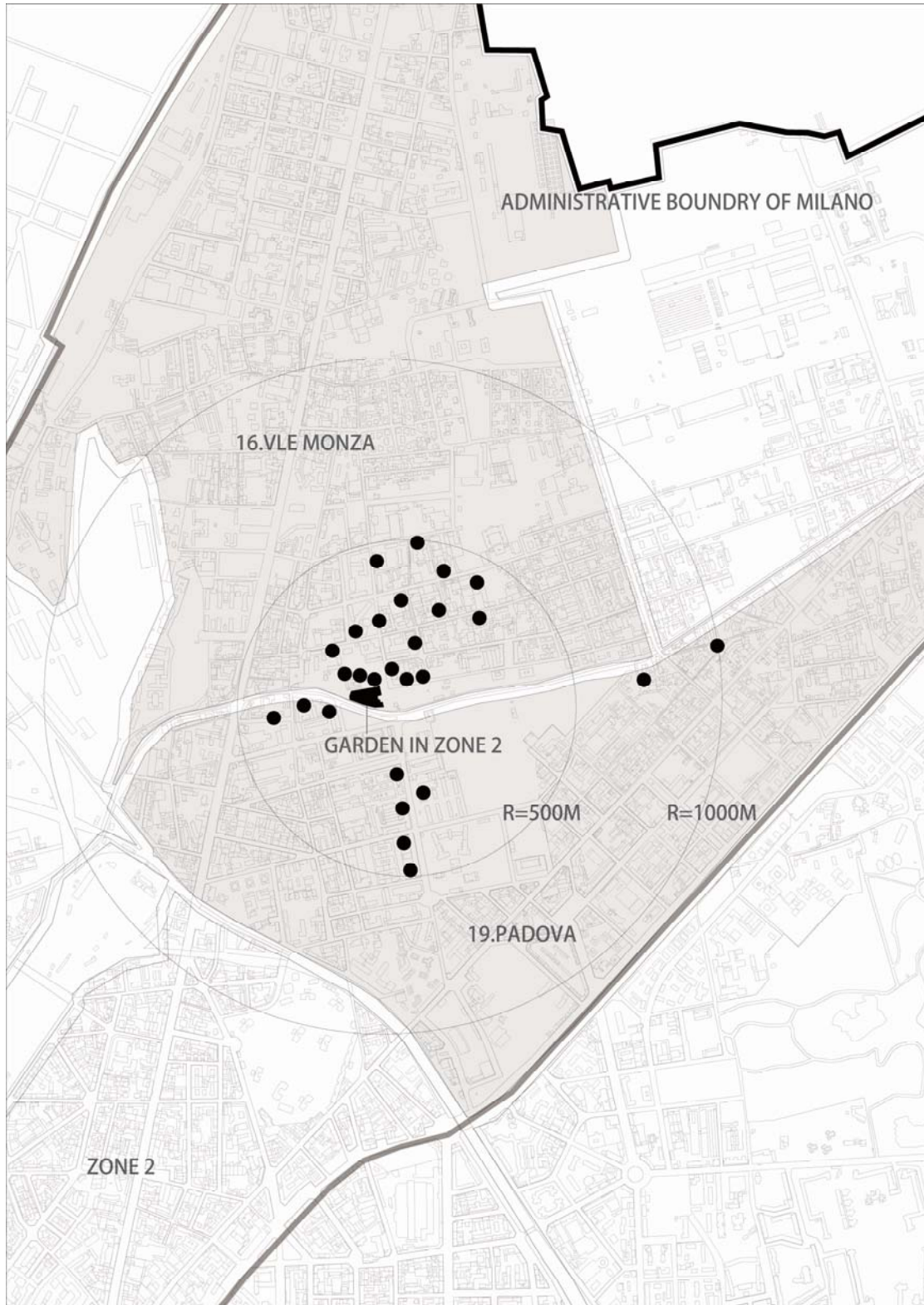


Fig. 5-9 the living place distribution of the core members in garden in zone 2<sup>39</sup>

<sup>39</sup> Data source: improved and drew by the author based on investigation

### 5.3 Features of social organization network

The gardens broaden the partnership with other society organizations and association after a variety of public activities and receptions. Thus, the garden-based society network is established, the network varies a lot in different gardens. In this part, the general and specific features will be examined carefully to compare the difference of the community network in four gardens in detail.

#### 5.3.1 The network quantitative feature

In this part, the related organizations would be examined in detail in terms of the number and the types.

Table 5-2 below illustrates the related organizations in the four gardens. There are almost no organizations in GARDEN IN ZONE 2 and LIBRE. However, the organizations related with ISOLAPEPEVERDE and COLTIVANDO reached 68 and 28 respectively. While the number of the organizations in COLTIVANDO is relatively less than in ISOLAPEREVERDE, this gap narrow when take the existing years of the two gardens. In general, the organizations in ISOLAPEPEVERDE and COLTIVANDO are more than the organizations in GARDEN IN ZONE 2 and LIBRE.

Table 5-2 the number comparison of garden related communities<sup>40</sup>

Gardens	Isolapepeverde	Coltivando	Libre	Garden in zone 2
The number of the organizations	68	28	1	0
The number of the organizations per year	17	11.2	1	0

Further information indicates that the organizations in ISOLAPEPEVERDE and COLTIVANDO have Academic education institutions, associations, commercial institutions, public service agencies and program. In ISOLAPEPEVERDE, the associations and commercial institutions occupying 84% of all the organizations, and the percent are 51% and 33% respectively. Academic education institutions and associations take up 35% and 46% respectively. LIBRE have only one academic education institution and the GARDEN IN ZONE 2 has none organization.

Table 5-3 the type comparison of garden related organizations<sup>41</sup>

Garden		Isolapepeverde		Coltivando		Libre		Garden in zone 2	
		Type	Share	Type	Share	Type	Share	Type	Share
Organizations	Academic education institutions	√	7%	√	35%	√	100%	×	0
	Associations	√	51%	√	46%	×	0	×	0
	Commercial institutions	√	33%	√	7%	×	0	×	0
	Public service agencies	√	3%	√	4%	×	0	×	0
	Program	√	6%	√	7%	×	0	×	0
In total	5	5	100%	5	100%	1	100%	0	0

#### Sub-type of the educational institution

<sup>40</sup> Data source: improved and drew by the author based on investigation

<sup>41</sup> Data source: improved and drew by the author based on investigation

The Academic education institutions related with ISOLAPEPEVERDE and COLTIVANDO cover five kinds of institutions. The organizations in ISOLAPEPEVERDE cover kindergarten, primary school, middle school and university. The organizations in COLTIVANDO mainly connected with higher learning institutions such as college radio station, university or other academic institutions, which in total occupying 60% of all the organizations (Table 5-4).

Table 5-4 the comparison of sub-type of the educational institutions<sup>42</sup>

sub-type of the educational institutions	ISOLAPEPEVERDE		COLTIVANDO	
	Count	Share	Count	Share
kindergarten	√	20%	×	0%
primary school	√	20%	√	20%
middle school	√	20%	×	0%
University academic research organization	√	40%	√	60%
other academic insititutions	×	0%	√	10%
College radio station	×	0%	√	10%

#### Associations:

ISOLAPEPEVERDE contains Non-Profit Organization (NPO), group, network platform and communities while COLTIVANDO contains three of them and lack of communities. Further information (Table 5-5) illustrate the most intensive association is NPO in both of the two gardens. To be specific, the proportion of NPO in all the associations is 74 percent in ISOLAPEPEVERDE and 54 percent in COLTIVANDO. Thus, the connection with other associations is less intensive and dispersal.

Table 5-5 the comparison of sub-type of the associations in the two gardens<sup>43</sup>

Community garden	Isolapepeverde		Coltivando	
	Count	Share	Count	Share
Group	√	14%	√	23%
Npo	√	74%	√	54%
Network platform	√	8.50%	√	23%
Communittee	√	2.80%	×	0%

#### Commercial institutions :

The sub commercial institutions in ISOLAPEPEVERDE and COLTIVANDO vary a lot. There are only a few commercial institutions related with COLTIVANDO, they are sports club and architecture firm. Whereas, there are 10 categories and 18 sub-categories commercial institutions related with ISOLAPEPEVERDE. The hotel and bookshop are the most, which in total occupies 34 percent of all the commercial institutions.

Table 5-6 the comparison of sub commercial institutions in the two gardens<sup>44</sup>

		Isolapepeverde		Coltivando	
		Count	Share	Count	Share
Sports club	Taiji	√	4%	√	50%

<sup>42</sup> Data source: improved and drew by the author based on investigation

<sup>43</sup> Data source: improved and drew by the author based on investigation

<sup>44</sup> Data source: improved and drew by the author based on investigation

Bookshop	Publications	✓	13%	×	--	
Shop	Food	✓	4 %	×	--	
	Music	✓	4%	×	--	
	Clothes	✓	4%	×	--	
	Plant	✓	4%	×	--	
	Drinks	✓	4%	×	--	
	Metal	✓	4%	×	--	
Beauty salon	Cosmetology	✓	4%	×	--	
Bar	Food	✓	4%	×	--	
Company	Drama	✓	4%	×	--	
	Sustainable energy sources	✓	4%	×	--	
	Clean energy	✓	4%	×	--	
	Architectural firm	×	--	✓	50%	
Workshop	Food	✓	4%	×	--	
Restaurant	Food	✓	21%	×	--	
Supermarket	Construction materials	✓	4%	×	--	
Space rental	Space	✓	4%	×	--	
Sum	10	18	17	100%	2	100%

### 5.3.2 The network structure feature

#### The connection intensity

The organizations related with ISOLAPEPEVERDE and COLTIVANDO show the same trend in terms of the connection intensity. The interactive activities among them are less than 1 time per year, the percentage is 74% in ISOLAPEPEVERDE and 71% in COLTIVANDO. The percent of activities more than 2 times per year is 4% in ISOLAPEPEVERDE and 11% in COLTIVANDO (Table 5-7). Activities are even less in LIBER and GARDEN IN ZONE 2, there are no associations take part in activities together with GARDEN IN ZONE 2, and the only one association participate in activities with LIBER, it happened less than 1 time per year.

Table 5-7 the frequency of activities in the four gardens<sup>45</sup>

Activities per year	Isolapepeverde		Coltivando		Libre		Garden in zone 2	
$0 \leq n < 1$	50	74%	20	71%	1	100%	0	0%
$1 \leq n < 2$	8	12%	5	18%	0	0%	0	0%
$2 \leq n < 3$	2	3%	3	11%	0	0%	0	0%
$3 \leq n < 4$	1	1%	0	0%	0	0%	0	0%
In total	68	100%	28	100%	1	100%	0	0%

#### The connection direction

The connection direction means the direction of resource acquisition between the garden and the organization. There are three connection directions in ISOLAPEPEVERDE garden and COLTIVANDO garden, the bi-directional connection among the gardens and the organizations, the Unilateral Connection from the organization to the garden (the organization offer help to the

<sup>45</sup> Data source: improved and drew by the author based on investigation



garden) and the Unilateral Connection from the garden to the organization (the garden offer help to the organization). In GARDEN IN ZONE 2 there are no connections between the garden and the organization. In LIBRE, there are only bi-directional connections.

Table 5-8 show the connection direction between the garden and the organization in the four gradens. The three connections take up the same share in garden ISOLAPEPEVERDE, the bi-directional connection, the OG connection and the GO connection occupying the same 30 percent. COLTIVANDO garden mostly get help or resource from the other organizations, the OG connection take up more than half of all share and there is only 21 percent in the bi-directional connection.

Table 5-8 the connection direction between the garden and the organization in the four gardens<sup>46</sup>

The connection direction	Isolapepeverde		Coltivando		Libre		Garden in zone 2	
	No.	Share	No.	Share	No.	Share	No.	Share
Graden ↔ organization	21	30%	6	21%	1	100%	0	0
Graden ← organization (og)	25	37%	15	54%	0	0%	0	0
Graden → organization (go)	22	32%	7	25%	0	0	0	0
In total	68	100%	28	100%	1	100%	0	0

### The network structure

The connection intensity and the direction make up the network structure (错误!未找到引用源。). There are 4 circles according to the connection intensity between the garden and the organization. Circle one is the core circle organizations which have connections with gardens at least three times per year. Circle two is the close circle the connection frequency is 2-3. Circle three is the less close circle which the connect frequency is between 1 and 2. Circle four is the alienated group, the connected frequency in all the organizations in this circle is less than 1 time per year.

The network structures in ISOLAPEPEVERDE garden and COLTIVANDO garden show the distinctive polarization phenomenon. The core circle organizations occupying a small share of the total while most of the organizations concentrate on the alienated group which only hold the activity less than 1 time per year with the gardens.

The only organization of LIBER garden ranks as the fourth circle, it is a alienated, less frequency and mutual benefit group. GARDEN IN ZONE 2 has no mutual-linkage network.

<sup>46</sup> Data source: improved and drew by the author based on investigation

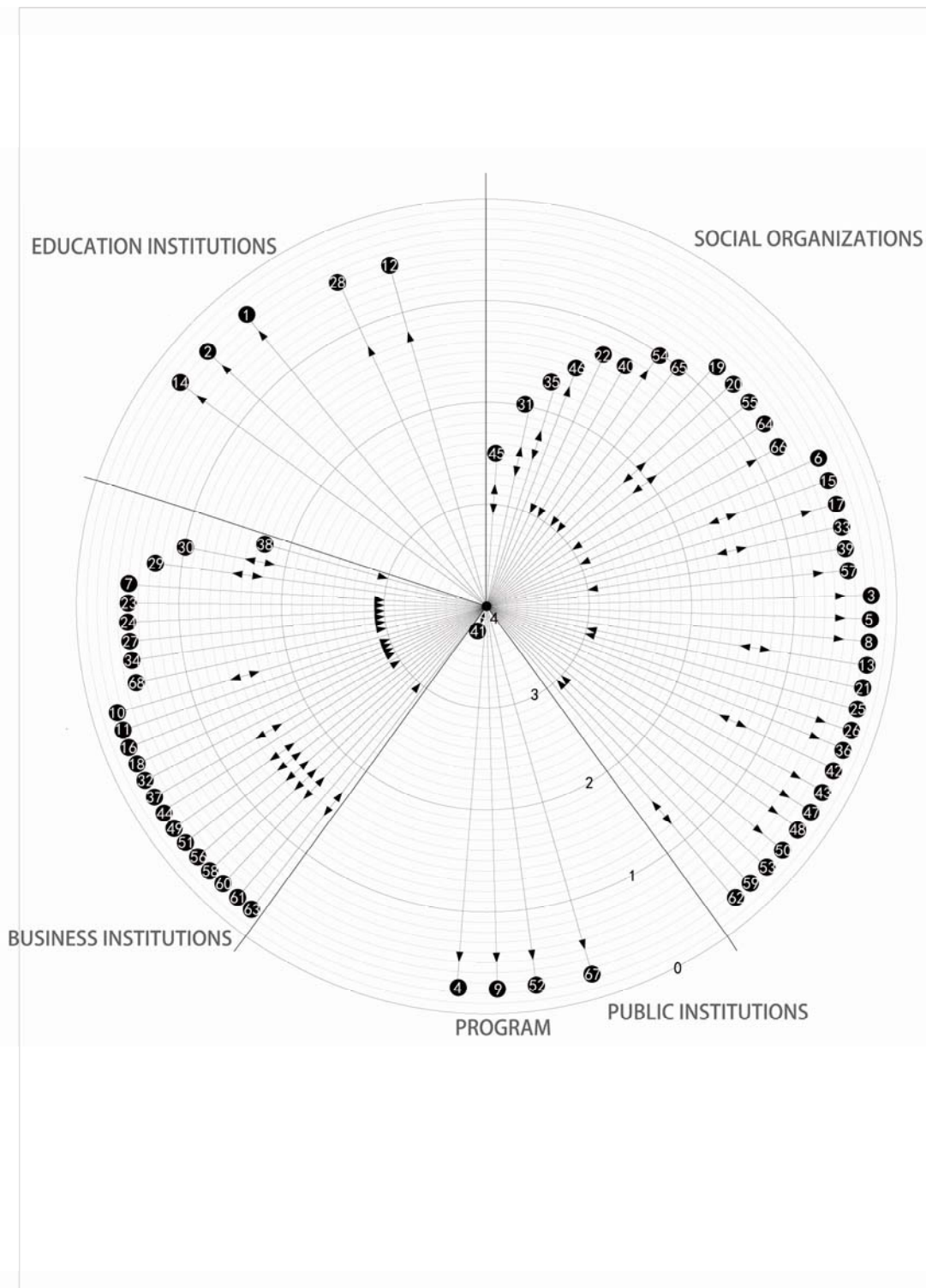


Fig.5-10 the network structure of isolapeverde garden<sup>47</sup>

<sup>47</sup> Data source: improved and drew by the author based on investigation

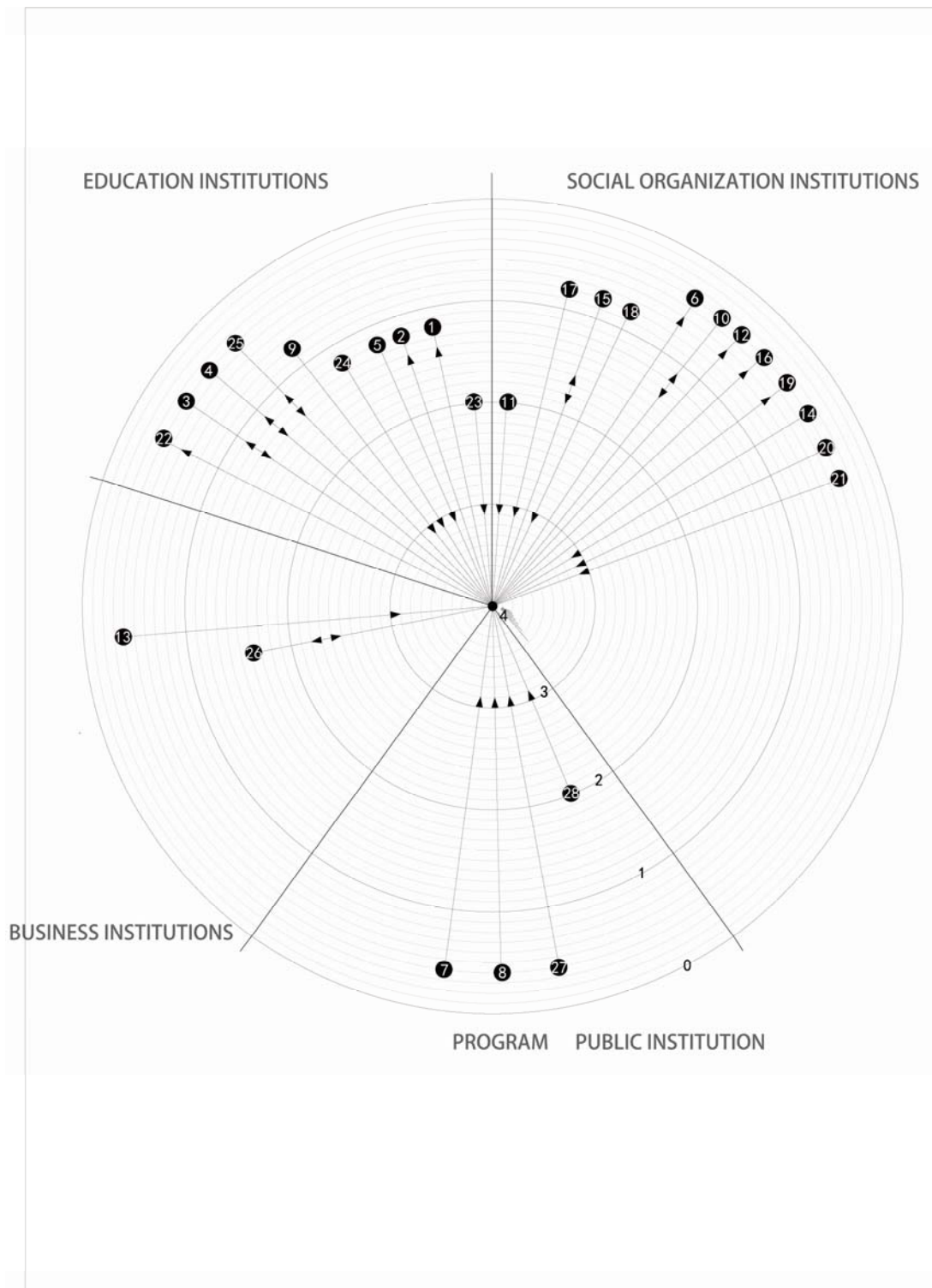


Fig. 5-11 the network structure of coltivando garden<sup>48</sup>

<sup>48</sup> Data source: improved and drew by the author based on investigation

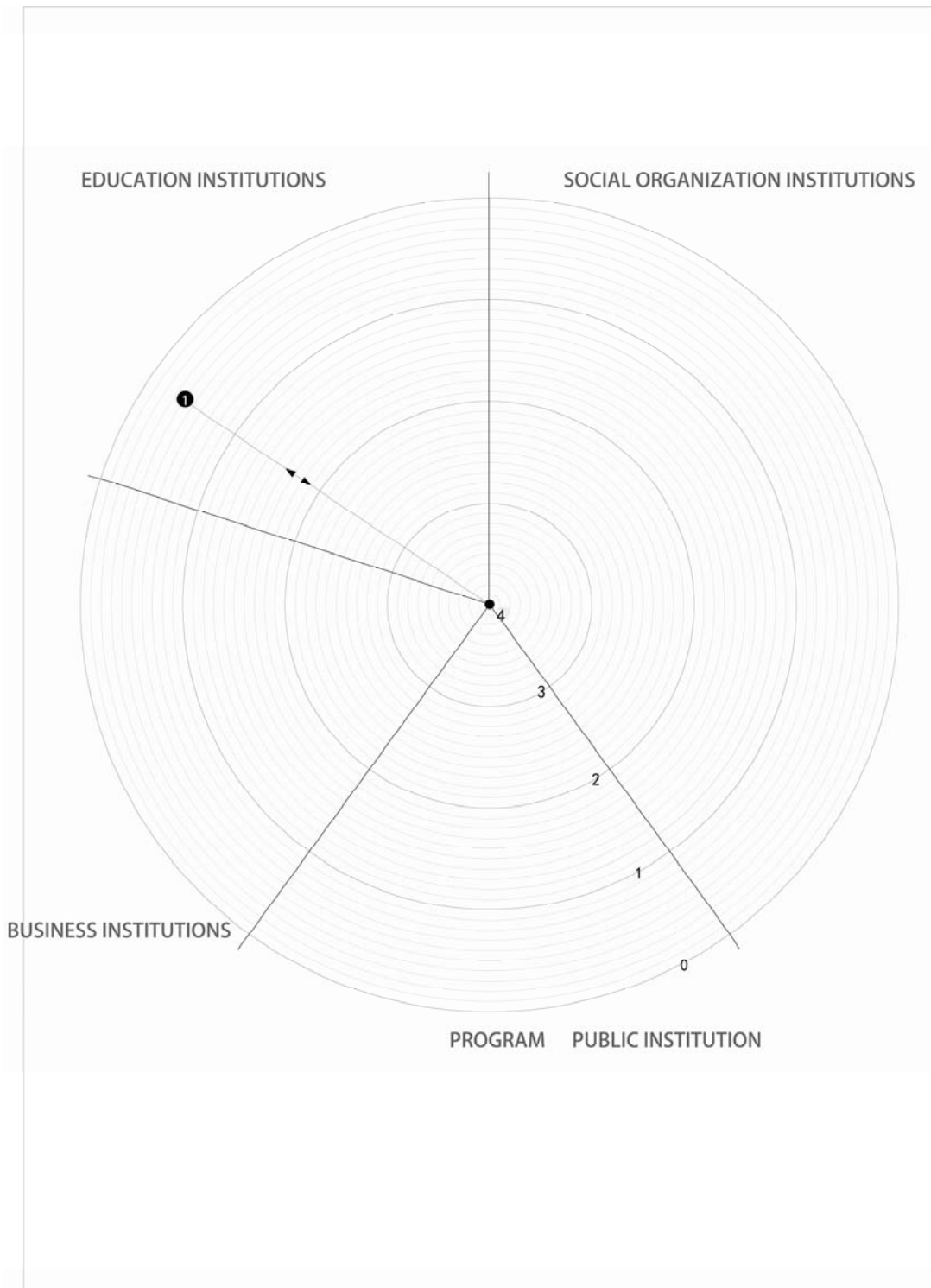


Fig. 5-12 the network structure of liber garden<sup>49</sup>

<sup>49</sup> Data source: improved and drew by the author based on investigation

In circle one, only ISOLAPEPECERDE garden developed the core related organization ISOLA ART CENTER, which is the mutual-benefit relationship with the ISOLAPEPECERDE garden. In the partnership, the garden offer space for all kinds of activities while the ISOLA ART CENTER offer some intelligent and technical support for the development of the garden such as the gate and logo design, the ecologic plant box production and assist for the wine parties, etc.

In the circle two (close group), the most related organizations in ISOLAPEPECERDE garden are two None Profit Organizations (NPO). One of them developed mutual-benefit partnership with ISOLAPEPECERDE garden and the other organization offer service for the garden. There are three organizations offer service for COLTIBANDO garden in this circle, they are one association, one academic institution and one public institution.

Specifically, in ISOLAPEPEVERDE, the community garden organization Giardino degli Aromi offer help in general layout, access to the legal land using, offering the Herbal plants and seeds, and offering agriculture technical consult, etc. Giardino degli Aromi also take part in the process of garden construction and the promotion. The NPO MEDIONAUTA mainly offered the space for the meetings and the activities during the process of getting the access to the legal land use.

In COLTIBANDO garden, civil group Zac-Rete Gas offers the chances for self-promotion and getting in touch with other associations. The community library LA BIBIOTECA DI DERGANO/BOVISA offer the free books for the activities and the School of Design of Milan polytechnic university offer the labor and site for the activities of the garden.

Table5-9 the organizations in the second circle in the gardens<sup>50</sup>

No.	Types of the organizations	Connectio n direction	Name and the purpose of the organizations
Isolapepeverde garden			
45	Associations Npo(non profit organization)	← →	Giardino degli aromi Advocating social integration considering the disabled group and build urban community gardens.
31	Associations Npo	←	Medionauta Offering places and studios for all kinds of art and art creation.
Coltivando garden			
11	Associations Civil group	←	Zac - rete gas (purchasing groups) Aim at promoting sustainable development. Advocate purchse local food and objecting the industrialize food system controlled by the political and economy, support the autonomous right of the food.
28	Public insituations LibRARY	←	La bibioteca di dergano/bovisa Offering the book for the libRARY.
23	Academic insituations Art designschool	←	Design and kintting lab The school of milan polytechnic university Offering tailoring sewing design

In the third circle, there are 6 NGOs, 2 commercial institutions and 2 educational institutions which have close relationship with ISOLAPEPEVERDE garden while there are 4 academic

<sup>50</sup> Data source: improved and drew by the author based on investigation

institutions and 1 commercial institution.

Table5-10 the organizations in the second circle in the gardens<sup>51</sup>

No.	Types of the organizations	Connection direction	Name and the purpose of the organizations
Isolapepeverde garden			
35	Associations Internet platform	←→	Libere rape metropolitan The internet platform of community gardens in milano, supporting the development of all the gardens.
46	Associations Npo	←→	Parents association The parents federation of community isola, devote to offering diversity service for the students.
22	Associations Npo	←→	Out Advocate all kinds of art exchange, establish art workshop to solve urban problems.
40	Associations Civil group	←	Isola indoor market Manage community market and organize community activities.
54	Associations Civil group	→	Coltivando Urban community garden, aim at foster the relationship between the university and the community.
65	Associations Npo	←	Arci metissage National association, aimed at acquiring the right of cultural leisure for the public
38	Commercial insitution Bookshop	←	Isola libri Community bookshop, also manage nonprofit publications aimed at develop the community culture
30	Commercial insitution Company	←→	Milano clown festival Dramatic art training
12	Educational insitution Primary school	→	Scuola primaria f.confalonieri
28	Educational insitution University	→	Naba nuova accademia di belle arti milano
Coltivando garden			
1	Educational insitution Primary school	→	Primary school of bovisa Elementary education
2	Educational insitution Primary school	→	Primary school of bovisa Elementary education
5	Educational insitution University	←	Politecnico di milano University education
24	Educational insitution University academic organization/ project	←	Polisocial Promote interdisciplinary collaboration and social innovation by practice and teaching integration

<sup>51</sup> Data source: improved and drew by the author based on investigation

26	Commercial insitution Sports club	←→	Il vaso di pandora Tai chi qigong teaching
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In circle four, there are five main types of organizations, namely associations, academic educational institutions, commercial institutions, projects and public institutions. The associations take up almost 50 percent both in ISOLAPEPEVERDE garden and the COLTIBANDO garden, and ISOLAPEPEVERDE garden mainly offer help to the associations (Table 5-11). The academic educational institutions are also the main organizations related with COLTIBANDO garden and the mainly relationship is the mutual-benefit partnership. But in ISOLAPEPEVERDE garden, there are not too much organizations belong to this category. The situation is opposite when it comes to the commercial institutions, there is only one related commercial institution in COLTIVANDE garden, while there are 21 in ISOLAPEPEVERDE garden and the relationship is mutual-benefit or garden to organization. In the fourth category, projects, there are only a few organizations in this group. This also applies for the public institutions, there are only one agency offer service for the ISOLAPEPEVERDE garden.

Table 5-11 the organizations in the fourth circle<sup>52</sup>

Organizations	Garden→ organization	Garden←→ organization	Garden← organization	In total	Share
<b>Associations</b>					
Isolapepeverde	12	7	8	50	74%
Coltivando	4	2	5	20	72%
<b>Academic educational institutions</b>					
Isolapepeverde	5	0	0	5	9%
Coltivando	1	3	3	7	32%
<b>Commercial institutions</b>					
Isolapepeverde	0	9	12	21	37%
Coltivando	1	0	0	1	5%
<b>Projects</b>					
Isolapepeverde	3	0	0	3	5%
Coltivando	0	0	3	3	14%
<b>Public institutions</b>					
Isolapepeverde	1	0	0	1	2%
Coltivando	0	0	0	0	0%

### 5.3.3 The network spatial distribution feature

The geographical distribution of all the related organizations varies a lot in the four gardens. All the organizations related to the LIBER garden are in the same community with LIBER garden while the organizations related to the ISOALPEPEVERDE garden cover 12 communities and 6 urban areas (Fig.5-13). Those numbers are 8 communities and 4 urban areas in COLTIBANDO garden (Fig.5-14). Many of them are the organizations out of the boundaries of Milano even out of Italy (Table5-12).

<sup>52</sup> Data source: improved and drew by the author based on investigation

Table5-12 the related organizations out of the boundries of milano

No	Names	Nations	Cities
Related with isolapepeverde garden			
2	School of urban design in university of venice	Italy	Venezia
33	Urban open laboratory	Italy	San cassiano
62	The rose revive band	Italy	Savona
63	Flour company	Italy	Bassano del grappa
3	The earth friend organization	Germany	Berlin
4	City farm organization	Holland	Rotterdam
19	Institute of public art in london	England	London
21	Hamburg park legend group	Germany	Hamberg
36	Bald eagle wings association	Argentina	Buenos aires
64	Independent architecture studio in paris	France	Paris
Related with coltivando garden			
22	The school of urban design at the university of sheffield	England	Shefield
12	Locke, thai association	Italy	Azzate

There are a lot of organizations close to the ISOLAPEPEVERDE garden and COLTIVANDO garden. Most of the related organizations are located in the ISOLA community and BOBISA community or nearby DERGANO community. The organizations show the features of intensive distribution.

Most of the further organizations in ISOALAPEPEVERDE garden locate in the northwest of Milano, and there are also some core circle organizations such as NPO association Giardino degli Aromi located in BOVISASCA community and garden development network platform Libere rape metropolitan. Those further organizations in COLTIVANDO garden mainly located in southeast of Milano, and there are no intensive connection between them.



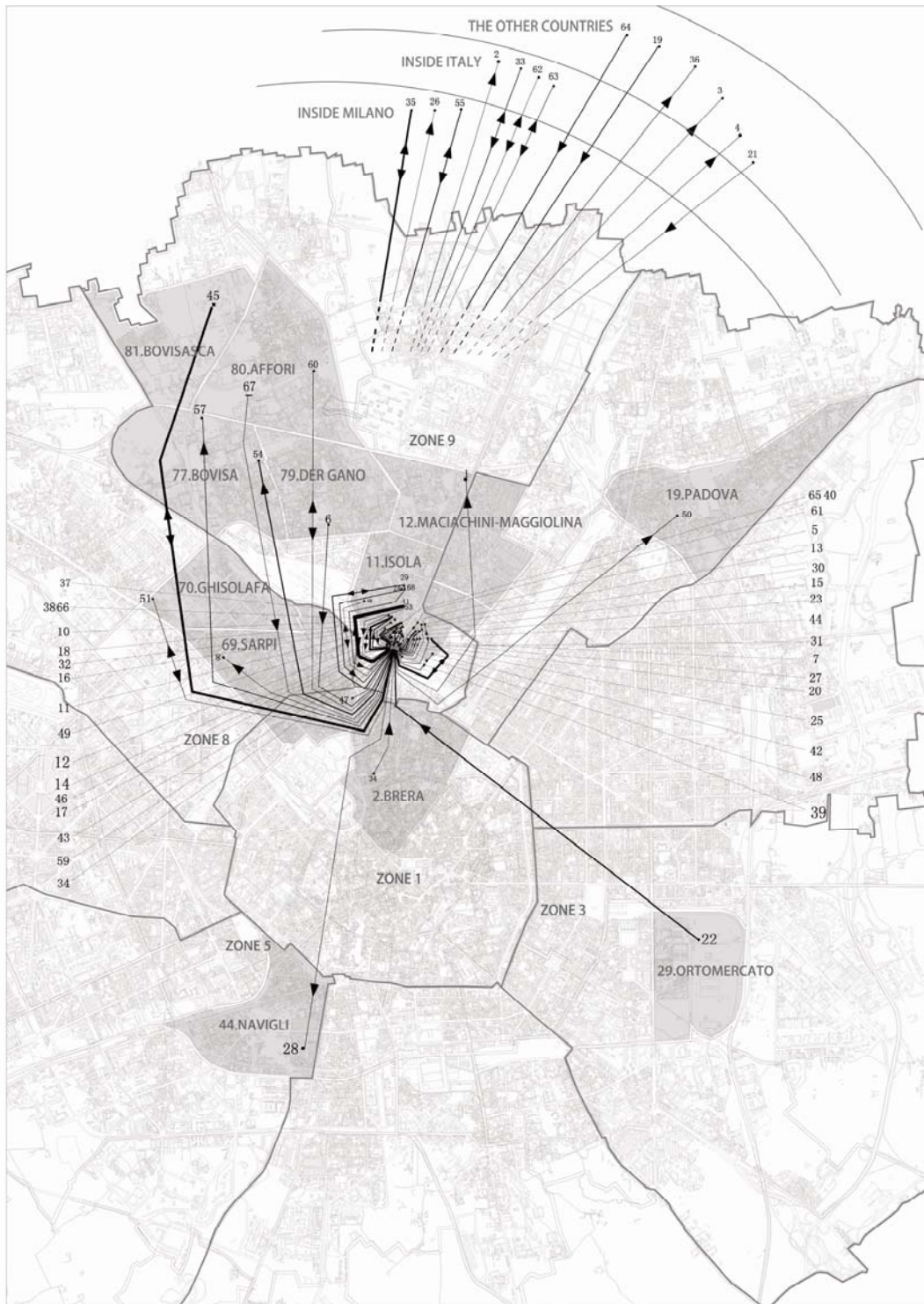


Fig.5-13 spatial distribution of related organizations in isolapeverde garden<sup>53</sup>

<sup>53</sup> Data source: improved and drew by the author based on investigation

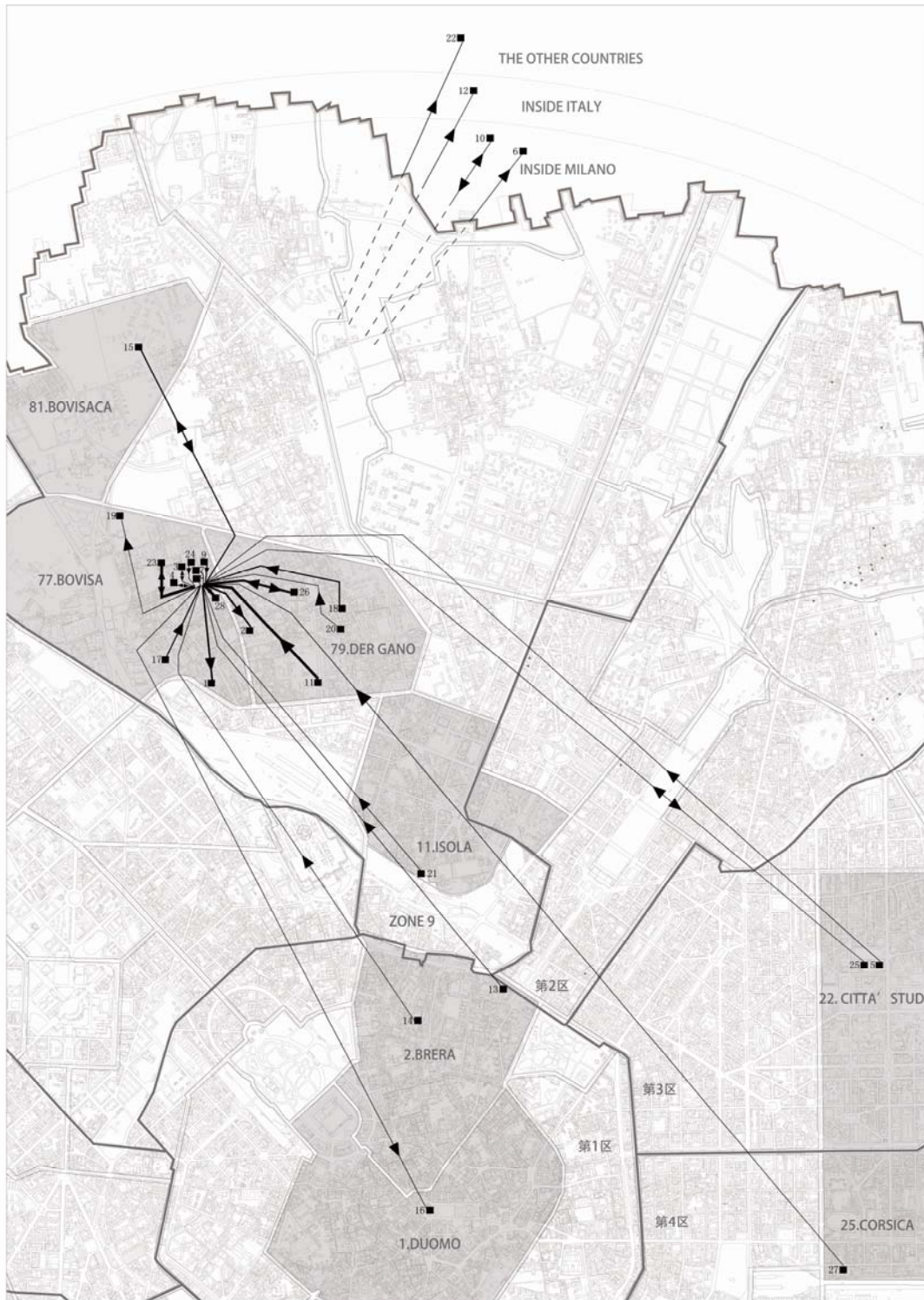


Fig.5-14 the spatial distribution of related organizations in coltivando garden<sup>54</sup>

<sup>54</sup> Data source: improved and drew by the author based on investigation

## 5.4 Features of citizen network

The citizen network is also a very important part of the social network. It comes from the process of garden promotion, the citizens take part in the farming work and the activities hold by the gardens.

### 5.4.1 The network quantitative feature

In this part, the network scale and the members' heterogeneity are measured to examine the general characteristics of the citizen network.

#### (1) ISOLAPEPEVERDE garden

In terms of the network scale, there are 1,500 supporters (based on the signature or donation) and 200 members of the garden. There are also 10 people come to the garden for interview, visit or study.

The members also vary a lot in terms of the social roles such as research scholars, undergraduates, professors, cameramen, journalists and retired people. Among them, there are not only the core members' relatives and friends, but also the residents come from the community of the garden. Many of them participate in the community activities hold by the garden. Also, as showed in Table 5-13, there are some visitors sharing the same dreams about developing the community gardens from other regions or countries to study the garden.

Table 5-13 the visit received isolapepeverde garden<sup>55</sup>

The occupations of the visitors	The departments	Nations	Activities
Scholar	Giornalismo walter tobagi school	Italy	Visit and study
Student	Universita di bolzano	Italy	Visit and study
Scholar	Universida di rotterdam	Rotterdam in holland	Visit and study
Student	Universida pisa	Italy	Make a film about the community gardens
Cameraman noolyta	--	Italy	Make a film about the community gardens
Artist paolo buggiani	--	Italy	Visit and study
Scholar	Europe urbes project	Italy	Visit and study
Cameraman		Italy	The photo exhibition
Cameraman salavatore laforgia,paola longo	--	Italy	Make a film about the community gardens

As in Fig.5-15, the members in ISOLAPEPEVERDE garden cover almost all the ages, and most concentrate on the 30 to 60 years old with the total share of more than 50 percent.

<sup>55</sup> Data source: improved and drew by the author based on investigation

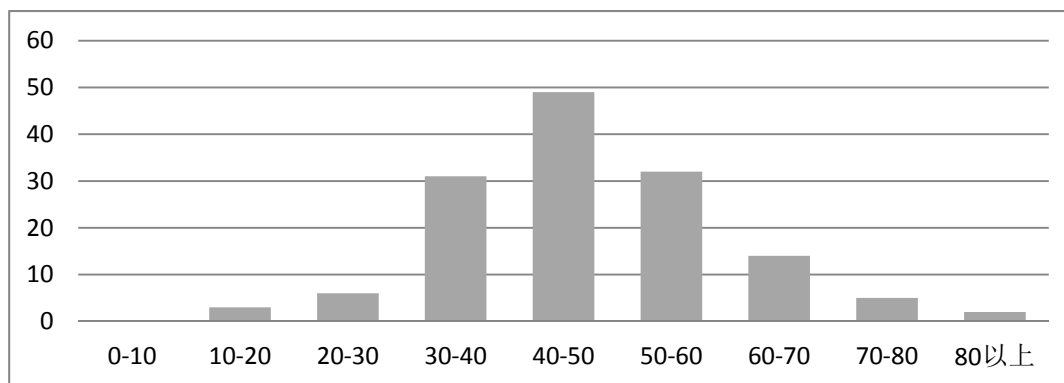


Fig.5-15 the age structure of the members in isolapeverde garden<sup>56</sup>

## (2) Other community gardens

The members of COLTIVANDO garden mainly consist of the residents of BOVISA community. Most of them join the garden group because of the recommendation from the core members. There are 20 members in total. In other two gardens, there are only a few members who are mainly the relatives of the other members.

### 5.4.2 The network structure feature

#### (1) ISOLAPEPEVERDE garden

Many citizens network members connected closely with garden are families and friends of core members. Intensive mutual benefit relationship is formed between the core members and the related citizens.

*“...People come to our garden are a lot. Most of them are local residents live nearby. When it comes to late afternoon and early night, many parents would take their children from community school and kindergarten here for play, rest and chat...A lot of residences take the initiative to conduct birthday party in our garden. We provide them with place and facilities. Often we would take part in them. Once we played until late night when the office building light in the other side turned on, which lighted up our whole garden. The light was not needed anymore!...This is also what we want in our garden that this garden could be used as a recreation place for all residences...Usually when the garden need help they come and help. Vegetables and flowers are all donated or plant by themselves. When it is dry in the summer, they would come and water and clean the plants voluntarily..I really enjoy this relation with the local residents. Before, we are just familiar, now we say hi to everyone and even some people could tell my name. We are more closer than before...”*

-----ISOLAPEPEVERDE garden association chairman AFRICA

The relation between the citizens outside the community geographic and the core members is relatively alienate. The garden is not often visited by citizen members living outside and far away

<sup>56</sup> Data source: improved and drew by the author based on investigation

the community. Occasionally they would attend the garden activities, meeting and assist conduct party and collective working under invitation. Some scholars and students visit the garden just once, forming the most alienate relation with the garden.

(2) COLTIVANDO garden

The families of the core members come to garden almost every Saturday for collective working and gathering, being the frequent garden guests and close connected citizens with garden. The other 15 citizens come from the community where the garden members. They come in warm season for collective working and various activities, forming the relative intensive relation with garden.

(3) LIBRE garden and GARDEN IN ZONE 2

The families and friends of cultivators are the main body of citizen network. They visited the garden once in a while for family gathering activities such as barbecue. Relatives and friendships are the main intensive linkages between garden cultivators and the other citizens.



### 5.4.3 The network Spatial distribution feature

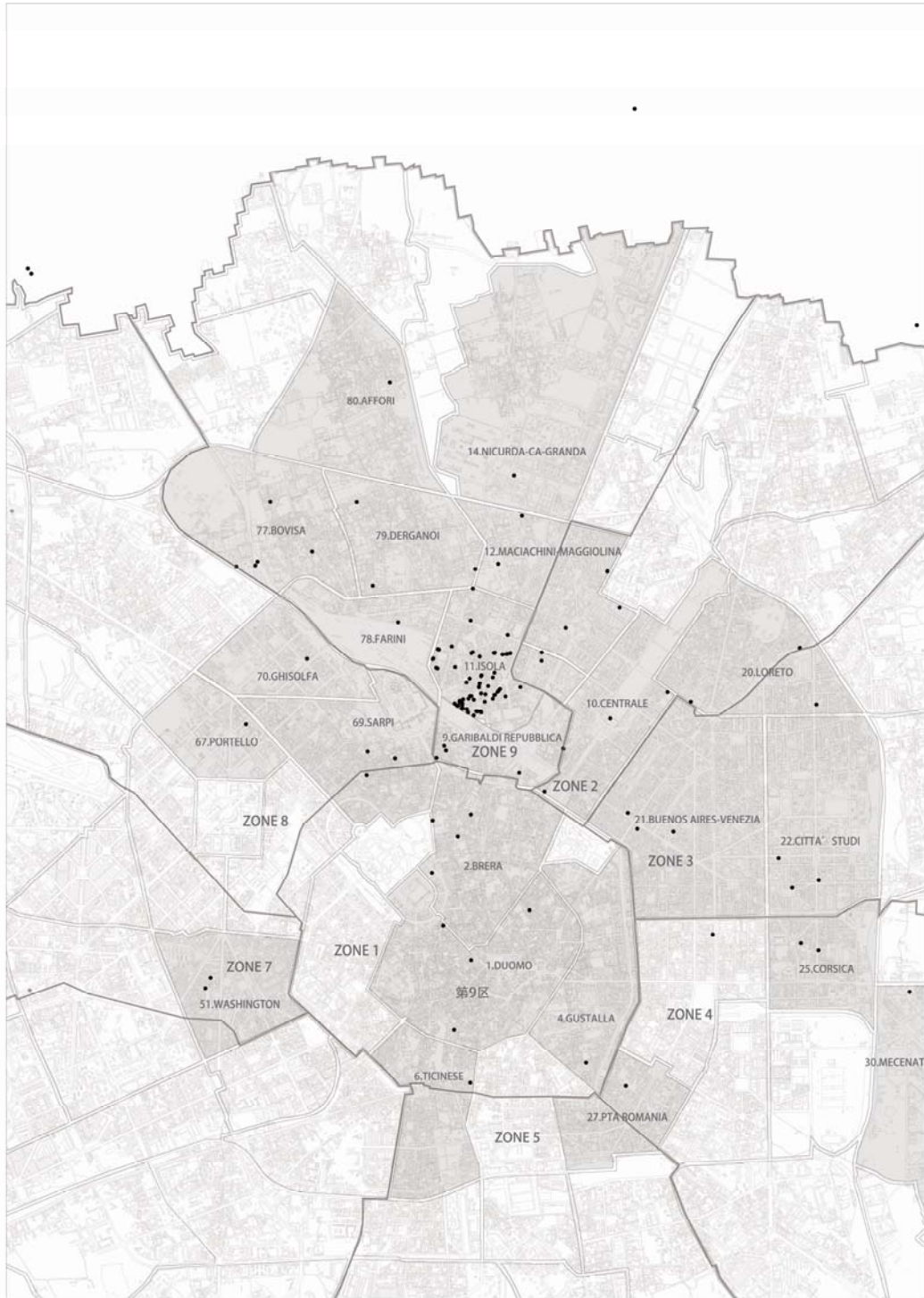


Figure 5-16 address space distribution of ordinary members from isopeverde garden<sup>57</sup>

<sup>57</sup> Data source: improved and drew by the author based on investigation

All the other network members of COLTIVANDO garden, LIBRE garden and GARDEN IN ZONE 2 come from the community where the garden located or proximity.

For ISOLAPEPEVERDE garden, the other network members living in three spaces which are inside the geographic boundary of community ISOLA, inside the administrative boundaries of municipality of Milano and outside Milano. Just see from the space distribution of ordinary members of ISOLAPEPEVERDE association, it is broad that covers 8 zones, 12 communities and even go beyond the administrative boundary of Milano (Figure 5-16).

## 5.5 Conclusive remarks

Combining with investigation data in this chapter, through comparative analysis of 4 community gardens on their 3 sub-networks, it could be concluded that the sub-networks are broadly differ from each other in terms of their gross characteristics, structure features and spatial characteristics. Specifically, the structure distinction differences are obvious on core member network, while the differences of gross, structure and spatial characteristics are all clear on social organization network and citizen network.

### 5.5.1 Feature differences on the core network

See from the network scale, 4 community garden does not differ from each other largely sharing a total core member of 20 to 40. From the perspective of network heterogeneity, compared to the other-organized garden, the self-organized garden show higher level of heterogeneity on member ages, occupations and gender. On the structure characteristic, ISOLAPEPEVERDE garden presents interconnected and intensive network, while the COLTIVANDO garden forming 2 clusters connected. LIBRE garden presents several small clusters with little connection. Garden in zone 2 showing the lowest dense of network with few separated small clusters.

### 5.5.2 Feature differences on the social organization network

#### (1) Gross characteristic difference

ISOLAPEPEVERDE garden has the largest scale and highest level heterogeneity of its social organization network. COLTIVANDO garden presents the relative big network size and secondary rank heterogeneity. LIBRE garden has small network scale which has only a agriculture education institution. GARDEN IN ZONE 2 has not formed any social network with any kinds of social organization.

#### (2) Structure characteristic difference

ISOLAPEPEVERDE garden and COLTIVANDO garden under self-organized pattern present intensive connected network structures and 2-edges network structure with 2 close connected clusters. LIBRE garden under other-organized pattern shows few, alienated network structure with 1 social organization which share mutual benefit with garden. GARDEN IN ZONE 2 has not built any relations with any social organization.

#### (3) Spatial characteristic difference

The spatial distribution of 2 community gardens social network under self-organization both go beyond their original community geographic boundaries, reaching to other countries in Europe. See from the space distribution scale, ISOLAPEPEVERDE garden ranks the first, COLTIVANDO garden ranking the second. In terms of spatial agglomeration degree, networks of both the 2 gardens concentrate inside geographic community or the proximity. On the network connection strength, COLTIVANDO garden has both connected social organizations with near location, strong relation and also strong connection but far away from garden. Comparatively, the relative organizations of LIBRE garden under other-organized pattern distribute beyond its original community, most of which locate inside the near communities with weak connections with garden.

### 5.5.3 Feature differences on the citizen network

Supporters, ordinary garden members, visitors and learners with record form the main body of ISOLAPEPEVERDE garden citizen network. It shows big network size, high heterogeneity and broad space distribution. The intensive relation is shared between the garden and friends, families, some residences inside ISOLA community, while that between the others and garden decline with increasing distance.

The local residences from the inside and nearby original communities form the main part of COLTIVANDO garden citizen network. Compared to ISOLAPEPEVERDE garden, its network has also close connections, while with smaller scale and lower heterogeneity.

Most of the citizen network nodes of LIBRE garden and GARDEN IN ZONE 2 are families and friends of cultivators, living inside the garden community and nearby, sharing close connections with the cultivators.



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## CHAPTER 6 SOCIAL NETWORK CONSTRUCTION MACHANISM OF URBAN COMMUNITY GARDEN

### 6.1 Introduction

By organizing motivation of social network construction in literature review, it is found that resource acquisition of individuals in network is the basic motivation for network construction development. Generally speaking, resource in the network can be divided into instrumental resource and affective resource.

Based on the motivation core of resource acquisition, this paper starts from characteristic differences of 4 garden sub-networks to explain the organizational reasons for garden network construction differences by investigating how different organization patterns affect resource acquisition of individuals in network.

### 6.2 The influence of organization pattern on network construction of core members

#### 6.2.1 Organizational reasons for gross characteristic difference

- (1) Why is the network heterogeneity of ISOLAPEPEVERDE and COLTIVANDO garden greater than that of other two gardens under the same network size?

This is mainly caused by the difference between self-organization and other-organization pattern in decision-making power. The garden association ISOLAPEPEVERDE and Farming Group of Politecnico di Milano under self-organization pattern can autonomously decide who can be the garden member, while the decision-making power of garden under other-organization pattern is possessed by the third party. Selection of the cultivator will reflect self-consideration of the rule-maker to some extent. For instance, in garden of other-organization pattern, the government has the decision-making power of rules and regulations, and it decides that garden is the social welfare provided for social vulnerable groups, especially retired people. However, members and citizens in self-organization pattern and core members of ISOLAPEPEVERDE garden consider that garden is the leisure and recreation place for the society and all people. Community residents and teachers of COLTIVANDO Farming Group co-determine that garden should be the medium for interaction between all community residents and university campus. Therefore, garden under self-organization pattern is open to all people, and heterogeneity among core members of the garden is high; however, garden under other-organization pattern is only open to retired people, so the heterogeneity is low.

#### 6.2.2 Organizational reasons for structural characteristic difference

- (1) Why do ISOLAPEPEVERDE and COLTIVANDO garden have denser network structure and higher association strength than other two gardens?

- a) Individual pattern – under individual pattern, individuals will acquire resources via self-investment

According to the plot consignment agreement signed between cultivators of LIBRE garden & GARDEN IN ZONE 2 garden and NOSTRA association & ZONE 2 government (Table 6-1), acquisition condition, continuous acquisition condition, and compelled abandonment of members' land use right all depend on the individual cultivators rather than other cultivators. The labor products also belong to the individual and other people have no right to obtain them. Other aspects such as plant type, warm house application, and other prohibited items are directed at laborer, and standard constraint among members is realized only through cultivators' individual action, without collaboration and cooperation with others. On the whole, there are much fewer constraint regulations for members than those for cultivators.

Table 6-1 some regulations in the agreement signed between garden in zone 2 garden cultivators and municipal government<sup>58</sup>

Individual Pattern	Instrument	Prepare seed, farm tools and water pipe
	Land use	Live in zone 2 of milan; not able to possess the repeated land even in other urban areas; The contract term is 5 years, it can be renewed for 1 year, and it is prohibited to sign the contract for 2 times in a row; The plot should be used by individual citizens, and it is prohibited to transfer the land to other people; The cultivator can temporarily entrust others for cultivation if he/she cannot cultivate the land, but the duration shall not exceed 6 months; The cultivator should actively abandon the cultivation right if he/she cannot cultivate the land due to special reasons; If the stipulation is violated and correction is not made within 90 days, the cultivation right of the plot will be deprived; Need to pay guarantee deposit, rent, management cost, maintenance cost, and water rate; If the cultivator dies, does not pay the fees, does not plant for more than 1 year, grow prohibited plants, move to other cities, does not renew the contract after expiry, and initiatively abandon the right, the contract will terminate; Comune di milano can terminate the contract out of public interest.
	Labor products	It is prohibited to sell the agricultural products for profiting purpose.
	Others	Able to plant vegetable, flowers, and arbuscle; It is not allowed to grow prohibited plants (such as cannabis sativa); It is prohibited to use pesticide. Keep the plot clean; Watering is needed from 6:00-9:00 in the morning and from 6:00-10:00 in the afternoon every day; Able to enter the garden from 6:00-22:00; The plot area should not be changed; No bicycle can be parked in the plot; No animals and pets can be raised in the plot; Ignition is prohibited; Cooking is not allowed in the plot; Rubbish, pollutant and hazardous articles should not be discarded in the plot; Motor vehicles should not be parked in the plot, and they can only be parked outside the door; Vinyl house can be used only in winter; it must be firm and transparent;
Among members	Behaviors harmful to others are prohibited; Composting is prohibited in the plot; Excrement fertilizer can be used only between 7:00 and 8:00 p.m.; Personal belongings should not be put in the public roads; Stealing greens in others' plot is prohibited; Vine should not be planted in the position close to other plots; Plant shelf above 2m should not be set up.	

Table 6-2 some regulations in the agreement signed between libre garden cultivators and italia nostra association<sup>59</sup>

	Right to	The contract term is 5 years;
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<sup>58</sup> Data source: improved and drew by the author based on investigation

<sup>59</sup> Data source: improved and drew by the author based on investigation

Individual	use	90 euros (rmb 720 yuan in total) should be paid every year as plot rent; The land should not be subleased, resold or presented to others for cultivation; Planting must be conducted by the individual or his/her direct relatives (husband, wife and children); If the individual cannot plant temporarily, he/she can entrust others for cultivation within a period of 1 year; If the individual dies, cannot handle his/her own life, or actively stop the contract, the contract will terminate;
	Labor products	The labor yield belongs to cultivators;
	Others	Able to grow flowers, vegetables, small trees, fruit trees, or even grassland; It is not allowed to grow prohibited plants (such as opium poppy); It is prohibited to raise animals, fire up, use pesticide, or cause pollution; Keep the garden clean, and carry out continuous growing; The plot area and usage should not be changed; Vinyl house can be used only in winter; it must be moved away after 15 mar. In spring; its land occupation should be smaller than 15%.
Among members		Tree in the plot should not exceed 3m; Only able to plant in our own plot; no planting is allowed in others' plots; No noise should be made.

Under this situation, if a cultivator wants to acquire and maintain his/her land use right and gain more labor achievements, he/she just needs to and has to invest in his/her own plot. In another word, in order to obtain instrumental resources like labor yield, individual investment comes into being under individual pattern. The investment pattern of refusing investment in others is called **individual self-investment mode** in this paper.

Practice representation of such individual self-investment mode can be discovered in LIBRE garden. According to president of NOSTRA association, the association emphasizes that cultivators should respect each other's labor achievements, but cultivators in the garden often steal each other's greens. They will not only steal greens of cultivators they are familiar with, but also go to cultivators they know well. Though association managers can identify some recidivists, they still appease such problems due to hard evidence or human feelings. In addition, cultivators often quarrel with each other owing to some small problems.

#### a) Individual pattern – network construction under resources acquisition via self-investment

Under the mode of resource acquisition by self-investment, there is no need for the individuals to make friends with other cultivators. If needed, they tend to establish relationship with other cultivators based on geographical relationship with close living cultivation plots or addresses. The establishment method is daily meeting and mutual help. According to the interview, when some cultivators cannot go to water the vegetable garden at the moment, they will ask cultivators of adjoining vegetable garden to look after their plots. Therefore, relatively close reciprocal relationship has been established. In addition, in LIBRE garden, cultivation courses and annual Pumpkin Festival organized by ITALIA NOSTRA association will also help to establish, maintain and strengthen relation among members. However, few people will participate in such activities.

Therefore, the overall connection density among cultivators of GARDEN IN ZONE 2 and LIBRE garden is low, and the association strength is weak. Relatively acquainted small groups of reciprocal relation is formed based on geographical relationship (close plot or living address), and the association strength among various small groups is weak. It has been less than 4 years since establishment of GARDEN IN ZONE 2 garden, so there are fewer network small collections when compared with LIBRE garden which has a history of 26 years.

b) Collective pattern – under collective pattern, individuals will acquire resources via investment in others

In ISOLAPEPEVERDE and COLTIVANDO garden where decision-making power is equally allocated and various affairs are conducted by consultation, the garden use right is owned by all members, and productive labor means in the garden, including plant, flowerpot, plant box, and communal facilities including basketball stands, table tennis tables and grill all belong to all members. Moreover, labor income of the garden, namely food, also belongs to all members. In practice, in the aspect of sharing cultivation and agricultural products, members of COLTIVANDO garden decide the plant type and planting position after consultation; moreover, they will work in the plant box together and dine together at the noon of every Saturday. During harvest season, all members form the norm of obtaining permission from other members in the picking process. Then the food will be processed into lunch for all members to enjoy; or it can be brought back by a warmhearted member skilled at cooking and processed into cate which will be presented to other members next time. In ISOLAPEPEVERDE garden, all facilities including plants presented by members belong to the collective. During harvest season, all members also form the norm of obtaining permission from other members before picking the fruit. If they want to take the food home, they will not pick too much. In terms of holding activities, all members need to make a decision and arrange the site together.



Fig. 6-1 food harvest during harvest season in the garden<sup>60</sup>



Fig. 6-2 warmhearted cultivator is making sauce shared by all people<sup>61</sup>

In conclusion, if individual workers in the garden want to gain labor achievements and success of collective activities, they must invest in the collective, which has generated the form of **individual investment in others**.

b) Collective pattern – network construction under individual investment in others

Under the way of individual investment in others, the process in which individuals invest in cultivators to gain instrumental resources is the process of establishing relationship among network members.

In the interview about COLTIVANDO garden and ISOLAPEPEVERDE garden members, members come to participate in garden cultivation activities on each weekend not only to gain organic food, but also to learn instrumental resources including farming technology. More importantly, they like and enjoy the good relation with other members.

*“When I settled down in Milan, I was adapted to the new environment quickly and like the cultivation with everyone else very much ... They told me much useful information, such as where the bookstore is and places with delicious food. Therefore, I got familiar with this city soon...”*

<sup>60</sup> Data source: <https://www.facebook.com/coltivando>

<sup>61</sup> Data source: <https://www.facebook.com/coltivando>

-----COLTIVANDO cultivator 1

*"I cultivate 20 pots of flowers and plants at my balcony...However, I like here more, for this is a good social contact platform. Every time after work, we will dine together and go outside on sunny days ... Later, we set up a plant box together, and work and dine together. I like the feeling of getting together with everybody else. Today, I do not bring my children here. However, I often took my two children here on each Saturday..."*

-----COLTIVANDO cultivator 2

*"...She is an unemployed woman. Dejected at home, she did not know what to do when staying at home. After coming to our garden, she has become open and clear gradually. Later, she often comes to the garden to chat with others and look after the plants, so she is very cheerful now ...Besides, she also presented us a plant named ...which can attract bees in the sky of Milan. She told me she liked the garden much... It also makes me happy to see ISOLAPEPEVERDE change others' life ..."*

-----ISOLAPEPEVERDE association president AFRICA



Fig. 6-3 cultivators of coltivando garden in dining and rest after collective work<sup>62</sup>  
Fig. 6-4 cultivators of isoapepeverde garden in collective work<sup>63</sup>

Therefore, garden members have formed intensive relationship, and the significance of such affective resource for cultivators becomes more and more prominent. It has become another driving force for members to further invest in others. Therefore, in order to gain instrumental resources like labor income, individuals invest in others, thus network connection is established and affective resource of network becomes outstanding gradually. In order to further acquire affective resource and labor income, individuals continue to invest in others, so the network connection will be strengthened gradually. This virtuous circle will continue to exist.

In network construction way, garden members mainly verify, maintain and strengthen connection among each other through two actions which are diversified activities and cultivation. Specifically speaking, as for activities in COLTIVANDO garden, some associations will participate in activities like birthday party of garden, Saturday BOVISA and watching a film; some of them will take part in activities of other social organizations such as citizen farm. In addition, there is also collective work on each Sunday, such as establishment for plant box, planting, watering, weeding, dining together and seed selection. Activities of ISOLAPEPEVERDE garden include wine party and conference organized by the association such as relaxation gathering, dining together, member

<sup>62</sup> Data source: photo took by the author

<sup>63</sup> Data source: photo took by the author

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recruitment, and annual meeting, as well as activities of other groups and individuals such as summer vacation meeting of parents initiated by citizens, other association activities and commercial activities. Collective work covers planting and watering activities for facilities and plants as well as construction and maintenance for courtyard facilities such as solar power and rainwater collection systems. Core members of the above two gardens actively participate in the above activities; they let those with strength contribute strength, those with money contribute money, and those with idea contribute idea. Through collaboration and cooperation, they conduct all activities and cultivation. Correspondingly, they obtain instrumental resources like labor yield including fruits and vegetables as well as emotional support resource. Thus a compact and reciprocal garden core member network is formed.

### 6.2.3 Organizational reasons for spatial characteristic difference

Except COLTIVANDO garden, in other three gardens, network characteristics of core members do not possess much difference which is mainly concentrated on internal community or nearby community. COLTIVANDO garden project was initiated by college teachers and students, and community residents of BOVISA were introduced at later stages, so residences of college teachers and students with a long distance in space appear. This reflects the fact that the garden sponsors become core member of the network by combining with others.

## 6.3 Influence of organization pattern on social organization and citizen network construction

### 6.3.1 Organizational reasons for gross characteristic difference

(1) Why is the network size of ISOLAPEPEVERDE and COLTIVANDO garden greater than that of other two gardens?

a) Influence of self-organization pattern and other-organization pattern

Leading manager of LIBRE garden under other-organization pattern is Milan Branch of "ITALIA NOSTRA" association. This association is non-profit organization at national level in Italy, and its purpose is to protect historical, artistic and natural heritage of Italy. Milan Branch of the association signed consignment agreement with Milan City in 1974, and it takes charge of building a farmland of 120 hectares that has been discarded for several years into an urban public park. Its task is mainly forest planting, ecological system reconstruction, and park facility construction. The specific job includes sapling cultivation, research of park ecosystem, land clearing, canal clearing, lawn planting and maintenance, and farm building repair (see the appendix of LIBRE). Therefore, the management job of garden is no more than a small part of the association's work.

At the same time, as non-profit organization, except the staff of about 10 people and some appropriation gained from the government<sup>64</sup>, it needs to be responsible for park reconstruction in a region of 120 hectares, so close cooperation of the third party is required. Therefore, the association closely cooperates with voluntary group, middle and primary schools, and other social non-profit organizations, so as to strive for volunteers, capital and material resources as well as to provide services. However, in these activities, there are few activities related to garden. Among major activities of the association in 2013, only 2 activities among 14 ones are about garden (Table6-3). In which agriculture course training is conducted in the sapling greenhouse of the association, and there are 20 people in total; by directing at the public mass, there are few participants in the garden. Pumpkin Festival only lasts for one day in each year and it is celebrated in other areas of the park, which does not have an ideal effect on making new friends and extending social network, especially on establishing close social relations among the garden members.

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<sup>64</sup> 750,000euro was provided to the association from the governments and bank fund

According to the interview about association president, the garden was not initiated by the association; instead, it existed in the field at the beginning. After gaining power of attorney for this land, the association began to take charge of reconstruction and management. For the association, garden project in which citizens participate has made it better. It is observed that in LIBRE garden under other-organization pattern, as the leading manager of garden, ITALIA NOSTRA association is not specially aimed at garden. Instead, it has more important tasks.

Table 6-3 major activities of italia nostra association in 2013<sup>65</sup>

Month	Day	Activity	Object
1	18	Celebration of campfire party, saint anthony	All people
2	10,17	Labor of volunteers	All people
	14 - 15	Carnival of children (6-10 years old)	Surrounding families (need to pay)
3	4 - 8	Pipeline cleaning of volunteers	All people
4	4	Roam in wet land	School students and teachers
5	21	Night tour in forest	All people
6	10-14,17-21,24-28	The forest exploration of children (6-10 years old), children	Surrounding families (need to pay)
7	1-5,8-12	The forest exploration of children (6-10 years old), children	Surrounding families (need to pay)
8	26-30	The forest exploration of children (6-10 years old), children	Surrounding families (need to pay)
9	2-6	The forest exploration of children (6-10 years old), children	Surrounding families (need to pay)
10	6	Competition in pumpkin festival	Garden and all other people
11	10,17	Labor of volunteers	All people
12		Carnival of children (6-10 years old)	Surrounding families (need to pay)
2		Agriculture course training	All people

By contrast, leading manager and cultivators of garden under self-organization pattern is the same interest community, and they possess the same objective and task. By taking COLTIVANDO garden as an example, teachers and students of Politecnico di Milano in garden farming group are major sponsors of garden activities, such as "Saturday BOVISA community" from Mar. to Jul. in each year and "garden birthday party of 1 year old" on Oct. 2013. However, design, preparation and participation of activities are all completed through consultation among the group members. Purpose of the activities is to make community residents know garden, and to promote integration between university campus and surrounding residents. Through multi-frequency and diversified activities, social network of garden farming group members has been expanded.

Therefore, under self-organization pattern, leading managers and cultivators of the garden belong to the same interest community, so a large number of activities held by garden leaders are related to garden. However, under other-organization pattern, leading managers and cultivators of the garden belong to different interest groups, so the leading managers can freely decide whether to hold activities related to cultivators or garden. In GARDEN IN ZONE 2 garden of other-organization pattern, the leading manager (the government) will not hold any activity in order to save cost; in LIBRE garden, only few activities organized by the leading manager (ITALIA NOSTRA association) are related to garden. Therefore, social network centering on cultivators can be established and extended only under self-organization pattern, while it can hardly develop

<sup>65</sup> Data source: drew by the author according to <http://www.cfu.it/>



under other-organization pattern. This is why the social organization and other network of ISOLAPEPEVERDE garden and COLTIVANDO garden can develop vigorously, while the network of LIBRE garden and GARDEN IN ZONE 2 garden seldom develop.

b) Influence of individual pattern

Individual pattern is restrictive for extension of garden network. In garden under individual pattern, garden cultivators have independent plot use right and distribution right for product income. The use right should not be shared with people beyond the direct relatives. Therefore, individuals of the garden will not actively share food and establish relation with strangers. The primary beneficiary of each plot is the cultivation individual, and the secondary beneficiary is his/her family members. Therefore, social network expansion of garden under individual pattern is just restricted to family members of the cultivator, or it might be extended to friends at most.

Due to such use method based on individual privatization, garden cultivators will excessively protect personal interest, which has prevented the extensive citizens from sharing the garden interest. For instance, in LIBRE garden, there is clear stipulation that the public space used for picnic and rest should be open to the public and should not be locked within the required time. However, in practice, in order to protect self-interest, cultivators often lock the garden gate within the period when the garden should be open to the public. As a result, citizens are unable to use the public part. In order to avoid such phenomenon, the key to GARDEN IN ZONE 2 garden gate is kept by virescence department of ZONE 2 government which takes charge of opening and closing the garden every day. This will guarantee that the garden is open to the public and meanwhile maintain the personal interests of cultivators.



Fig. 6-5 entrance guard management and opening time of garden in zone 2<sup>66</sup>

(2) As garden under self-organization pattern, Why is network size and heterogeneity of ISOLAPEPEVERDE garden greater than that of COLTIVANDO garden?

By starting from the reason of organization pattern, it is found that as garden under self-organization pattern, the social organization scale and other network size is more or less in direct proportion to instrumental resources including men, fund and material required by garden construction and management.

Teachers of Politecnico di Milano applied for land use right of COLTIVANDO garden as teaching project, and they gained approval soon. Moreover, they have also obtained relatively abundant appropriation. ISOLAPEPEVERDE garden is located near the urban center where the land resource is insufficient. Therefore, it is hard to gain land use right of the garden, and the government does not provide any fund support. From the time when the idea of garden construction occurred to now, the core members have not gained any official fund support. Under more scarce external support, ISOLAPEPEVERDE garden has to strive for more resources and support by expanding its

<sup>66</sup> Data resource: photo took by the author



network size to the largest extent.

Firstly, it comes to the period of gaining legal right of garden land. On 11 Nov. 2010, the garden directly visited the municipal government and requested it to modify the land utilization nature of where the garden is located determined by urban planning. However, such application was turned down. Later, is visited ZONE 9 government and gained support from relevant departments. After the district government reflects this issue to the municipal government, support from the mayor candidate GIULIANO PISAPIA<sup>67</sup> was obtained. Finally, after 2.5 years, land use engagement letter was signed with the government in May 2013. This association took charge of building a temporary garden, but no fund will be provided. The agreement duration is 1 year, and it can be renewed.

In order to prove the importance of garden for the public and increase the negotiation price, the garden leader held 8 public wine parties, trying to advertise and recruit supporters. It has collected 1,500 garden supporters and about 200 association members. In order to raise fund for the wine party, members went from door to door, to seek help from the third party including commercial institutions and non-profit organizations. Commercial institutions like bar, restaurant and bakeshop have provided free drinks, food and noodle cutter for several times; the community bookstore ISOLALIBRI will provide a free assembly room after 21:00 on two days of each week, and the non-profit organization MEDIONAUTA also offers conference room for free. GIARDINO DEGHLI AROMI garden organization, OUT association and ISOLA ART CENTER association freely help the association negotiate with the government. For example, they design and draw temporal scheme of the garden, and study urban planning scheme and relevant policies of Milan together.

*“Island Green Pepper green space is a public and contact space for all people! Isola community is in urgent need of a green place, a public and social contact space for families, for children, for the old, and for all people! ...this small dream of Isola is possible, but it depends on the government decision. Everybody, let’s fight for it! ...”*

*--Publicity words of the association when recruiting members on 20 Nov. 2011<sup>68</sup>*

After the garden was open to the public in May 2013, in order to raise goods and materials required by facilities construction (as shown in Table 6-4) and strive for volunteer labor of citizens, this garden holds and participates in diversified wine parties, meetings and workshops. The garden alone has organized more than 20 activities, to fight for financial resources and material resources from citizens and associations as well as to attract more citizens via the fun and entertainment of the garden.

Table 6-4 material collection and expenditure of isolapepeverde garden<sup>69</sup>

Material collection			
Resource type	Material	Acquisition channel	
Cash type	Cash (at least 3,000 euros, equal to rmb 24,000 yuan)		
Facility type	New slide for children	Donation	Company
	Old table tennis tables	Donation	Community residents
	Old tables and chairs	Donation	Community residents and association members
	Seed, plant and flower	Donation	Garden association giardino Deghli aromi garden organization

<sup>67</sup> He is the sitting mayor of Milano.

<sup>68</sup> Data source: <https://www.facebook.com/pages/Isola-Pepe-Verde/125389367522362?fref=ts>

<sup>69</sup> Data source: drew by the author based on investigation

			Community resident Association member
	Flowerpot and plant pot	Donation	Community primary school Community residents Community member
	Greenhouse	Prize	Income of the association from competition of plant wholesale supermarket
	Big bucket (container in rainwater collection system)	Donation	--
Material type	Old wood (used to make tables and chairs)	Recycle of old object	Base station material discarded in milan concert (friends of the association member provide information)
	Old brick (used to make plant box)	Recycle of old object	Original brick wall in the field collapses
Expenditure			
Insurance		500 euros (rmb 4,000 yuan in total)	
Solar energy power system		2000 euros (rmb 4,000 yuan in total)	
Others: rainwater collection system, basketball stands and grill		--	



Fig. 6-6 plant and vessel gained from donation of isolapeverde garden<sup>70</sup>

By contrast, it is easy to obtain land use right of COLTIVANDO garden, and it takes less than half a year from Sep. 2011 of generating the idea about garden to Mar. 2012 of applying for land use right and material support (as shown in Table 6-5). 3 common design activities are held from May to July in that year and about 18 residents are collected; plane design, work and labor pattern of the garden are determined. During this period, core members of the garden, cultivation group in another word are preliminarily formed. However, as an organization, it is still not extended to external network.

Table 6-5 material collection and expenditure of coltivando garden<sup>71</sup>

<sup>70</sup> Data source: photo took by the author

Material collection			
Resource type	Material	Acquisition channel	
Cash type	9,000 euro (about RMB 72,000 Yuan)	Politecnico di Milano	Teaching project fund
	100 euro	Donation	Members of cultivation group
Facility type	Meeting room	Classroom in School of Design of Politecnico di Milano	Application for use
	Room of farm tools	Politecnico di Milano	Application for use
Energy type	Water	Politecnico di Milano	Application for use
	Electricity	Politecnico di Milano	Application for use
Expenditure			
Expenditure of holding activities	1,000 euro (RMB 8,000 Yuan)		
Plant box	6,000 euro (RMB 48,000 Yuan)		
Automatic irrigation system	1,000 euro (RMB 8,000 Yuan)		
Earthwork (TOOF, a kind of plant box), soil, farm tools, plant, seed, and greenhouse	About 500 euro (RMB 4,000 Yuan)		



Fig. 6-7 irony box and plant purchased by coltivando garden<sup>72</sup>

After carrying out collective work on each Saturday since Oct. 2012, the garden began to hold some activities gradually. The main purpose is to enhance integration between community residents and university campus rather than to collect instrumental resource. Initiatively organized activities that involve other social organizations and citizens mainly include “Saturday BOVISA” for 5 times and “1 garden anniversary celebration”, 6 activities in total.

Therefore, the 2 gardens are under self-organization patterns, and both of them hold activities. They are based on initiative and autonomous right of social network association between other social organizations and extensive citizens. However, under the situation where external supporting force decreases, the initiative of garden to set up external connection is greatly increased. This is the reason why network size of social organization and citizens in ISOLAPEPEVERDE garden is greater than that of COLTIVANDO garden.

However, it is undeniable that ISOLAPEPEVERDE garden possesses existing social network stock;

<sup>71</sup> Data source: improved by the author based on investigation

<sup>72</sup> Data source: photo took by the author

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moreover, due to the high popularity at later stage, many citizens, students, and organizations and institutions in other cities and even other countries are attracted. These organizational reasons also play an important role in expanding social network of garden.

### 6.3.2 Organizational reasons for structural characteristic difference

- (1) By comparing the social network of two gardens, why do ISOLAPEPEVERDE and association & commercial organization form a close network, and COLTIVANDO garden forms a close network with universities?

ISOLAPEPEVERDE has the organizational nature of association, so it naturally tends to establish relationship with other similar associations. Secondly, the multiple identities of association members are also very important. For instance, the association president AFRICA was the member of parent association before, and most members are members of ISOALARTCENTER artist association, parent association and COMITATO DEI MILLE committee. Therefore, during association activities, it is very important to establish and maintain long-term relationship through members with dual identity. In fact, social organization closely related to ISOALAPEPEVERDE mainly consists of the above associations.

Similarly, in COLTIVANDO, college teachers and students in cultivation group come from Politecnico di Milano. As a university with rich resources, it naturally becomes low-cost connection object when the garden holds activities.

- (2) By comparing the association network, why does social network of both gardens have two-level structure?

Establishment of network association requires energy, time and manpower. Manpower of the two gardens is limited, and most of them have a full-time job. Moreover, they do not have the capital of establishing close connection with other organizations. Therefore, two-level structure of alienation and compactness appears.

### 6.3.3 Organizational reasons for spatial characteristic difference

- (1) By comparing the association network, why does the network of ISOALPEPEVERDE and COLTIVANDO garden extend to other communities?

It is pointed out in network size of garden (6.2.2) that gardens under self-organization pattern have strong network construction initiative and ability, and they will set up relation of different compactness degrees with various different social organizations with multiple scales. It is impossible for these networks to concentrate on one community, so they will extend to other communities. It is the natural expression of large network size and high heterogeneity for network to expand outside the community in space.

- (2) By comparing the association network, why does ISOLAPEPEVERDE garden present the network characteristic of long distance and strong connection?

As for the reason, the social organization and garden possess the same dream of garden construction and development. In another word, they have the same interest.

The social organization which has a long distance but close relation with this garden is another garden organization GIARDINO DEGHLI AROMI (No. 45 association in the previous figure). Its purpose is to promote social integration and progress by infusing garden cultivation projects of disabled group. This association possesses a large amount of garden construction experience; it helps the garden design plane graph, negotiate with the government, donate plant bag and herb, and provide technical guidance of plant maintenance in winter. ISOLAPEPEVERDE association will help them conduct garden facility construction and propaganda activities. It can be understood as the fact that these two form a comrade relation on the basis of common garden ideal. With the

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common ideal of promoting garden development in Milan, No. 35 social organization organized by the garden (previous figure) and the networked organization LIBERE RAPE METROPOLITANE to promote urban garden development in Milan form a close relation even if the distance is long.

(3) By comparing the citizen network, why is the spatial characteristic difference among the four gardens so big?

This is the result under mutual influence of self-organization pattern and collective pattern. Specifically, core members of ISOPAPEPEVERDE garden and COLTIVANDO garden actively contact and attract interaction between citizens and garden by carrying out diversified and low-cost social activities and maintaining maximization of garden publicity, thus association with the extensive citizens is established. ISOLAPEPEVERDE garden has high social activity ability and frequency as well as big popularity, so its citizen network distributes the most extensively. By going across the community, it covers the entire city of Milan and even other counties. Distribution of COLTIVANDO garden mainly concentrates on the community scope.

As for garden under other-organization pattern and individual pattern, the network mainly extends toward the cultivator and his/her relatives and friends, so it mainly focuses on nearby places of the cultivator's living address in space, which is the community scope.

(4) By comparing the citizen network, why does the intensive network part of the four gardens focus on the community?

Citizens closely related to garden often meet the garden members and the cost of establishing association is low. Or they once met each other before, and the emotional boost of establishing relationship is strong. More importantly, in garden under self-organization pattern, garden provides opportunities of enjoying leisure and entertainment at a low cost for community residents, and community residents will offer instrumental resources for garden construction. Thus reciprocal relation is formed between garden and citizens, and such relation can last for a long time.

#### **6.4 Conclusive remarks**

This chapter tries to explain the organizational reasons for the difference among three sub-networks of the garden. It is found that collective pattern and individual pattern mainly affect characteristics like structure of core member network of the garden. Meanwhile, individual pattern restricts expansion of garden toward the direction of citizens to some extent. Self-organization and other-organization patterns mainly affect external expansion of garden network, which means expansion of garden social organization network and citizen network.

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## CHAPTER 7 RESEARCH CONCLUSION

### 7.1 Research conclusion

#### 7.1.1 Organization pattern of urban community garden

By analyzing organization structure of garden cases, this paper summarizes two pairs of organization patterns. The first pair is **self-organization pattern and other-organization pattern**. Under self-organization pattern, cultivators and leading managers belong to the same group; with relatively independent leadership and management decision-making power and rule-making power, they can decide the cultivation pattern and regulations of the garden by themselves. Under other-organization pattern, garden cultivators are separate from leading managers and they belong to two independent organizations. Cultivators enjoy little leadership and management decision-making power and rule-making power, so they can just passively receive leadership and management of the third party.

Based on the relation among cultivators, the second pair of organization pattern (collective pattern and individual pattern) is concluded. Under individual pattern, cultivators have the use right and decision-making power for their own plot, and they can complete the work in garden without any cooperation. Their relation is restricted by legal agreement. Under collective pattern, each cultivator has equal use right and decision-making power for the entire plot, and their relation is restricted via morality. Only with collaboration and cooperation, can they finish the work in garden.

In practical situation, garden under self-organization pattern will initiatively choose collective pattern to form **self-organization collective pattern**. In order to save management cost, leaders under other-organization pattern often select individual pattern that does not require frequent consultation during work, to form **other-organization individual pattern**. ISOLAPEPEVERDE and COLTIVANDO garden are under self-organization collective pattern; LIBRE garden and GARDEN IN ZONE 2 garden are under other-organization individual pattern.

#### 7.1.2 Social network characteristics of urban community garden

Through empirical study on social network elements of 4 garden cases, this paper discovers that overall network of garden can be divided into 3 sub-networks which are core member network centering on garden cultivators, social organization network related to garden, and extensive citizen network associated with garden.

##### (1) Core member network characteristics of garden

As for core network, under similar member quantity, compared with garden under other-organization individual pattern, garden under self-organization collective pattern has greater network heterogeneity. In spatial distribution of members, except COLTIVANDO garden in which a few core members are far away from the garden, core members of garden are near the garden and relatively concentrated in geographic space.

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## (2) Social organization and citizen network characteristics of garden

In social network and citizen network of garden, garden under self-organization pattern has a larger network size and higher heterogeneity. Meanwhile, with reduction of supports like external goods and materials, it will carry out external network expansion more positively, strive for more possible resources, and develop network with larger scale. In spatial distribution, it far exceeds the geographical category of the community where the garden is located, covers multiple communities and urban districts, and even reaches other cities and overseas countries. Moreover, some social organizations with long distance but close relation with the garden appear. However, garden under other-organization pattern hardly develops social organization network, and the citizen network just involves the cultivator and his/her family members and friends. In spatial distribution, the network mainly concentrates on community of the garden or nearby communities.

However, generally speaking, social organizations and citizens closely related to garden still center on the geographical range where the garden is located, and social organizations and citizens beyond the community range has an alienated relation with the garden. Besides, cultivators of the garden mainly come from the community, which reflects “community character” of garden.

In social organization network, ISOLAPEPEVERDE garden forms first-level compact network dominated by multiple associations and a few commercial institutions as well as second-level alienated network dominated by multiple associations and commercial institutions and supplemented by other organizations. In COLTIVANDO, it forms first-level compact network composed of multiple academic education institutions and a few organizations of other types as well as second-level alienated network dominated by multiple associations and education institutions and supplemented by a few organizations of other types.

### 7.1.3 Influence of organization pattern on garden social network

By putting garden under different organization patterns and starting from the difference between two pairs of organization patterns: self-organization and other-organization as well as individual pattern and collective pattern, this paper tries to explain the differences among four gardens in network characteristics.

#### (1) Influence of organization pattern on core member network structure of garden

Firstly, rule-making and leadership & management power in other-organization pattern is possessed by the third party that is Comune di Milano in this case. The government decides that cultivator of the garden can only be old and poor retired people in Milan, which reflects the interest consideration of policy makers. However, under self-organization pattern, cultivators can often autonomously decide cultivator of the garden; in this case, they stipulate that any people with such intention can participate. This is why network heterogeneity of garden under self-organization collective pattern is greater than that of garden under other-organization individual pattern.

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Secondly, in individual pattern, individual cultivators have independent plot use right and decision-making power. They can acquire instrumental resources like labor income just by self-investment, without needing to depend on others and cooperation. Therefore, it can only develop few and inattentive social relations based on close geographical relationship including nearby family address or close cultivation plots. In collective pattern, cultivators equally enjoy land use right and decision-making power for the entire garden, and they need to cooperate with each other to carry out all jobs. Simply speaking, laborers can gain instrumental resources like labor income only by investing in others continuously. Thus social network will be established. Later due to the increase of acquaintance degree, affective resources contained in network will become outstanding and turn into important motivation for cultivators to invest in others. Thus the network association will be further enhanced. Therefore, close and interconnected network characteristics appear under such virtuous circle. This is the reason why core members of garden under self-organization pattern have higher acquaintance degree, closer relation and higher network density than garden under self-organization pattern.

Finally, in spatial characteristics of network, this project was initiated by college teachers and students, and it was introduced into community residents of BOVISA later, so the living addresses of college teachers and students far away from the garden appear in space. This shows the fact that garden sponsors combine with others to form core members of the network.

## (2) Influence of organization pattern on social organization network and citizen network of garden

Firstly, in terms of network gross characteristic, under other-organization pattern, leading managers and cultivators are mutually independent, and they are two different interest groups. As a result, leading managers have the right of not organizing activities or hold social activities irrelevant to garden. Therefore, social network centering on garden is unable to expand. However, in other-organization pattern, leading managers and cultivators of garden are the same interest group. In order to strive for resources of garden construction, leaders will carry out activities related to the garden, thus social organization network and citizen network centering on garden can be expanded. At the same time, individual pattern adopted by garden under other-organization pattern also restricts garden extension towards citizens to some extent. Firstly, garden cultivators will not initiatively contact strangers from fundamental motive. At most, they might share garden food with family members and friends or occasionally go to the garden for fun. Secondly, in order to protect personal interests, individual cultivators will close the garden gate during the period when the garden should be open to the public. As a result, the public will be unable to enter the garden. This is also an important reason why garden network, especially citizen network cannot be expanded. Finally, the scale of self-organization collective pattern is greater than that of other-organization individual pattern.

Secondly, under the situation where external support force is weak, garden of self-organization collective pattern will strive for resources of garden construction more proactively. Compared with COLTIVANDO garden that has capital and land support from Politecnico di Milano, ISOALPEPEVERDE garden association has no external fund support, and it is hard to obtain legal land use right for the garden. No success can be made by only depending on the 18 association



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members. Therefore, the association extends its citizen network and social organization network, to acquire instrumental resources like material resources and financial resources required by garden construction. Moreover, support from citizens is transformed into political resources as the capital of negotiating with the government. As it were, under self-organization collective pattern, network size of the garden will increase with the reduction of external support; however, in other-organization pattern, network expansion of garden is not greatly related to external support. Both of them are self-organization pattern, so why is network size and heterogeneity of ISOLAPEPEVERDE garden greater than that of COLTIVANDO garden.

Thirdly, in structural characteristics, both of them are self-organization collective pattern; with association nature, ISOLAPEPEVERDE naturally tends to establish relationship with other similar associations. Similarly, in COLTIVANDO, college teachers and students in cultivation group come from Politecnico di Milano. As a university with rich resources, it naturally becomes low-cost connection object when the garden holds activities. This is why one forms close network with associations and commercial institutions, and the other one is closely related to universities.

Finally, in spatial characteristics of network, why does the social organization network of ISOLAPEPEVERDE garden and COLTIVANDO garden extend to other communities? Why does some network association with long distance and strong connection appear? Why is garden under organization pattern restricted in the community? Why does citizen network of ISOLAPEPEVERDEN garden exceed the original community and cover a large area? This is the natural result of network expansion under combined action of self-organization and collective patterns as well as the space expression of sociality like large network size and high heterogeneity of garden. Social organization with long distance and strong connection to the garden in ISOLAPEPEVERDE garden is also garden organization. It has comrade relation with the case garden, and they can generate strong connection by going across a long distance. Meanwhile, due to the low cost of geographical relationship and family relationship, garden mainly is mainly closely related to citizens and social organizations in the same community.

In conclusion, collective pattern and individual pattern affect characteristics of core member network, while individual pattern restricts network expansion of the garden toward citizens to some extent. Self-organization and other-organization pattern mainly affect external expansion of garden network which is expansion of garden social organization network and citizen network.

## **7.2 Innovation point, limitation and prospect of research**

### **7.2.1 Innovation point of research**

The huge social network difference of different gardens is proved, and not all garden protects can enhance connection and cohesion among cultivators with the same degree. Moreover, this paper also summarizes two pairs of organization patterns which are very important to social network construction of garden – self-organization and other-organization pattern as well as collective pattern and individual pattern.

### **7.2.2 Research limitation**

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Firstly, in terms of research method, due to limited investigation energy, no investigation is made by directing at all members in the network. In-depth interview is conducted for principle members and key characters in core member network, such as association president, garden sponsor, garden principal of virescence department in the government, and some cultivators of garden. Though overall characteristics of core member network can be determined, the precise complete picture of network cannot be determined. The other two networks involve numerous network members (68 social organizations related to a certain garden and at least 1,500 citizen network members), and it is uneasy to gain in-depth investigation data. Relevant information such as social organization nature and business address of social organization can be acquired only via interview about core members of the garden including acquaintance degree and resource exchange as well as network investigation. In this way, the relation between garden and social organization / citizens is studied, while the network connection of social organization / citizens cannot be known.

Secondly, in terms of organization pattern study, the four garden cases of Milan are typical, but they are far from covering all organizational characteristics of garden. Garden develops vigorously with fashion trend in Europe, North America and Australia, and the organization patterns of garden have become more and more diversified. For instance, in LEED City of Britain, there is no fixed concentrated plowland and garden association takes charge of establishing one-to-one connection between land owners and citizens who want to till in the entire city. This is a flexible pattern of one-to-one connection between land owners and garden cultivators (families). All the above contents require further study.

Thirdly, in cause analysis of garden network construction, organizational element is not the sole influence factor. Some non-organizational elements, such as the existing social network stock under the influence of urban location of the garden (distance to the city center) as well as citizens, students and organizations of other cities and even other countries attracted by the popularity of garden at late stage, also play an important role in expanding social network of garden. In addition, multiple identities of garden association members are of great importance to garden network construction expansion. For instance, ISOLA association president AFRICA was the member of parent association before, and most members are members of ISOALARTCENTER artist association, parent association and COMITATO DEI MILLE committee. Therefore, during association activities, it is very important to establish and maintain long-term relationship through members with dual identity. In fact, social organization closely related to ISOALAPEPEVERDE mainly consists of the above associations. Due to the limitation of investigation time and energy, we have not made further analysis related to garden social network construction as for the influence of the above non-organizational elements on garden.

In addition, network construction is a dynamic evolution process. When explaining the influence of organization pattern on garden network construction, we should theoretically combine with time dimension to explore the influence of organization pattern at different network evolution stages. However, owing to the limitation of energy, we have not made dynamic explanation.

### 7.2.3 Research prospect

In future study, we should select several gardens at preparation stage or initial development

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stage on the basis of organizing more diversified organization patterns. Dynamic tracking study on the social network can not only acquire static characteristics of the ultimate garden network, but also grasp the dynamic picture of network construction. Moreover, based on comparison among several cases, the influence differences of different organization patterns on social network construction can be summarized.

In garden practice of China, more and more gardens under individual pattern and other-organization pattern have been introduced. For instance, in Shanghai (supplement name of case) and Beijing (supplement name of case), gardens mainly concentrate upon suburban areas far away from citizens. However, according to this study, gardens under collective pattern and self-organization pattern can promote social network construction, which is very important for advancing community building, enhancing social cohesion, and strengthening credibility among citizens. However, individual pattern and other-organization pattern have been knocked out by times gradually; modern society pays more attention to social interaction, social integration and close and harmonious social relations. Therefore, the extensive experts, citizens and relevant decision makers should pay more attention to promotion for gardens under self-organization and collective pattern. Besides, garden does not need to occupy a large area, and internal construction can be attempted in the city.

Moreover, it is also a significant topic to integrate garden cultivation project with important social value and ecological value into urban planning land use classification and index as well as urban planning administration. This deserves further research.

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At Tongji University in May 2014

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## APPENDIX A: Interview Questions

### FOR CULTIVATIONS:

How do you know this garden program? Why you take part in?

Who else do you know in this garden?

Do you familiar with him/her and why?

Did you know each other before this garden program starts? Do you contact each other when you are not in this garden and do what?

### FOR IMPORTANT PERSONS:

Why and how did this garden built?

Who are the stakeholders? Did you sign any kinds of agreements/set up any regulations?

How many garden members this garden has? What are their nationalities, ages, genders and jobs and where are their living places?

How do the members cooperation for working? How to distribute the products?

Could anyone use this garden? Why? And how they use it?

Which are the third parties of the garden? And why you contact with each other?

If the garden holds any activities and what are they? Why the garden holds these activities?

Does the garden have any problem now?

### FOR OFFICERS IN GREEN APARTMENT OF MILANO GOVERNMENT:

What are the relative community garden policies?

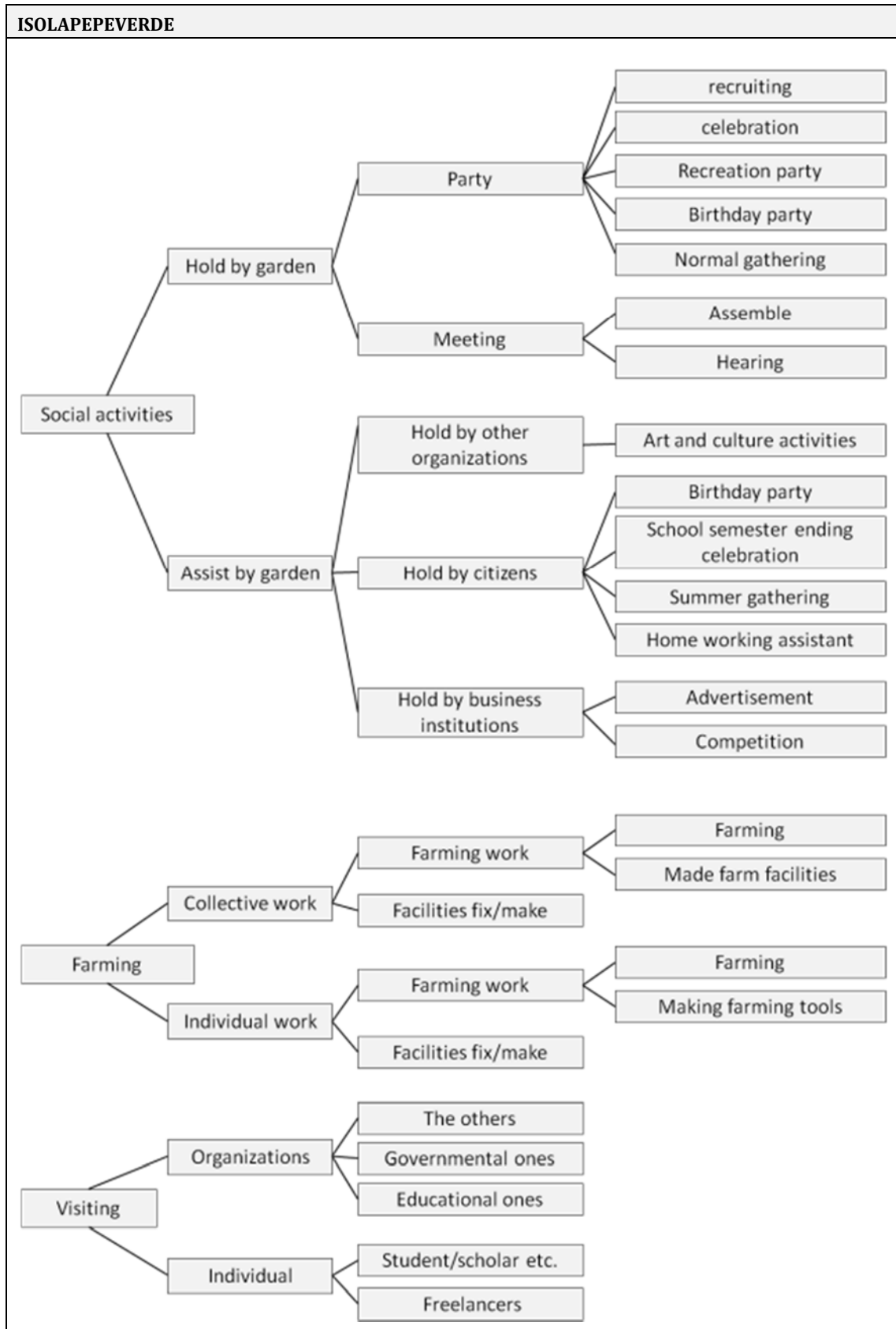
What are the development conditions of community gardens now in Milano?

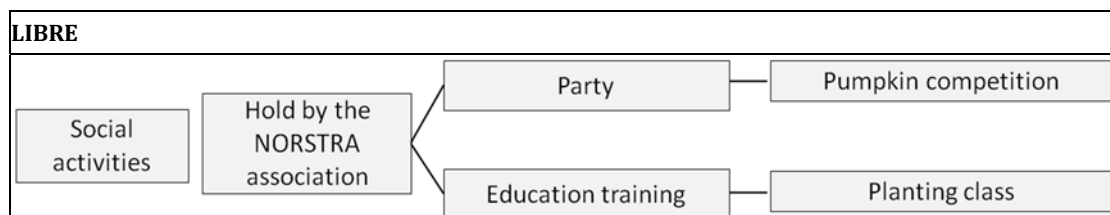
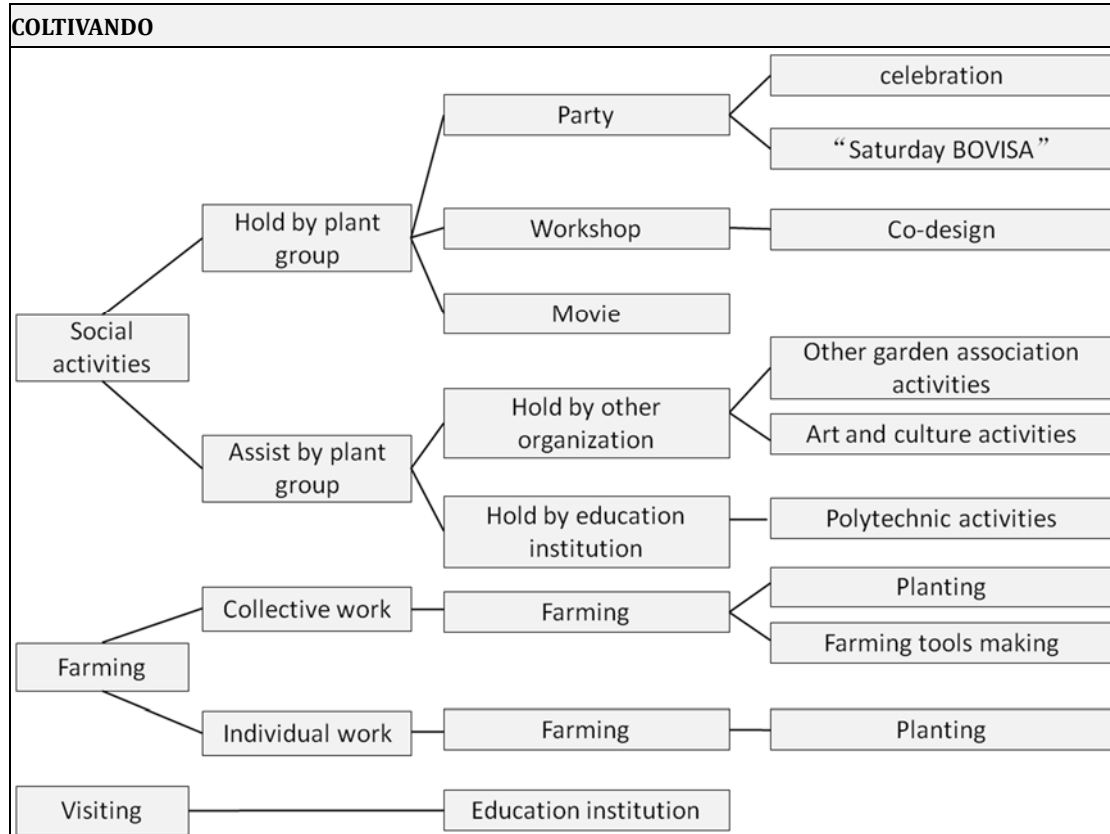
### FOR OFFICERS IN GREEN APARTMENT OF MILANO GOVERNMENT:

What is the history of community garden in Milan?

What are the differences between the traditional allotment and current community garden?

## APPENDIX B: Activity Types of Each Garden





## APPENDIX C: Garden Activities

<b>ISOLAPEPEVERDE</b>			
TIME	ACTIVITY TYPE	ACTIVITY	ENVOLVED CITIZENS AND ORGANIZATIONS
2010/02	Social activity-hold by ISOLAPEPEVERDE	ISOLA community residences decided to reuse an abandoned storage land near via pepe to an community garden. Bookstore ISOAL LIBRI helped to public this idea with an poster.	Co-organizer: <b>【ISOAL LIBRI】</b>
2010/06/20	Social activity-hold by ISOLAPEPEVERDE	It was an wine party on the passenger foot bridge (Cavalcavia Bussa) that the residence notice the public their garden program.	
2010/11/26	Social activity-hold by ISOLAPEPEVERDE	Design the garden site plan.	Co-organizer: <b>【OUT】</b>
2010/11/11 –Citizens applied “observation”at the Milan government which meant to change PGT and turned a place into an garden.			
2010/12/11	Social activity-hold by ISOLAPEPEVERDE	It was a wine party on Cavalcavia Bussa including games, music and shows with 30 participants, 20 of which were willing to be noticed next. Donations was collected with each one 3 euro to 100 euro.	Co-organizer: <b>【ISOLA ART CENTER】</b>
2011/01/11 –A report called <i>Isola pepe verde</i> to the zone government committee which were <i>Per la Città Sostenibile</i> and <i>Per la Città dei Giovani e deiBambini</i> was conducted in Via Guerzoni 38. Report was supported and accepted.			
2011/01/27 –Zone government accepted and passed it to municipality government presenting the general introduction about the garden program and pointing out its fitting sustainable development.			
2011/01-02 –The sitting chairman <i>Giuliano Pisapia</i> suggested an city workshop to develop this program which was called <i>x Milano Tavolo Città Metropolitana</i> with and specificname called <i>ISOLA PEPE VERDE</i> .			
2011/03/07	Social activity-hold by ISOLAPEPEVERDE	Isolapepeverde association meeting was conducted in Via Borsieri 2 with and borrowed office provided by <i>ARCI Metissage</i> .	Co-organizer: <b>【ARCI Metissage】</b>
2010/04/05-Association ISOLAPEPEVERDE applied to the government for taking care of public green strip near vis pepe. <i>Arredo Verde e Qualità Urbana-Servizio Promozioni e Sponsorizzazioni</i> was the apartment that they applied for.			
2010/04/06	Social activity-hold by ISOLAPEPEVERDE	Isolapepeverde association meeting was conducted for preparing thewine party in 22 <sup>nd</sup> , May.	Co-organizer: <b>【Medionauta】</b>
2011/05/22	Social activity-hold by ISOLAPEPEVERDE	It was an wine party in <i>Parcheggio Via Pepe/Borsieri</i> which was an parking lot that 30 persons were willing to be noticed next.	Participants and co-organized by: <b>【ANPI Sezione Almo Colombo Isola】</b> <b>【Comitato I Mille】</b> <b>【Emergency gruppo Milano zona 9】</b> <b>【Erboristeria Astragalo】</b> <b>【Fiab CICLOBBY Onlus】</b> <b>【Giardino degli aromi Onlus】</b> <b>【Incarcer】</b> <b>【Isola Art Center】</b> <b>【 Isola Indoor Market】</b> <b>【Circolo La gatta sul tetto che</b>

			scotta Onlus】【Jahmekya Music】 【Medionauta】 【Milano Clown Festival (PIC)】【Mio Bio】out】【Associazione culturale Punto Rosso】 【Spazio Sugus】 and isola community residences
2011/05/24	Social activity-hold by ISOLAPEPEVERDE	Isolapepeverde association meeting was conducted in <i>Via Confalonieri 2</i> .	Co-organizer: 【Medionauta】
2011/06/05	Social activity-ISOLAPEPEVERDE participate	Having a meeting with garden association Libere Rape Metropolitane to point out the possible abandoned and vacant land which could be turned into gardens in zone 9.	Sponsor: 【Giardino degli Aromi】 【Libere Rape Metropolitane】
2011/06/20	Social activity-hold by ISOLAPEPEVERDE	Isolapepeverde association meeting was conducted in via Pollaiuolo at 9pm with the borrowed office.	Co-organizer: 【Puerto de Libros】
2011/06/28 –A contemporary garden program was proposed to the sitting chairman Pisapia. The official name of the report was <i>Protocollo nr PG 482647-2011, D.C. Sviluppo del Territorio Settore Progetti Strategici, Pianificazione Urbanistica, Ass.re De Cesaris: Protocolli nr PG 482172-2011, nr PG 482193-2011, nr PG 482210-2011; D.C. Arredo Decoro Urbano e Verde: Protocollo nr PG 482518-2011</i> . This proposal was conducted with the help of 4 third parties which are <i>out, ufficio per la trasformazione urbana, AAA Atelier d'Architecture Autogérée Parigi, Associazione Il Giardino degli Aromi Onlus</i> .			
2011/06/28-A meeting was asked by ISOLAPEPEVERDE with sitting city president Pisapia and De Cesaris who was the chairman of territory planning department of Milan. The asking could be found from <i>Protocol No. 482628-2011 PG and PG nr 482132-2011</i> .			
2011/07/06 –Daniela Benelli, who was the man at the wheel of Decentralization department, was noticed by ISOLAPEPEVERDE to list the abandoned place into the vacant land list of Milan.			
2011/10/06-ISOLAPEPEVERDE association was officially built up. It was defined as a culture and social association with 18 core members. Evidence could be found from <i>Agenzia delle Entrate nr 8565 del 12-10-2011</i> .			
2011/10/16	Social activity-ISOLAPEPEVERDE participate	Desiderio Verde, an public free workshop was hold on in the parking lot near via pepe. Eco-boxes for planting were made.	Sponsor: 【Isola Art Center】 【Sassetti Cultura】 【Atelier d'Architecture in Paris autogéré (AAA)】
2011/10/12-20	Social activity-ISOLAPEPEVERDE participate	A sharing session about green design was conducted in Via Volturmo 35, Milan.	Sponsor: 【Autogérée Atelier d'Architecture in Paris】 【Park Fiction in Hamburg】 【Public Works in London】 【 Sassetti Culture】
2011/10/25 –ISOLAPEPEVER association designed the garden site plan.			
2011/11/10	Social activity-hold by ISOLAPEPEVERDE	A contemporary garden design was improved.	Co-organizer: 【out】 【Autogérée Atelier d'Architecture in Paris】 【IL GIARDINO DEGLI AROMI ONLUS】 【ISOLAN INDOOR MARKET】
2011/11/20	Social activity-hold by ISOLAPEPEVERDE	Under the permission of the local government, ISOLAPEPEVER association hold recruition on the Via Farini Celebration and Isola indoor market. Garden program was advertised.	Co-organizer: 【Island Indoor Market】 【ARCI Metissage】
2011/11/24-Ameeting direct with the garden land owner was conducted in government office in Via Larga.			

2011/11/26	Social activity-hold by ISOLAPEPEVERDE	Under the permission of the local government, ISOLAPEPEVER association conducted recruit in Piazza Minniti and also Piazza Minnitiopen market. Above 1000 volunteer signs and their contacts were collected within 2 days.	
2011/11/29	Social activity-hold by ISOLAPEPEVERDE	The public ASSEMBLE was conducted to the public advertising the garden program and recruiting in Via Confalonieri 1, the corner of Via Borsieri. Association Medionauta lend the meeting place.	Co-organizer: <b>【Medionauta】</b>
2011/11/30-A meeting with Lucia De Cesaris e D.C. who was the chairman of urban planning department of Milan government was made.			
2011/12/01	Collective work	Decorating the Christmas tree with association members in the parking lot near via pepe.	
011/12/11	Social activity-ISOLAPEPEVERDE participate	One year ceremony of <i>Libere Rape Metropolitane</i> , a community gardens joint platform, was conducted .	Sponsor: <b>【Cascina Albana】【Libere Rape Metropolitane】</b>
2011/12/12 -Regional Committee of zone government replied ISOLAPEPEVERDE that only half of the land could be used as garden. This was rejected by ISOLAPEPEVERDE and an apply was delivered to the zone government asking for another meeting discussing about this issue again.			
2012/01/22	Social activity-hold by ISOLAPEPEVERDE	Under the permission of zone government, ISOLAPEPEVERDE recruited an advertised this garden program in an outdoor market called <i>Island indoor market c/o Arci Metissage</i> . The support sighs reached to 1200.	Co-organizer: <b>【Island indoor market】【 Arci Metissage】</b>
2012/02/05	Social activity-ISOLAPEPEVERDE participate	The seeds exchange party was conducted in Giardino Primo Moroni.	Sponsor: <b>【Giardino degli Aromi】 + 【Libere Rape Metropolitane】</b>
2012/02/21	Social activity-ISOLAPEPEVERDE participate	ISOLAPEPEVERDE was invited for an exhibition.	Sponsor: <b>【The Cinemino】</b>
2012/02/22	Social activity-hold by ISOLAPEPEVERDE	Garden management and construction fee was estimated for the first time.	
2012/02/27	Social activity-assist by ISOLAPEPEVERDE	An art activity called“Bombe di Semi/Seed bombs”was conducted. Artists and participants thrown plant seeds into this abandoned place from outside the tall wall.	Sponsor: <b>【Isola Art Center】【Londinese Public Works】【Medionauta】</b>
2012/03/19-A meeting with Lucia Castellano who was the sitting chairman of national property department in Uff. Comunale, Via Larga.			
2012/03/21	Social activity-hold by ISOLAPEPEVERDE	A ceremony was conducted to remember little Kevin, the grandchildren of one garden member. A tree was planted in garden.	
2012/04-ISOLAPEPEVERDE prepared a draft including garden site plan, analysis, suggestion and evaluation for the requirement of shared garden by concession.			

2012/04/06-An agreement was signed between ISOLAPEPEVERDE and urban green department of Milan for the concession of an public green strip near via pepe for 2 and a half years.			
2012/05/06	Social activity-hold by ISOLAPEPEVERDE	“Isola Pepe Verde in festa” was conducted in the parking lot near via pepe. Various organizations and community associations and residences participated. Creating a communication opportunity for all organizations in community isola and building a garden with both culture and society were the aim of this activity. Children and citizens participated who wanted a more livable community after the closer of Via Confalonieri garden, residences were eager to have a new one and hold positive attitude to take part in taking care of strip via pepe. 60 persons and their families participated in “taking care one tree”.	Co-organizer and participants: <b>【OUT】 【CULTURALE PUNTO ROSSO】 【CIRCOLO LA GATTA SUL TETTO CHE SCOTTA】 【ANPI】 【LIBERE RAPR METROPOLITANE】 【PIC MILANO CLOWN FESTIVAL】 【ISOLA ART CENTER】 【MEDIONAUTA】 【ISOLA LIBRI】 【MIO BIO】 + 【NABA】</b>
2012/05/15-The official shared garden policy was made in a meeting with many participants including <i>Libere Rape Metropolitane</i> , national property department, urban green department and decentralization department in Uff. Comunale Via Larg.			
2012/05/22 A public assemble was conducted with the participants of city urban planning chairman <i>Lucia De Cesaris</i> , decentralization chairman Daniela Benelli, zone 9 chairman Beatrice Uguccioni, zone 9 regional committee chairman Luca Simi. At night, the association public their contemporary garden program. Meeting address: Sala Parrocchiale S.Volto			
2012/05/25 –the city government released approval that the ISOLAPEPEVERDE program was agreed. It was an public shared garden with management under non-profit organization.			
2012/05/29-Isolapepeverde association got an official association number called nr PG 358661/2012.			
2012/06/01-ISOLAPEPEVERDE ask help to officer Andrea Motta in zone 9 for suggestion in term of how to get the legal concession of shared garden.			
2012/06/02	Collective work	Farm working on public green strip with 50 flowers and vegetables planted.	
2012/06/14 A meeting to explain how to realize a shared garden with participants including chairman of national property department, representatives from green sector, decentralization sector and those from Libere Rape Metropolitane. Address: Uff. Comunale Via Larga			
2012/06/20	Collective work	Farm working at the public green strip including watering, goosing grass and planting.	
2012/7/5	Social activity-hold by ISOLAPEPEVERDE	Communication meeting.	Sponsor: <b>【LONDON PUBLIC WORKS】【COLTIVANDO】【ISOLA ART CENTER】 【OUT】</b>
2012/07/06	Organization visiting	The garden was visited by the sitting chairman Andrea Motta who was zone 9 environment committee and other officers.	
2012/07/10- A meeting hold by zone 9 environment committee to explain the shared garden policy in Milan. ISOLAPEPEVERDE was called the fist one of this kind.			
2012/07/20 - Zone 9 environment committee and decentralization committee claim supporting ISOLAPEPEVERDE publicly. Some suggestions were come up with to this garden in terms of how to realis it. address: Via Guerzoni 38,			
2012/07/25	Organization visiting	Officers from national property departments come to garden making sure there being no harmful construction waste. Some of which had to be moved away immediately.	
2012/07/26 An document was applied at zone 9 government for permission and possible fee to hold a garden party called “Isola Pepe Verde in festa” in October.			

2012/8/7	Individual visiting	Making "ECOBX" for planting.	
2012/09/20 Zone 9 government hold the point that the traffic speed around the garden should be limited under 30km/h, to fitting the sustainable development principle.			
2012/09/22	Collective work	Goosing the grass in PEPE stripe.	
2012/09/25	Social activity- ISOLAPEPEVERDE participate	Helping the other garden association to planting and construction.	Sponsor: <b>【Giardino degli Aromi】</b>
2012/9/29	Social activity- ISOLAPEPEVERDE participate	Taking part in the "Cleaning the planet" activity hold by another garden association. Cleaning, construction and planting were included.	Sponsor: <b>【garden in transformation】</b>
2012/10/3	Social activity-hold by ISOLAPEPEVERDE	A recreation gathering called APERITIVO.	Co-organizer: <b>【ISOLA LIBRI】</b>
2012/10/05- A meeting with Daria Maistri from decentralization committee about the garden concession. Address:Via Larga:			
2012/10/14	Social activity- ISOLAPEPEVERDE participate	A celebration with many other garden associations of Milano, including co-working such as making the garden fence. Address: in garden Giardino degli Aromi	Sponsor: <b>【Giardino degli Aromi】 【Libere Rape Metropolitane】</b>
2012/10/19	Collective work	Receiving the planting donations from isola community residences with a car. Various plants, plant pots and boxes were donated.	
2012/10/21	Collective work	Plant part of the donated plants on the public green strip.	
2012/10/22	Social activity-hold by ISOLAPEPEVERDE	ASSEMBLE of ISOLAPEPEVERDE association, free to all public	Co-organizer: <b>【Isola Libri】</b>
2012/10/26 Email to zone 9 noticing them that ISOLAPEPEVERDE decided giving up the economic support from government because of their uncertain time.			
2012/12/01	Social activity- ISOLAPEPEVERDE participate	Association took part in food group buying activity to advertise garden program and know the other associations.	Sponsor: <b>【ZAC】</b>
2012/12/02	Social activity- ISOLAPEPEVERDE participate	Advertise the garden activities which would be going on.	Sponsor: <b>【Incubatore dell'Arte】 【Tavoli sul cavalcavia Busa】</b>
2012/12/06 Took part in an meeting organized by the zone 9 environment sector and decentralization sector			
2013/01/10 Zone 9claimed that ISOLAPEPEVERDE could get the land concession under the agreement of shared garden.			
2013/01/18	Social activity- ISOLAPEPEVERDE	Book conference written by Mariella Bussolati. Address:Libreria Les Mots	Sponsor: <b>【Libreria Les Mots】</b>



	participate		
2013/01/19	Organization visiting	Residences and representatives of ISOLAPEPEVERDE had a meeting with the chairman of national property sector Lucia Castellano. Chairman of zone 9 environment sector Andrea Motta come to the garden for a looking.	
2013/3/10	Collective work	Planting on the green strip	
2013/3/22	Collective work	Cleaning the garden waste	
2013/4/6	Collective work	Cleaning the garden waste	
2013/4/7	Collective work	Cleaning the garden waste and fixing the door	
2013/4/15	Collective work	Cleaning the garden waste and fixing the door	
2013/05/07 The government of Milano and ISOLAPEPEVERDE association signed the shared garden agreement.			
2013/05/12	Social activity-hold by ISOLAPEPEVERDE	Garden open ceremony with more than 1000 participants and 34 associations/organizations. Various activities were conducted including planting, eco-box making, communication, sport, music, and children games. Food was provided by the local community residences. Music was give by band Brass Band Renaissance Alberto Rossi and PianoTerra Lab. Art games were made by Isola Art Center. The artist Nikola Macedonian Uzunovski also came.	Co-organizer and participants (business institutions): <b>【AMSA】【BEST SERVICES+BOTTEGHE ISOLA】【ECORISOLUZIONI】【LIBERE RAPE METROPOLITANE】【MIO BIO】【NABA Nuova Accademia di Belle Arti Milano】【RISTORANTE KIKI】【VINARIO 11】</b> Co-organizer and participants (organizations): <b>【CHENJIAGOU TAIJI ACADEMY ITALY】【ANPI ALMO COLOMBO ISOLA】【BANDA DI FIATI RINASCIMENTALI ALBERTO ROSSI】【BAR VOLTURNO】【BUEN VIVIR】【CIRCOLO LA GATTA SUL TETTO CHE SCOTTA-Per la tutela dei gatti in libertà】【COLTIVANDO】【DESERTIAMO】【GLI ORTI DI CASCINALBANA】【IL GIARDINO DEGLI AROMI ONLUS】【I'NUSC】【ISOLA ART CENTER】【ISOLA KNIT CAFE'】【ISOLA LIBRI】【LIBERE RAPE METROPOLITANE】【LIBRERIA LES MOTS】【MEDIONAUTA】【MILANO CLOWN FESTIVAL】【ORTO DIFFUSO】【OSSERVATORIO FIGURALE】【PIANOTERRA LAB】【TANTRIKA SHOP】</b> Isola community residences
2013/05/14	Social activity-assist by ISOLAPEPEVERDE	Some primary school students done home work with the help of their parents in the garden after class in the afternoon.	Sponsor: <b>【PARENTS ASSOCIATION】</b>
2013/05/15	Social activity-hold by ISOLAPEPEVERDE	The first association Assemblea was conducted to the public free. 50 persons participated.	Participants: Isola community residences
2013/05/18	Collective work	Cultivation and prepare the garden for the winter. Herb gabs and normal plant bags were made. And kids games were included.	Participants: isola community residences

2013/05/19	Collective work	Cultivation and prepare the garden for the winter including making herb bags and normal plant bags.	Participants: isola community residences
2013/05/22	Social activity-hold by ISOLAPEPEVERDE	A wine party of sharing meal in the garden which was the first meal share activity. The idea come from the first public ASSEMBLE. Sharing meal party has fixed time on every Tuesday noon just after the open air market in the morning. This activity could attract the residences and workers from nearby isola community. In warm season, sharing meal party could attract about average 15 persons once.	Participants: isola community residences
2013/05/23	Organization visiting	Milano laeffe TV shoot an interview of the garden. "Garden and a half" was made as a small documentary movie to show people reclaiming their right for land in Milano.	Visitors: radio station of laeffe TV
2013/05/24	Organization visiting	Some clowns come to garden playing with the children and their parents in the garden, which brought a big surprise.	Visitors: <b>【Scuola di Arti Circensi e Teatrali di via Sebenico】</b>
2013/05/29	Social activity-ISOLAPEPEVERDE participate	Drawing workshop "draw a plant" was conducted by ISOLA ART CENTER for 4-6 year old kids.	Sponsor: <b>【ISOLA ART CENTER】</b>
2013/06/01	Social activity-hold by ISOLAPEPEVERDE	Co-organize workshop was conducted with various activities including eco-box making, kid drawing and planting.	Participants: residences
2013/06/02	Social activity-assist by ISOLAPEPEVERDE	A birthday party for a child in isola community.	Sponsor: residences
2013/06/04	Social activity-assist by ISOLAPEPEVERDE	A celebration for kinder garden semester ending with garden picnic.	Sponsor: <b>【PARENTS ASSOCIATION】</b>
2013/06/07	Collective work	Fix the rain system with bog container of 5.500lt in the garden.	
2013/06/08	Collective work	Soil was delivered into garden and pull into the eco-box and plant pots and bags.	
2013/06/09	Organization visiting	Interviewed by a TV show.	Visitors: <b>【radio station of milan】</b>
2013/06/12	Social activity-assist by ISOLAPEPEVERDE	"Indro Montanelli" as an activity was prepared including making wooden chairs.	
2013/06/13	Social activity-assist by ISOLAPEPEVERDE	An movie party. The movie was called Olvivos del Rio, documenting ancient Italians' art crafts.	Sponsor: <b>【MEDIONAUTA】【LE ALI DEL CONDOR】</b>

2013/06/15	Social activity-assist by ISOLAPEPEVERDE	Taking part in an activity about reuse the waste. Abandoned plastic bags and all kinds of boxes were collected around the city and made into new things in the garden.	Sponsor: <b>【 ISOLA KNIT CAFE 】</b>
2013/06/17	Social activity-assist by ISOLAPEPEVERDE	A birthday party for 6 year old boy from the community.	
2013/06/20	Social activity-assist by ISOLAPEPEVERDE	Celebration for Confalonieri primary school semester ending in the garden with a class of kids and their parents.	Sponsor: <b>【 Confalonieri primary school 】 【 PARENTS ASSOCIATION 】</b>
2013/06/21	Social activity-assist by ISOLAPEPEVERDE	Celebration for Confalonieri primary school semester ending in the garden with a class of kids and their parents. Activities included picnic and music.	Sponsor: <b>【 Confalonieri primary school 】 【 PARENTS ASSOCIATION 】</b>
2013/06/23	Social activity-hold by ISOLAPEPEVERDE	Collective working including big plant box and flower beds.	
		A birthday party for an community residence.	
	Organization visiting	Interviewed by an Milano TV.	Visitors: <b>【 radio station of milan 】</b>
2013/06/30	Social activity-assist by ISOLAPEPEVERDE	Book presentation of Fight Specific Island in garden.	Sponsor: <b>【 ISOLA ART CENTER 】 【 ISOLA LIBRI BOOK 】</b>
2013/07/03	Social activity-hold by ISOLAPEPEVERDE	Aperitivo	
		The association ASSEMBLE	
2013/07/05	Social activity-assist by ISOLAPEPEVERDE	Performance art of collect wall drawing	Sponsor: <b>【 ISOLA ART CENTER 】</b>
2013/07/06	Social activity-participate ISOLAPEPEVERDE	Took part in and won the business competition of <i>Insieme per il nostro quartiere</i> . The local residences rank our garden program as the first among all the other 4. The prize was free construction materials.	Sponsor: <b>【 BRICO CENTER 】</b>
	Collective work	The first garden vegetable harvest.	
2013/06/28	Social activity-assist by ISOLAPEPEVERDE	Performance art of collect wall drawing.	Sponsor: <b>【 ISOLA ART CENTER 】</b>
2013/06/30	Social activity-assist by ISOLAPEPEVERDE	Citizen music party.	Sponsor: <b>【 Isola Art's Club Band 】</b>
2013/07/03	Social activity-hold by ISOLAPEPEVERDE	Recreation party with 50 participants.	
2013/07/06-07	Collective work	Garden harvest.	

2013/07/07	Individual visiting	Interviewed by a university student for his graduation thesis.	Visitors: <b>【Università di Bolzano】</b>
2013/07/10	Organization visiting	Checked by the <i>urbano e verde</i> sector for watering system.	Visitors: <b>【Giardino degli Aromi Onlus】</b> <b>【urban and green department of government】</b>
2013/07/13	Social activity-assist by ISOLAPEPEVERDE	A birthday party for a kid from isola community.	
2013/07/17	Individual visiting	Interviewed by an scholar majored in environmental sustainable development.	Visitors: <b>【University of Rotterdam】</b>
2013/07/20	Individual visiting	Interviewed for a documentary movie showing Milano community garden development.	Visitors: photographer Noolyta
2013/07/23	Individual visiting	Visited by and world-wide known artist Paolo Buggiani which get us a big surprise.	Visitors: artist Paolo Buggiani
2013/07/24	Social activity-hold by ISOLAPEPEVERDE	Notice and invite the residence watering garden plants voluntarily. People come and took bottles that night.	
	Organization visiting	Interviewed by Milano TV.	Visitors: radio station <b>【WWF Lombardia】</b>
2013/07/26	Social activity-hold by ISOLAPEPEVERDE	Wine party for summer holiday with families remained in Milan.	Co-organizer: <b>【PARENTS ASSOCIATION】</b>
2013/07/27	Collective work	Making new eco-box for new plants.	
2013/07/31	Social activity-hold by ISOLAPEPEVERDE	Investigate and meeting for preparing a children place.	
2013/08/01	Social activity-hold by ISOLAPEPEVERDE	A birthday party for one association member.	
2013/08/09	Organization visiting	Milan road and green sector checked and made sure the water system was not connected to the city water infrastructure.	Visitors: <b>【urban and green department of government】</b>
2013/08/10	Individual visiting	Visited by a scholar	Visitors: urban researchers of Europe
2013/08/12	Collective work	Drainage ditch and rain containers making.	
2013/08/24	Organization visiting	Visited by a scholar by a sustainable workshop.	Visitors: <b>【sustainable workshop】</b>
2013/08/25	Organization visiting	Visited by representatives from a Germany organization.	Visitors: <b>【Friends of the Earth】</b>
2013/09/06	Organization visiting	Visited by the other garden organizations in Milan.	Visitors: <b>【coltivando】</b>
2013/09/10	Social activity-assist by	A birthday party for a girl from isola community.	

	ISOLAPEPEVERDE		
2013/09/11	Social activity-ISOLAPEPEVERDE participate	Took part in a farmers market to know about other associations.	Sponsor: <b>【Gas Archipelago】</b>
2013/09/16	Social activity-assist by ISOLAPEPEVERDE	A birthday party for a residence from isola community.	
2013/09/20	Collective work	The business competition prizes were sent into garden and all the members were helping to install the warm house and farming tools.	Co-organizer: <b>【Brico Center】</b>
2013/09/24	Individual visiting	Interviewed by an university student for thesis.	Visitors: university student in Milan
2013/09/25	Organization visiting	Some wooden planks were sent into garden for free.	Visitors: a construction company in milan
2013/09/26	Social activity-hold by ISOLAPEPEVERDE	Association meeting prepared for party in 12nd of October.	
2013/09/28	Social activity-hold by ISOLAPEPEVERDE	Association meeting	
	Collective work	Collective working	
	Social activity-assist by ISOLAPEPEVERDE	Movie first show in garden about Milan community garden shoot by Noolyta.	Sponsor: <b>【Noolyta】</b>
2013/09/29	Social activity-assist by ISOLAPEPEVERDE	A birthday party for a girl from isola community.	
2013/10/06	Social activity-assist by ISOLAPEPEVERDE	Celebration and workshop teaching the farming knowledge and culture including seeds cleaning, wheat harvest and milk making. 30 kids and 100 adults participate even though it was rain. Some snack were provided.	Sponsor: <b>【Isola Kids Festival】</b>
2013/10/12	Social activity-hold by ISOLAPEPEVERDE	Wine party called Festa Solare Festival  Free workshop about recycle energy knowledge, free noon meal and music by Isola Art's Club Band. More than 500 persons participated including the vice-mayor of Milano.	Co-organizer: <b>【Isola Art's Club Band】</b>
2013/10/18	Social activity-assist by ISOLAPEPEVERDE	A birthday party for a girl from isola community.	
2013/10/19	Collective work	Fixing solar energy system in garden.	
2013/10/20	Social activity-assist by	Free TAIJI class to public.	Sponsor: <b>【PIANO TERRA】</b>

	ISOLAPEPEVERDE	A photograph exhibition called "Ab-Out Milano" and a communication salad.	Sponsor: 4 young photographers
2013/10/26	Collective work	Making eco-boxes, cleaning the farming tool room, drawing the wall, fixing the solar energy system, cultivation, constructing the kids play ground.	
	Individual visiting	Visited by some by cyclists.	Visitors: cyclists
2013/10/27	Social activity-assist by ISOLAPEPEVERDE	A birthday party of a garden member.	
2013/11/05	Individual visiting	Interviewed and shoot for an garden documentary movie about urban farming activities in Berlin and Milano.	Visitors: Salvatore Laforgia and Paola Longo
	Collective work	Interviewed by an garden program called transmission Orto di Mare.	Visitors: radio station <b>【Radio Router】</b>
2013/11/09	Collective work	Visited by botanist from another garden association for winter planting knowledge.	Visitors: <b>【Giardino degli Aromi Onlus】</b>
	Social activity-hold by ISOLAPEPEVERDE	Meeting with parents from isola community discussing about the kids playground making.	Co-organizer: <b>【PARENTS ASSOCIATION】</b>
2013/11/10	Social activity-ISOLAPEPEVERDE participate	Invited to visit Parco POP in Via Bovisasca for advertising and resisting the urban development program.	Sponsor: <b>【Seminatori】</b>
2013/11/16	Individual visiting	Holding a class for balcony planting with some students.	Visitors: writer <b>【Mariella Bussolati】</b>
2013/11/21	Organization visiting	Visited by Dott. Seris who was zone 9 committee representing the government.	Visitors: <b>【urban and green department of government】</b>
2013/11/22	Individual visiting	Interviewed by an scholar from Giornalismo Walter Tobagi	Visitors: researcher from university
2013/11/23	Social activity-hold by ISOLAPEPEVERDE	Meeting with parents about the indoor kids playground.	
2013/11/24	Social activity-ISOLAPEPEVERDE participate	Indoor market	Sponsors: <b>【INDOOR MARKET】</b>
2013/11/30	Collective work	Preparing the kids indoor playground and the plants for winter.	
2013/12/01	Collective work	Planting new plants on the green strip and fixing a small moving barbecue.	
2013/12/02	Collective work	Turned down a dangerous wall on the west of the garden.	
2013/12/07	Collective work	Constructing the indoor kid playground and prepared the plants for winter.	

		Some abandoned bricks were used as flower beds.	
2013/12/13-14	Organization visiting	A workshop organized by professor Giulio Ernesti and his students. It was free to all the public with the title of "linkage, edge, pedestrian bridge".	Visitors: <b>【planning and design school of Venice university】</b>
2014/01/01	Social activity-hold by ISOLAPEPEVERDE	The first sharing meal of the new year.	
2014/01/06-07-08-09	Collective work	Cultivation of different plants donated from a residence like bamboos.	
2014/01/11	Individual visiting	Interviewed for an community garden documentary movie.	Visitors: journalist
2014/01/12	Collective work	Reusing the abandoned bricks and taking care of the plants.	
2014/01/19	Social activity-hold by ISOLAPEPEVERDE	An Assemble to the public and a sharing meal after.	
2014/01/20	Social activity-ISOLAPEPEVERDE participate	Invited by a competition for designing citizen center and pedestrian bridge.	
2014/01/28	Individual visiting	Interviewed for the documentary movie.	
	Collective work	Preparing for cultivation and winter snow.	
2014/01/29	Individual visiting	Interviewed by university students for his thesis.	Visitors: Chinese student from polytechnic of Milan
	Organization visiting	Donated by an olive tree.	Visitors: <b>【LUA-Laboratorio Urbano Aperto di San Cassiano】</b>
	Collective work	Plant taking care and preparing for the winter snow.	
2014/1/31	Organization visiting	Association chairman Africa was invited to take a visit.	Visitors: <b>【ISOLA primary school】</b>
2014/2/3 Applying to zone 9 government for renewing the shared garden agreement.			
2014/2/12-17	Collective work	Mobilizing residences and children to take part in the clown festival in April. On Saturday parents and kids making the decoration using plastic bottles in garden.	Co-organizer: <b>【PARENTS ASSOCIATION】</b>
2014/2/20	Social activity-ISOLAPEPEVERDE participate	Invited by an culture visiting	Sponsors: <b>【Nord Milano】</b>
2014/2/16	Collective work	Constructing the electrical system.	
	Social activity-ISOLAPEPEVERDE participate	Seeds exchange in Ex Ospedale Psichiatrico Paolo Pini,via ippocrate,45 with more than 100 participants.	Sponsors: <b>【Giardino Degli Aromi】【Libere Rape Metropolitane】 【PIANO Terra】</b>

2014/2/17	Collective work	Cultivation and planting on the seeds beds.	
2014/2/23	Social activity-hold by ISOLAPEPEVERDE	Second-hand market, sharing meal	Co-organizer: 【Isola Indoor Market】 【 ISOLA LIBRI】
2014/3/1	Social activity-assist by ISOLAPEPEVERDE	Show of "Si vergogni il ciclista" (Shame on Cyclists) and gathering	Sponsors: 【O.P.M.】
2014/3/2	Social activity-hold by ISOLAPEPEVERDE	Wine party for all the public including music and games	
2014/3/6	Social activity-assist by ISOLAPEPEVERDE	Milan clown festival activities	Sponsor: 【ISOLA CLOWN FESTIVAL】
2014/3/13	Collective work	Preparing and making show board for spring activities in April.	
2014/3/15	Social activity-ISOLAPEPEVERDE participate	Being invited by Politecnico di Milano to making a lecture.	Sponsor: 【I COLTIVANDO】
2014/3/16	Collective work	Preparing and making show board for spring activities in April.	
2014/3/20	Individual work	Planting potatoes	
	Social activity-assist by ISOLAPEPEVERDE	Designing new garden door.	Sponsors: 【Isola Art Center】
2014/3/21	Collective work	A truck of free soil was sent into garden	
2014/3/22	Social activity-hold by ISOLAPEPEVERDE	Spring festival including making eco-box, kids drawing, new entrance celebrating, spring planting, music and free food	Co-organizer: 【Isola Art Center】
2014/3/30	Collective work	Planting and watering	

## CONTIVANDO

TIME	ACTIVITY TYPE	ACTIVITY	INVOLVED CITIZENS AND ORGANIZATIONS
2011/09-2012/03	Social activity-hold by COLTIVANDO	A meeting to consult specialists and other managers about the garden program in university.	Co-organizer: 【Il Giardino degli Aromi】 and specialists of university
2012/05-07	Social activity-hold by COLTIVANDO	3 big co-designs including 4 workshops. Garden site plan, working pattern were decided and 18 residences and students were willing to be members.	Co-organizer and participants: 【POLITECNICO DI MILANO】 【POLISOCIAL】
2012 10 13	Collective work	20 persons participated.	



2012 10 20	Collective work	20 persons participated.	
2012 10 27	Collective work	12 persons participated.	
2012 11 17	Collective work	12 persons participated.	
2012 11 24	Collective work	Seeds choosing workshop,21 persons participated.	
2012 12 1	Collective work	Seeds choosing workshop	
	Social activity- COLTIVANDO participate	Invited to farmers market to know the other organizations	Sponsors: <b>【ZAC】</b>
2012 12 7	Social activity- COLTIVANDO participate	Invited to farmers market to know the other organizations	Sponsors: <b>【ZAC】</b>
2012 12 15	Social activity- COLTIVANDO participate	Helping a garden organization cleaning the place for getting the land use right for a community garden	Sponsors: <b>【FARM ALBANA】</b>
2012 12 22	Collective work	Cultivation,10 persons participated.	
2013 1 12	Collective work	Cultivation 10 persons participated.	
2013 1 19	Collective work	Cultivation ,10 persons participated.	
2013 1 26	Collective work	Cultivation ,15persons participated.	
2013 2 9	Collective work	Cultivation ,10 persons participated.	
2013 2 16	Collective work	Cultivation ,15 persons participated.	
2013 2 13	Collective work	Cultivation ,15 persons participated.	
2013 3 2	Collective work	Cultivation ,10 persons participated.	
2013 3 9	Collective work	10 persons participated.	
2013 3 15	Collective work	Cultivation ,10 persons participated.	
2013 3 16	Social activity-hold by COLTIVANDO	Festival called BOVISA ON SATURDAY including various games aiming at mixing the university and the surrounding residences.	Co-organizer: <b>【IL VASO DI PANDORA】DESIGN AND KNITTING LAB【POLIMI LIBRARY】【LA BIBIOTECA DI DERGANO/BOVISA】</b>
2013 3 23	Collective work	Cultivation ,10 persons participated.	
2013 4 6	Collective work	Cultivation ,10 persons participated.	
2013 4 13	Collective work	Cultivation ,10 persons participated.	
2013 4 15	Social activity-hold by	Festival called BOVISA ON SATURDAY including various games aiming at	Co-organizer: <b>【IL VASO DI PANDORA】【DESIGN AND KNITTING LAB】</b>

	COLTIVANDO	mixing the university and the surrounding residences.	【POLIMI LIBRARY】【LA BIBIOTECA DI DERGANO/BOVISA】
2013 4 21	Social activity- COLTIVANDO participate	Being invited to the farmers market for advertising CONTIVANDO and knowing the other organizations.	主办方: 【ZAC】
2013 5 4	Collective work	Cultivation ,10 persons participated.	
2013 5 11	Social activity-hold by COLTIVANDO	Festival called BOVISA ON SATURDAY including various games aiming at mixing the university and the surrounding residences.	Co-organizer: 【IL VASO DI PANDORA】【DESIGN AND KNITTING LAB】【DE.DE.P】【CHIARA FRASSI DI CLEMT DESIGN】【POLIMI RADIO】【POLIMI LIBRARY】【LOCAL LIBRARY】
2013 5 18	Collective work	Cultivation, 15 persons participated.	
2013 6 8	Collective work	Cultivation, 5 persons participated.	
2013 6 15	Social activity-hold by COLTIVANDO	Festival called BOVISA ON SATURDAY including various games aiming at mixing the university and the surrounding residences.	Co-organizer: 【DASTU】【ASF-ARCHITECTI SENZA FRONTIERE】【DESIGN AND KNITTING LAB】【POLIMI LIBRARY】【LA BIBIOTECA DI DERGANO/BOVISA】【CHIARA FRASSI DI CLEMT DESIGN】【IL VASO DI PANDORA】
2013 6 22	Collective work	A birthday party for a member, 15 persons participated.	
2013 6 29	Collective work	Cultivation, 10 persons participated.	
2013 7 1	Social activity- COLTIVANDO participate	An outdoor salad called sustainability in Monday.	Sponsors: 【LUNEDI SOSTENIBILI】
2013 7 7	Collective work	Cultivation	
2013 7 14	Collective work	Harvest of wheat, vegetables and watermelon etc.	
2013 7 15	Social activity-hold by COLTIVANDO	Festival called BOVISA ON SATURDAY including various games aiming at mixing the university and the surrounding residences.	Co-organizer: 【POLIMI-RADIO】【IL VASO DI PANDORA】【DESIGN AND KNITTING LAB】【LA BIBIOTECA DI DERGANO/BOVISA】
2013 7 27	Collective work		
2013 8 3	Collective work	Harvest of wheat, vegetables and watermelon etc.	
2013 8 10	Collective work	Harvest of wheat, vegetables and watermelon etc. Planting and making plant boxes.	
2013 9 14			
2013 9 18	Collective work		
2013 9 21	Collective work	Harvest, planting and making plant boxes.	
2013 10 9	Social activity- COLTIVANDO	6 warm houses were donated from the indoor design department	Sponsors: 【APE】

	participate	students.	
2013 10 13	Collective work	Cultivation, 5 persons participated.	
	Social activity-hold by COLTIVANDO	1year birthday party of COLTIVANDO with more than 80 persons.	Co-organizer: <b>【CHOIR】</b>
2013 10 19	Collective work		
2012 10 26	Collective work		
2013 11 7	Collective work		
2013 11 16	Collective work	Cultivation, 15persons participated.	
2013 11 21	Collective work	Cultivation, 10 persons participated.	
2013 11 30	Social activity- COLTIVANDO participate	Invited as an important site in the bicycle riding activity.	Sponsors: <b>【ZAC】</b>
2013 12 14	Collective work		
2013 12 20	Collective work	Celebrating the Christmas day with 15 persons participated.	
2013 1 11	Collective work		
2014 1 18	Collective work	Cultivation, 15persons participated.	
2014 1 21	Social activity-hold by COLTIVANDO	Movie called "A Farm for the Future" made by BBC.	
2014 1 23	Social activity- COLTIVANDO participate	Invited giving a lecture on design class in university.	Sponsors: <b>【design school of polytechnic of Milan】</b>
2014 1 25	Collective work	Cultivation, 20 persons participated.	
2014 2 1	Social activity- COLTIVANDO participate	Invited to farmers market to know the other organizations	Sponsors: <b>【ZAC】</b>
2014 2 8	Social activity- COLTIVANDO participate	Meeting to share the experiment of mongering a community garden.	Sponsors: <b>【Synergies for the garden】</b>
2014 2 10	Visiting	Visited by Sheffield University.	Visitors: <b>【urban design school of Sheffield University】</b>
2014 2 11	Social activity-hold by	Movie about healthy lifestyle.	

	COLTIVANDO		
2014 2 22	Collective work		
2014 3 1	Collective work		
2014 3 8	Collective work	Preparing for the BOVISA ON SATURDAY the next week.	
2014 3 11	Social activity- COLTIVANDO participate	Invited to community garden salon introducing CONTIVANDO. More than 120 persons took part in.	Sponsors: <b>【Pro Loco Azzate】</b>
2014 3 15	Social activity-hold by COLTIVANDO	Festival called BOVISA ON SATURDAY including various games aiming at mixing the university and the surrounding residences.	Sponsors: <b>【DESIS NETWORK】 【POLISOCIAL】【Il Giardino degli Aromi】 【 INCARTTA BOVISA】【CHOIR】【ZUP-ZUPPA URBAN PROJECT】【DE.DE.P】 【CHIARA FRASSI DI CLEMT DESIGN】【LA BIBIOTECA DI DERGANO/BOVISA】 【POLIMI LIBRARY】【DESIGN AND KNITTING LAB】【IMAGISLAB】</b>
2014 3 22	Collective work		
2014 4 4	Social activity- COLTIVANDO participate	Lecture	Sponsors: <b>【SAKVIAMO IL PAESAGGIO-ITALIAN FORUM OF CHANGES TO THE EARTH AND THE LANDSCAPE】</b>
--	Visiting	Visited by primary school students for 3 times	Visitors: <b>【PRIMARY SCHOOL 1 OF BOVISA】</b>
--	Visiting	Visited by primary school students for 3 times	Visitors: <b>【PRIMARY SCHOOL 2 OF BOVISA】</b>

<b>LIBRE</b>			
TIME	ACTIVITY TYPE	INTRODUCTION	INVOLVED CITIZENS AND ORGANIZATIONS
2011/10/06	Social activity-hold by NOSTRA	Pumpkin festival	Participants: garden renters, residences living nearby
2012/10/06	Social activity-hold by NOSTRA	Pumpkin festival	Participants: garden renters, residences living nearby
2013/10/06	Social activity-hold by NOSTRA	Pumpkin festival	Participants: garden renters, residences living nearby
2014/02	Social activity-hold by NOSTRA	Agriculture training calss	Co-organizer: an agriculture school Participants: garden renters, residences living nearby

## APPENDIX D: Social Organizations Connected with Garden

REMARKS: Appendix is made by summaries and systemize information from interview and internet

ISOLAPEPEVERDE								
CODE	SOCIAL ORGANIZATION	TOTAL CONTACT TIMES WITH GARDEN	AVERAGE CONTACT TIMES PER YEAR WITH GARDEN	BENEFIT FLOW (GARDEN VS ORGANIZATIONS)	TYPE 1	TYPE 2	TYPE 3	INTRODUCTION AND WEBSITE
1	MIDDLE SCHOOL	1	0.25	→	Academic/education institution	school		
2	URBAN DESIGN SCHOOL OF UNIVERSITY OF VENICE	1	0.25	→	Academic/education institution	University research/program		
3	FRIENDS OF THE EARTH	1	0.25	→	Organization/association	NGO	environment	Sustainable development of the earth
4	URBANIAHOEVE	1	0.25	→	Program	Research institution	environment	Various design and policy are used to improve the urban community garden <a href="http://www.urbaniahoeve.nl/">http://www.urbaniahoeve.nl/</a>
5	ZONA K (Isola Kids Festival)	1	0.25	→	Organization/association	Non-profit association	Culture	Devote to sharing wide range of culture, providing culture sharing activity across different ages and social classes. <a href="http://www.zonak.it/isola-kids-festival/">http://www.zonak.it/isola-kids-festival/</a>
6	ZAC	2	0.5	←	Organization/association	group	Society	<a href="https://www.facebook.com/events/439360332759638/">https://www.facebook.com/events/439360332759638/</a>
7	VINARIO 11	2	0.5	←	Business institution	shop	Wine	
8	The Cinemino	1	0.25	→	Organization/association	organization	Culture	Reading and understanding the society by shooting movies, understanding Era art spirit <a href="https://www.facebook.com/ilcinemino">https://www.facebook.com/ilcinemino</a>
9	Tavoli sul cavalcavia Bussa	1	0.25	→	Non-profit program	program	Society	Revitalization plan of isola pedestrian bridge <a href="http://www.milanoisola.it/tag/cavalcavia-bussa/">http://www.milanoisola.it/tag/cavalcavia-bussa/</a>
10	TANTRIKA	1	0.25	↔	Business institution	shop	Clothin	Hand-made clothes and jewelry shop

								<a href="https://www.facebook.com/pages/Tantrika-shop/338895539467388">https://www.facebook.com/pages/Tantrika-shop/338895539467388</a>
11	Spazio Sugus	1	0.25	←	Business institution	Public service institution	Place	Place for public and private use managed by Buen Vivir <a href="http://spaziosugus.it/SPAZIO_SUGUS/Home.html">http://spaziosugus.it/SPAZIO_SUGUS/Home.html</a>
12	SCUOLA PRIMARIA F.CONFALONIERI	2	0.5	→	Academic/education institution	Primary school		
13	Scuola di Arti Circensi e Teatrali	1	0.25	↔	Organization/association	Association	Culture	Circus and art education
14	SCUOLA DELL' INFANZIA COMUNALE	1	0.25	→	Academic/education institution	kindergarden		
15	Sassetti Cultura	2	0.5	↔	Organization/association	Association	Culture	Encourage art and culture development <a href="http://www.sassetticultura.it/">http://www.sassetticultura.it/</a>
16	RISTORANTE KIKI	1	0.25	←	Business institution	Restaurant	Food	<a href="http://kikimilano.com/">http://kikimilano.com/</a>
17	Punto Rosso	2	0.5	→	Organization/association	Association	Culture	Advertise communism, culture research, oppose to capitalist. Collective, common and respectful modern communism is advocated. <a href="http://www.puntorosso.it/">http://www.puntorosso.it/</a>
18	Puerto de Libros	1	0.25	←	Business institution	Book shop	Publisher	Connected close with Isola art center
19	Public Works in London	3	0.75	←	Organization/association	Association		Constitute of artists and architectures who advocate urban public space blend in participation and cooperation. <a href="http://www.publicworksgroup.net/">http://www.publicworksgroup.net/</a>
20	PIANO TERRA LAB	3	0.75	↔	Organization/association	Group	Culture	Occupied by student, class with culture and yoga <a href="https://www.facebook.com/pages/Piano-Terra/199540910146367">https://www.facebook.com/pages/Piano-Terra/199540910146367</a>
21	Park Fiction in Hamburg	1	0.25	←	Organization/association	Association	Society	Conduct public park activities including art, culture and entertainment by encouraging citizens participation self-organization. Advocating the citizens' right of using public park and avoid it from urban development

								<a href="https://www.nadir.org/nadir/initiativ/parkfiction/">https://www.nadir.org/nadir/initiativ/parkfiction/</a>
22	OUT	5	1.25	←	Organization/association	Association	Culture	Communication and art activity to solve the city problem. <a href="https://www.facebook.com/pages/Associazione-Culturale-OUT/219133971477345">https://www.facebook.com/pages/Associazione-Culturale-OUT/219133971477345</a>
23	OSTERIALNOVE	2	0.5	←	Business institution	Restaurant	Food	
24	OSTERIA DAL VERM	2	0.5	←	Business institution	Restaurant	Food	
25	OSSERVATORIO FIGURALE	1	0.25	←	Organization/association	Association	Art	Art communication <a href="http://www.osservatoriofigurale.it/">http://www.osservatoriofigurale.it/</a>
26	ORTO DIFFUSO	1	0.25	→	Organization/association	Network platform	Culture	Research on and advertise community garden in Italy <a href="http://ortodiffuso.noblogs.org/il-manifesto-di-orto-diffuso/">http://ortodiffuso.noblogs.org/il-manifesto-di-orto-diffuso/</a>
27	NUSC	2	0.5	←	Business institution	Restaurant	Food	
28	NABA Nuova Accademia di Belle Arti Milano	2	0.5	→	Academic institution	research university research institution		
29	Mio Bio	3	0.75	↔	Business institution	Shop	Food	Advocate “0 km” food chain and organic food <a href="http://www.mio-bio.it/">http://www.mio-bio.it/</a>
30	Milano Clown Festival	4	1	↔	Business institution	Company	Drama	Clown and outdoor drama <a href="http://www.milanoclownfestival.it/">http://www.milanoclownfestival.it/</a>
31	Medionauta	8	2	↔	Organization/association	Association	Culture	Providing all kinds of workshop and activities for art <a href="http://www.medionauta.org/">http://www.medionauta.org/</a>
32	MASE	1	0.25	←	Business institution	Shop	hardware	
33	LUA-LABORATORIO URBANO APERTO	2	0.5	↔	Organization/association	Association		Creative design and support participative urban design
34	Libreria Les Mots	2	0.5	←	Business institution	Bookshop	Publisher	<a href="http://www.librerialesmots.it/">http://www.librerialesmots.it/</a>
35	libere rape metropolitane	7	1.75	↔	Organization/association	Network platform	Society	Support urban community garden development in Milan

36	Le Ali del Condor	1	0.25	→	Organization/association	Association	Culture	The Italy division of sustainable tourism association from Argentina <a href="http://www.lealidelcondor.com/Index.html">http://www.lealidelcondor.com/Index.html</a>
37	Jahmekya	1	0.25	←→	Business institution	Shop	Music	<a href="https://www.facebook.com/pages/Jahmekya-Music/92082943635">https://www.facebook.com/pages/Jahmekya-Music/92082943635</a>
38	ISOLA LIBRI	7	1.75	←	Business institution	Book shop	Publisher	
39	ISOLA KNIT CAFE'	2	0.5	←	Organization/association	Group	Culture	Hand-made cloth and rebuild people's social network <a href="https://www.google.com/url?sa=t&amp;rct=j&amp;q=&amp;esrc=s&amp;source=web&amp;cd=10&amp;ved=0CIEBEBywCQ&amp;url=http%3A%2F%2Fwww.knitcafe.eu%2F&amp;ei=nfVLU7bQFeibygH0voDIDA&amp;usg=AFQjCNHD8Pla-np9PNNDRrK-IIO0LOr5w&amp;sig2=s51-IASB48WlQGKrnPWUEA&amp;bvm=bv.64542518,d.aWc&amp;cad=rjt">https://www.google.com/url?sa=t&amp;rct=j&amp;q=&amp;esrc=s&amp;source=web&amp;cd=10&amp;ved=0CIEBEBywCQ&amp;url=http%3A%2F%2Fwww.knitcafe.eu%2F&amp;ei=nfVLU7bQFeibygH0voDIDA&amp;usg=AFQjCNHD8Pla-np9PNNDRrK-IIO0LOr5w&amp;sig2=s51-IASB48WlQGKrnPWUEA&amp;bvm=bv.64542518,d.aWc&amp;cad=rjt</a>
40	Isola Indoor Market	5	1.25	←	Organization/association	Group		Organize community market <a href="https://www.facebook.com/pages/Isola-Indoor-Market/105977856183657">https://www.facebook.com/pages/Isola-Indoor-Market/105977856183657</a>
41	ISOLA ART CENTER	15	3.75	←→	Program	Association	Society	Resist community gentrification using art form <a href="http://www.isolartcenter.org/index.php?p=1131987149">http://www.isolartcenter.org/index.php?p=1131987149</a>
42	Incubatore dell'Arte	1	0.25	←→	Organization/association	Association	Culture	Center of all kinds of association <a href="http://www.piubici.org/2012/10/lincubatore-dellarte/">http://www.piubici.org/2012/10/lincubatore-dellarte/</a>
43	Incarcer-ARTI	1	0.25	→	Organization/association	Association	Culture	Guarantee and advocate prisons' right
44	I'NUSC	1	0.25	←	Business institution	Workshop	Food	Making Italian traditional food <a href="http://i-nusc.com/il-laboratorio/">http://i-nusc.com/il-laboratorio/</a>
45	Giardino degli Aromi	10	2.5	←→	Organization/association	Association	Society	Advocate social development within disables <a href="http://www.ilgiardinodegliaromi.org/">http://www.ilgiardinodegliaromi.org/</a>
46	Genitori F. Confalonieri (parents association)	6	1.5	←→	Organization/association	Association	Society	
47	garden in transformation	1	0.25	→	Organization/association	Association	Society	



48	Fiab Milano CICLOBBY	1	0.25	→	Organization/association	Association	Society	Advocate bicycle as and healthy and sustainable way <a href="http://www.ciclobby.it/cms/">http://www.ciclobby.it/cms/</a>
49	Erboristeria Astragalo	1	0.25	←→	Business institution	Spa	Spa	<a href="https://www.facebook.com/erboristeria.astragalo/info">https://www.facebook.com/erboristeria.astragalo/info</a>
50	Emergency gruppo Milano zona 9	1	0.25	→	Organization/association	Association	Society	Provide medical treatment in war place <a href="https://www.facebook.com/pages/Gruppo-Emergency-Milano-Zona-9/169174209767333">https://www.facebook.com/pages/Gruppo-Emergency-Milano-Zona-9/169174209767333</a>
51	ECORISOLUZIONI	1	0.25	←→	Business institution	Company	Clean energy	<a href="http://www.ecorisoluzioni.org/en">http://www.ecorisoluzioni.org/en</a>
52	DESERTIAMO	1	0.25	→	Program	Academic researcher		Understand Tunisia traditional culture <a href="http://desertiamo.blogspot.com/">http://desertiamo.blogspot.com/</a>
53	Comitato I Mille	1	0.25	←	Organization/association	Committee	Society	Resist community development program
54	COLTIVANDO	4	1	→	Organization/association	Group	Society	<a href="http://www.coltivando.polimi.it/">http://www.coltivando.polimi.it/</a>
55	Circolo La gatta sul tetto che scotta	3	0.75	←→	Organization/association	Association	Society	Animal protection, especially the cats living in cities <a href="http://www.artefantile.it/la_gatta_sul_tetto_che_scotta.htm">http://www.artefantile.it/la_gatta_sul_tetto_che_scotta.htm</a>
56	CHENJIAGOU TAIJI ACADEMY ITALY	1	0.25	←→	Business institution	Sport club	Taiji	<a href="http://www.chentaiji.it/wp/">http://www.chentaiji.it/wp/</a>
57	Cascina Albana	2	0.5	→	Organization/association	Association	Society	Rebuild the relations among people through collective shared garden program <a href="http://cascinalbana.wordpress.com/2012/05/30/e-continua-in-cascina-albana/">http://cascinalbana.wordpress.com/2012/05/30/e-continua-in-cascina-albana/</a>
58	BRICOLO CENTER	1	0.25	←→	Business institution	Supermarket	Construction	Construction materials selling
59	BOTTEGHE ISOLA	1	0.25	←	Organization/association	Association	Advertisement	Under the basis of respecting citizens, various are conducted including social activities, culture creative program, advertisement, aiming at improving business .development in community isola. <a href="http://www.bottegheisola.it/1_chi_siamo.php">http://www.bottegheisola.it/1_chi_siamo.php</a>
60	BEST SERVICES	1	0.25	←→	Business institution	Company	Sustainable energy	<a href="http://www.bestservices.co.uk/">http://www.bestservices.co.uk/</a>
61	BAR VOLTURNO	1	0.25	←	Business institution	Wine bar	Food	

62	BANDA DI FIATI RINASCIMENTALI ALBERTO ROSSI	1	0.25	←→	Organization/association	Association	Music	<a href="http://www.promusicaantiqua.it/Contatti/contatti.html">http://www.promusicaantiqua.it/Contatti/contatti.html</a>
63	Azienda Nauturaviva festa "Spiga e Farina"	1	0.25	←→	Business institution	Shop	botany	<a href="http://www.aziendanaturaviva.com/">http://www.aziendanaturaviva.com/</a>
64	Atelier d'Architecture in Paris autogéré (AAA)	3	0.75	←	Organization/association	Network platform	Research	Improving the Era urban development, solving the urban problems, improving urban democracy and ecobalance, through architecture, art and design <a href="http://www.urbantactics.org/">http://www.urbantactics.org/</a>
65	ARCI Metissage	4	1	←	Organization/association	Association	Culture	Advocate recreation right of citizens <a href="http://www.arcimetissage.org/">http://www.arcimetissage.org/</a>
66	ANPI Sezione Almo Colombo Isola	3	0.75	→	Organization/association	Association	Culture	Resist Fascism and advocate democracy. <a href="https://www.facebook.com/anpialmocolombo.isola">https://www.facebook.com/anpialmocolombo.isola</a>
67	AMSA	1	0.25	←	Public service institution	Cleaning company	Infrastructure	<a href="http://www.google.com.hk/search?newwindow=1&amp;safe=strict&amp;es_sm=122&amp;q=amsa+milano+raccolta+organico+giardini+condivisi&amp;oq=amsa+milano+raccolta+organico+giardini+condivisi&amp;gs_l=serp.3...9995.13593.0.13834.19.10.0.0.0.0.120.120.0j1.1.0...0...1c.1.40.serp..19.0.0.yJc0Bc8yARU">http://www.google.com.hk/search?newwindow=1&amp;safe=strict&amp;es_sm=122&amp;q=amsa+milano+raccolta+organico+giardini+condivisi&amp;oq=amsa+milano+raccolta+organico+giardini+condivisi&amp;gs_l=serp.3...9995.13593.0.13834.19.10.0.0.0.0.120.120.0j1.1.0...0...1c.1.40.serp..19.0.0.yJc0Bc8yARU</a>
68	AJO BLANCO	2	0.5	←	Business institution	Restaurant	Food	

COLTIVANDO								
CODE	SOCIAL ORGANIZATION	TOTAL CONTACT TIMES WITH GARDEN	AVERAGE CONTACT TIMES PER YEAR WITH GARDEN	BENEFIT FLOW (GARDEN VS ORGANIZATIONS)	TYPE 1	TYPE 2	TYPE 3	INTRODUCTION AND WEBSITE
1	PRIMARY SCHOOL 1 OF BOVISA	3	1.2	→	Academic/education institution	Primary school		
2	PRIMARY SCHOOL 2 OF BOVISA	3	1.2	→	Academic/education institution	Primary school		

3	APE-AGRICOLTURA PERLA CITTA	1	0.4	↔	Academic/education institution	University lab/institution/program	Design	Devote to urban creation and communication( design school of polytechnic of Milan)
4	Imagislab	1	0.4	↔	Academic/education institution	University lab/institution/program	Design	Media communication and participative design process( design school of polytechnic of Milan)
5	POLITECNICO DI MILANO	3	1.2	←	Academic/education institution	University lab/institution/program		
6	LUNEDI SOSTENIBILI	1	0.4	→	Organization/association	Group	Culture	Advocate green, ecological, and sustainable city
7	HUAMN CITIES -A user-centred design approach to the way we live	1	0.4	←	Program	Net platform	Research	Urban design and social creation advocating sustainable design
8	DESIS NETWORK -Design for Social Inovation and Sustainability	1	0.4	←	Program	Net platform	Research	A net platform for various schools, institutions and universities all around the world. Tongji university is included. They stand for public interest, participative design and resist leading by market, leading by specialists. <a href="http://www.desis-network.org/content/past-and-present">http://www.desis-network.org/content/past-and-present</a>
9	POLIMI RADIO	2	0.8	←	Academic/education institution	Radio station		Radio station of polytechnic of Milan
10	Ciboprossimo/Synergies for the garden	1	0.4	↔	Organization/association	Net platform	Social	Devote to shorten the distance between the farmers and consumers
11	Zac - Rete Gas (purchasing groups)	5	2	←	Organization/association	Group	Culture	Advocate buying food directly from the local farmers and resist food system under the control of industry and political economic system. The sustainable development of both society and economy is the objective.
12	PRO LOCO AZZATE	1	0.4	→	Organization/association		Culture	Volunteers from city of Azzate
13	CHIARA FRASSI DI CLEMT DESIGN	1	0.4	←	Business institution	Architecture company	Design	Architecture design

14	ASF -ARCHITECTURE SENZAFRONTIERE	1	0.4	←	Organization/association	Organization	Culture	Design as a way to improve society and local community is the core motivation of society development.
15	Il Giardino degli Aromi	2	0.8	←→	Organization/association	Organization	Culture	Building and improve the urban community garden.
16	SAKVIAMO ILPAESAGGIO  -ITALIAN FORUM OF CHANGES TO THE EARTH AND THE LANDSCAPE	1	0.4	→	Organization/association	Organization	Culture	Protecting environment and landscape of Italy.
17	CHOIR-CORO DI QUARTIERE INCANTA BOVISA	2	0.8	←	Organization/association	Group	Culture	Preserving the local traditional music through a group of interest people singing the local songs.
18	DE.DE.P	2	0.8	←	Organization/association	Organization	Culture	
19	CASCINA ALBANA	1	0.4	→	Organization/association	Organization	Culture	Construction and improving urban community garden in Milan.
20	ZUP-ZUPPA URBAN PROJECT	1	0.4	←	Organization/association	Organization	Social	Food as a tool to improve society.
21	ISOPEVEVERDE	1	0.4	←	Organization/association	Association	Social	Construction and improving urban community garden in Milan.
22	Urban design school of the University of Sheffield	1	0.4	→	Academic/education institution	University lab/institution/prog ram		Architecture and urban design teaching
23	DESIGN AND KINTTING LAB	5	2	←	Academic/education institution	University lab/institution/prog ram	Design	Tailoring sewing design of design school lab in polytechnic of Milan
24	POLISOCIAL	3	1.2	←	Academic/education institution	University lab/institution/prog ram	Social	Academic research program financed by polytechnic of Milan which aims at society creation
25	DaSTU	1	0.4	←→	Academic/education institution	University lab/institution/prog	Research	Architecture, planning, environment, and design in polytechnic of Milan

						ram		
26	IL VASO DI PANDORA	4	1.6	←→	Business institution	Sport club	Sport	Taiji <a href="http://www.italiangospelchoir.it">www.italiangospelchoir.it</a>
27	FEEDING MILAN	1	0.4	←	Program		Research	CARIPO fund aiming at rebuild the food, agriculture and urban <a href="http://www.nutrire milano.it/index.php?option=com_content&amp;view=article&amp;id=178&amp;Itemid=242">http://www.nutrire milano.it/index.php?option=com_content&amp;view=article&amp;id=178&amp;Itemid=242</a>
28	LA BIBLIOTECA DI DERGANO/BOVISA	5	2	←	Public service institution	Public library	Culture	<a href="http://www.vasodipandora.it/articles.php?lng=it&amp;pg=61">http://www.vasodipandora.it/articles.php?lng=it&amp;pg=61</a>

LIBRE								
CODE	SOCIAL ORGANIZATION	TOTAL CONTACT TIMES WITH GARDEN	AVERAGE CONTACT TIMES PER YEAR WITH GARDEN	BENEFIT FLOW GARDEN VS ORGANIZATIONS	TYPE 1	TYPE 2	TYPE 3	INTRODUCTION AND WEBSITE
1	Agriculture school	1	1	←→	Academic/education institution	University		Agriculture school

**APPENDIX E: Core Members of Community Garden**

REMARK: Appendix is made by summaries and systemizes information from documents given by each garden

<b>ISOLAPEPEVERDE</b>		
CODE	GENDER	AGE
1	M	23
2	M	44
3	F	47
4	F	47
5	F	49
6	F	58
7	F	59
8	F	61
9	M	44
10	F	53
11	F	47

12	M	41
13	F	44
14	M	56
15	M	58
16	M	58
17	M	60
18	M	62
19	M	58

<b>COLTIVANDO</b>		
CODE	GENDER	AGE
1	F	26
2	M	26
3	F	28
4	M	30
5	F	40
6	M	40

7	M	40
8	F	43
9	F	43
10	M	46
11	F	50
12	M	50
13	F	50
14	F	52
15	M	52
16	M	53
17	M	55
18	F	65
19	F	70
20	M	71

1	F	VIA BETTI 79	81
2	F	VIA UGO BETTI 119	77
3	F	VIA DONADONI 19	84
4	F	VIA ALDO CARPI 2	74
5	F	VIA CARPI 2	82
6	F	VIA F.LLI RIZZARDI 22	72
7	F	VIA MARIO BORSA 22	80
8	F	VIA OMODEO 29	71
9	F	VIA CILEA 76	79
10	F	VIA LUIGI ZOJA 23	68
11	F	VIA NOVARA 385	78
12	F	VIA FALCK 53	68
13	F	VIA BETTI 191	78
14	F	VIA GIORGIO DE CHIRICO 9	65
15	F	VIA ANGIOLETTI 5	55
16	M	VIA BETTI 165	84
17	M	VIA DONADONI 19	82

LIBRE			
CODE	GENDER	HOME ADDRESS	AGE

18	M	VIA BETTI 79	82
19	M	VIA BETTI 141	81
20	M	VIA VENEZUELA 3	81
21	M	VIA APPENNINI 175	80
22	M	VIA CILEA 76	80
23	M	VIA BETTI 141	80
24	M	VIA NOVARA 385	79
25	M	VIA SEM BENELLI 18	79
26	M	VIA MARIO BORSA 22	79
27	M	VIA BETTI 191	79
28	M	VIA F.CILEA 129	78
29	M	VIA CRIMEA 23	77
30	M	VIA GAREGNANO 47	77
31	M	VIA UGO BETTI 173	77
32	M	VIA OMODEO 21	76
33	M	VIA GIORGIO DE CHIRICO 9	75
34	M	VIA LUIGI ZOJA 23	75

35	M	VIA BETTI 85	74
36	M	VIA BETTI 6	74
37	M	VIA OMODEO 29	74
38	M	VIA OMODEO 1	72
39	M	VIA APPENNINI 33	69
40	M	VIA GORLINI 7	68

<b>GARDEN IN ZONE 2</b>			
CODE	GENDER	HOME ADDRESS	GENDER
1	F	VIA CLITUMNO 19	66
2	M	VIA CAVEZZALI 19	69
3	F	VIA G. PUECHER 9	74
4	F	VIA VIPACCO 6	77
5	M	VIA SARAGAT 6	83
6	F	VIA BRAGA 4	67
7	F	VIA PIETRO TOSELLI 10	71
8	M	VIA G. MELI 11	78



9	M	VIA ALGHERO 11	68
10	M	VIA ALGHERO 11	75
11	M	VIA ALGHERO 15	77
12	M	VIA ALGHERO 15	70
13	M	VIA ORISTANO 17	78
14	M	VIA ORISTANO 17	69
15	M	VIA STAMIRA D'ANCONA 24/3	69
16	F	VIA PARUTA 88	78
17	F	VIA ALGHERO 15	67
18	M	VIA SASSARI 10	71
19	M	VIA ALGHERO 15	78
20	M	VIA MAMIANI 2	74
21	--	--	--
22	M	VIA PADOVA 95	77
23	M	VIA FELICE CASATI 26	67
24	M	VIALE ZARA 124	51
25	M	LARGO TEL AVIV 7	73

26	M	VIA TREMELLONI 12	89
27	M	VIA BISI ALBINI 1	80
28	M	VIA TEOCRITO 46/5	72
29	M	VIA ALGHERO 11	71
30	M	VIA ASIAGO 46	49
REMARK: “—”means information missing			

## APPENDIX F: Citizens connected with Garden

REMARK: Appendix is made by summaries and systemizes information from documents given by association ISOLAPEPEVERDE

PART OF CITIZENS CONNECTED WITH ISOLAPEPEVERDE			
CODE	HOME ADDRESS	GENDER	AGE
1	VIA ASELLI 20	M	32
2	VIA BOTTICELLI 6	M	25
3	VIA TEODOSIO 60	F	73
4	VIA LOVANOIO 10	F	50
5	MORGHEN 25	F	54
6	VIA VIRGILIO 28	M	56
7	VIA VIRGILIO 28	F	53
8	VIA JACOPO DAL VERME 4	F	67
9	VIA ORTI 14	F	55
10	VIA GUARDI 15	F	57
11	MONTE CRISTALLO 3	F	64
12	VIA G.CANDIANI 29	F	44

13	PIAZZA DELL REPUBBLICA 13	M	46
14	CASCINA BRAN	F	45
15	CASCINA BRAN	M	46
16	VIA NICCOLINI 27	M	35
17	VIA DINA GALLI 1	F	48
18	VIA DINA GALLI 1	M	36
19	VIA DANTE 14	M	68
20	VIA DELLA PERGOLA 7	F	61
21	VIA DELLA PERGOLA 7	M	42
22	VIA FACCHINTETTI 6	M	56
23	IRNERIO 6	F	74
24	VIA STOPPANI 6	F	69
25	VIA JACOPO DAL VERME 7	M	23
26	VIA JACOPO DAL VERME 7	F	22
27	VIA ALEARDI 11	F	43
28	VIA TADINO 15	M	40
29	VIA F.GATTI 3	M	70

30	VIA GARIGLIANO 5	M	60
31	VIA LEONCAVALLO 39	F	70
32	VIA VALASSINA,12	M	39
33	VIA VALASSINA,12	F	39
34	VIA DELL'APRICA 26	M	37
35	VIA G.PEPE 28	F	41
36	FILIPPO REINA 11	F	35
37	CORSO DI PORTANUOVA 52	F	44
38	VIA VESPUCCI,5	F	46
39	VIA A.RESSI 9/A	F	41
40	VIA PALERMO 15	M	68
41	VIA PASTRENGO 7	F	47
42	VIA PASTRENGO 7	M	51
43	SOVUCO VIA MANZONI	M	39
44	VIA SPALATO 2	M	49
45	VIA G.PEPE 18	F	56
46	VIA CARLO FARINI 55	F	47

47	PIAZZA SEGRINO 6/A	F	40
48	PIAZZA SEGRINO 6/A	F	35
49	VIA COLA MONTANO 22	F	42
50	VIA IPPOLITO ROSELLINI 51	F	54
51	VIA ROSELLINI,IPPOLITO 26	F	20
52	VIA MEDARDO ROSSO 7	F	43
53	VIA CONFALONIERI 5	M	50
54	VIA CONFALONIERI 5	F	46
55	VIA G.PEPE 38	F	56
56	VIA F.ARESE 16	M	81
57	VIA F.ARESE 16	F	76
58	VIA GARIGLIANO 5	F	88
59	SARZANA 50	F	41
60	SARZANA 50	F	46
61	VIA VALTELLINA 18	M	61
62	VIA VALTELLINA 18	F	58
63	VIA BENEGAZZO 6	F	49

64	VIA PASTRENGO 5	F	57
65	VIA DELLA CHIUSA 8	M	57
66	VIA ERASMO BOSCHETTI 1	F	38
67	MIGLIARO 60	F	31
68	VIA JACOPO DAL VERME 12	F	49
69	VIA F.ARESE 7	M	48
70	VIA F.ARESE 7	F	49
71	VIA L'OLMO 12	F	40
72	PIAZZA DUCA D'AOSTA 129	M	43
73	VIA COLA MONTANO 6	F	17
74	VIA VOLTA 25	M	35
75	VIA SEBENICO 21	F	54
76	VIA COLA MONTANO 8	M	41
77	VIA G.PEPE 32	M	64
78	POLLAIUOLO 4	M	45
79	VIA PASTRENGO 14	F	40
80	DARIO PAPA 2	M	47

81	PIAZZA ARCHINTO 1`	M	52
82	VIA PRESTINARI 1	F	42
83	VIA BENIGNO CRESPI 4	M	53
84	VIA GARIGLIANO 5	M	66
85	VIA MARONCELLI 11	M	53
86	VIA LOMAZZO 5	F	72
87	VIA MAZZINI 56	F	40
88	VIA CIVER	F	57
89	VIA F.ARESE 5	M	60
90	PIAZZA MINNITI 6	M	64
91	VIA BOLTRAFFIO 10	F	31
92	VIA BOLTRAFFIO 10	M	35
93	VIA GUGLIELMO PEPE 29	M	48
94	VIA SISMONDI 27	F	61
95	VIA ARNALDO DA BRESCIA 5	M	54
96	VIA ARNALDO DA BRESCIA 5	F	49
97	VIA LOMELLINA 25	M	38

98	VIA LOMELLINA 25	F	41
99	VIA PASTRENGO 5	M	39
100	VIA GUGLIELMO PEPE 12	F	58
101	VIA MARONCELLI	F	79
102	VIA LATTUADA 19	F	53
103	VIALE PICENO 39	F	49
104	VIALE PICENO 39	F	45
105	SAN MARTINO 2	F	58
106	VIA BIGLI 7	F	38
107	VIA COLA MONTANO 26	F	47
108	VIALE STELVIO 44	F	55
109	VIALE STELVIO 44	F	59
110	VIA F.ARESE 13	M	45
111	VIA COLA MONTANO 6	M	48
112	VIA CONFALONIERI,4	F	54
113	VIALE BRIANZA 12	F	29
114	VIA LEGNANO 26	F	34

115	CORSO SEMPIONE 77	F	32
116	VIA MACCHI 72	M	44
117	VIA PASTRENGO 21	M	59
118	VIA PASTRENGO 21	F	60
119	PIAZZA MINNITI 8	M	39
120	VIALE GIASONE DEL MAINO 16	M	27
121	PER CASCINA BAROGGI 3	F	15
122	VIA C.CANTU 36	F	34
123	VIA GARIGLIANO 8	M	37
124	VIA G.FARA 15	F	29
125	PIAZZA MINNITI 8	F	46
126	VIA COLA MONTANO 6	F	38
127	VIA G.PEPE 32	M	48
128	VIA POLLAIUOLO 2	M	44
129	VIA POLLAIUOLO 2	F	44
130	VIA SPALLANZANI 16	F	47
131	VIA ANGELO DELLA PERGOLA 3	F	38

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132	VIA ANGELO DELLA PERGOLA 3	F	43
133	VIA UGO BASSI 13	F	60
134	VIA G. PEPE 32	M	44
135	VIA P.BORSIEI 29	F	39
136	VIA G. PEPE 32	M	49
137	VIA POLLAIUOLO 9	M	57
138	VIA POLLAIUOLO 9	F	39
139	VIA FABRIANO 7	M	41
140	VIA MORANDI 50	M	61
141	VIA D.VILLANI 3	F	59
142	VIA BORSIERI 32	F	47