

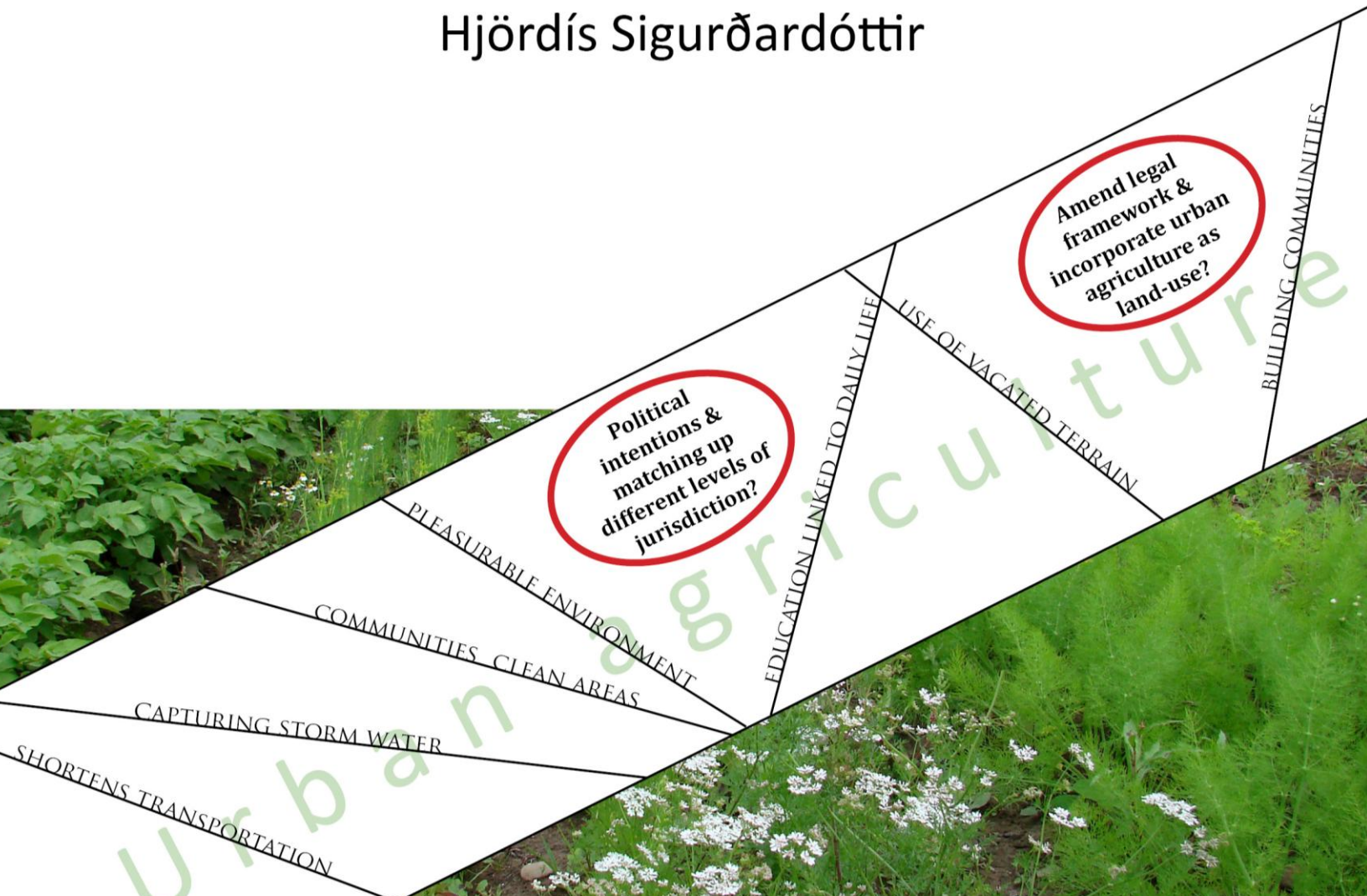
# Land ethics and urban agriculture

Is urban agriculture an 'ethical'  
means for urban land-use?

---

Literature study

Hjördís Sigurðardóttir





Landscape Architecture and Planning, Spatial Planning Specialization  
Minor Thesis (LUP - 80424, 24 ECTS) Land Use Planning Group

Master student: Hjördís Sigurðardóttir  
Registration number: 690613762020

Thesis Supervisor, Professor Arnold van der Valk  
Thesis Examiner, Assistant Professor Gerrit Jan Carsjens

The Netherlands: Wageningen University, February 2013

## ABSTRACT

*The phenomenon of urban agriculture can be observed from different aspects, e.g. sustainability based on global ethics, sustainable urban development and a person's desire for a better way of living. This study summarizes urban problems existing in three cities (Rotterdam NL, Detroit and New York in the USA) in which urban agricultural development is considered to address. Nonetheless, the development seems slow as a legally recognized activity. An overview is made of land ethics and how they influence decision-making when changes are made to an area of land. Hypotheses have resulted from a study of the different agents' perspectives by creating an awareness of the influence that their moral philosophy can have on agricultural development in cities. Urban agriculture which is a relatively new type of development is perceived from different angles and the land ethics in force determine the decisions to be taken in a particular process. Finally, an attempt has been made to ascertain whether urban agriculture is a means of ethical land-use by considering urban agriculture's relevance in addressing those problems. The appropriate ethical principles in land-use policy have been applied in each case. Urban agriculture seems to correlate on the whole with 'ethical land use'. However, legal aspects which must be adhered to, could be problematic.*

## PREFACE

While working on my MSc thesis in the field of spatial planning entitled- *Urban agricultural development on unused terrain, part of which is a case study on the Earthworks Urban Farm Detroit and 'Uit Je Eigen Stad' Rotterdam*, the idea of studying the ethical aspects of urban agricultural development sprang to mind. After some time it was considered that this study would be applicable to my minor thesis. I noticed, while searching through literature in the field of planning, ethics play an important role especially when necessary changes in society in general or to systems are discussed. For this reason I had the desire to understand this concept of ethics more precisely. I also find it interesting to go beyond the 'day to day' political debates and look at situations from another perspective. People tend to 'remain stuck in the same rut' and are sometimes too afraid to make changes in their life and perspectives. From my point of view it is important to understand why we act in the way we do and to have the courage to change our habits. This paper is an attempt to link 'land ethics' and urban agriculture and contribute to the discourse on whether urban agriculture is a meaningful development prospect.

# TABLE OF CONTENTS

1	Introduction .....	5
1.1	Why study land ethics in relation to urban agriculture? .....	5
1.1.1	The research problem.....	6
1.1.2	The overall context .....	6
	<i>THE RELEVANCE OF URBAN AGRICULTURE</i> .....	6
	<i>THE DECISION-MAKING PROCESS - MANY AGENTS WITH DIFFERENT VIEWPOINTS</i> .....	8
	<i>ETHICAL QUALITIES URBAN AGRICULTURE</i> .....	8
1.2	The objective .....	9
1.3	Research question.....	9
1.4	The structure of the report .....	9
2	Methodology .....	10
2.1	Literature study - the purpose.....	10
2.2	The focus.....	10
2.3	Working method.....	11
3	Literature review .....	12
3.1	The significance of Urban agriculture.....	12
3.1.1	Introduction.....	12
3.1.2	Different aspects of urban agricultural development .....	12
3.1.3	Urban problems and urban agriculture solutions .....	14
3.1.4	summary .....	15
3.2	The decision-making process - many agents with different viewpoints .....	16
3.2.1	Introduction.....	16
3.2.2	The significance of land-use planning.....	16
3.2.3	Land ethics .....	17
3.2.4	Urban agriculture and the agents perspectives - hypothesis.....	22
3.2.5	Summary.....	24
3.3	Evaluating the ethical principles of urban agriculture .....	25
3.3.1	Introduction.....	25
3.3.2	Beatley's ethical principles to guide land use.....	25

3.3.3	Drawing a comparison between urban agricultural solutions and urban problems, using ethical land- use principles.....	27
3.3.4	Summary.....	30
4	Discussions.....	31
4.1	The multifunctional character of urban agriculture.....	31
4.2	Urban problems and urban agriculture.....	31
4.3	Urban agriculture and land ethics.....	32
4.4	Urban agriculture as a means of ethical land-use.....	33
4.5	Strengths and weaknesses of the study.....	33
5	Conclusions.....	34
6	Suggestions for further study.....	34
7	Acknowledgements.....	35
8	List of tables and figures.....	36
9	References.....	36
	Appendix 1.....	40
	Appendix 2.....	41
	Appendix 3.....	42

# 1 INTRODUCTION

---

## KEY TERMINOLOGY: URBAN AGRICULTURE, PLANNING AND LAND ETHICS

---

### 1.1 WHY STUDY LAND ETHICS IN RELATION TO URBAN AGRICULTURE?

It is essential to categorize and evaluate core concepts in planning, however, it is most important to create “bridges” between dissimilar aspects in daily life. Generally, ‘norms’ and values affect people’s decision-making particularly where ethics (or moral philosophy) are concerned, which involve systematizing, defending, and recommending the concepts of right and wrong behavior (Fieser, 2009). The broad definition of ‘*land ethics*’ is the philosophy which guides decision-making when land is utilized or changes are made to a land<sup>1</sup> (Leopold, 1949). Thus, decisions that are ethical are those which are considered ‘right’ according to the moral philosophy that one upholds.

Libertarian socialistic ideas have been described as a response to the ‘Big Society’ (Frère & Reinecke, 2011). They favour the redistribution of economic and political power by realizing not only a charitable but an economically-empowered civil society. The idea of urban agricultural development blends with this discourse.

Planning cultivation of food inside cities challenges the old standards of urban rural divisions particularly in relation to ethics. Until recently, urban agriculture has only involved ‘marginal’ land use, but is now developing within cities and policies are being drawn up to approve this kind of development (Sonnino, 2009). *Urban agriculture* as defined based on Mougeot (2000 p 11) an industry located in the (inter-urban) or on the fringe (peri-urban area) of a town, a city or a metropolis, which cultivates, processes and distributes a diversity of food and non-food products, utilizing human and material resources, products and services found mainly in and around that particular urban area for the benefit of that same area.

It is claimed that urban agricultural development can be a strategy toward improving a city’s livelihoods in various ways (Wiskerke & Viljoen, 2012; Pothukuchi, 2011; Holland & Salle, 2010; Veenhuizen, 2006 among others). Even though the benefits of urban agricultural development have been well documented theoretically<sup>2</sup> (Broekhof & Valk, 2012), and its positive effects on urban communities<sup>3</sup>, it is surprising how few examples materialize (van der Schans & Wiskerke, 2012). The legal framework might be a barrier in seemingly lacking agricultural urban development, especially in developed economies (Veenhuizen, 2006; Holland & Salle 2010; van der Schans & Wiskerke, 2012). If there is a gap between reality, ‘work in progress’ and what is legally permitted it may indicate that institutions are unfamiliar with the development taking place.

In-depth comparative case study research on the development process of urban agriculture in Detroit and Rotterdam has shown fundamental differences in land-use ethics; the perspectives of the agents involved in

---

<sup>1</sup> Leopold (1949) re-conceived the idea of land. In his opinion land was for life and was also the source of life, e.g. soil, water, plants and animals. Harmony in the community; ‘the ultimate good’ is reflected especially in integrity, stability and beauty of the community (Shaw, 2005).

<sup>2</sup> in a normative way which means relating to an ideal standard or model - “ought to or should be”

<sup>3</sup> E.g. illustrations by Viljoen & Wiskerke (ed), 2012 based on Bohn & Viljoen, 2012: Appendix 1; Cohen et al., 2012 p 90: Appendix 2 and Walker et al., 2011 p22: Appendix 3.

the process and the role of the authorities and their influence (Sigurdardottir, 2013). However, in both cases the development has suffered because the legal framework could be more accommodating. Following the grassroots, the city's authorities have acknowledged the benefits of urban agricultural development and have been creating supportive policies. There appears to be an ethical dilemma in both cases causing an obstruction to the development in urban agriculture. In Detroit a State law was created at the time when urban and rural practice was treated differently and the norm only took account of rural aspect of producing food which forbade commercial agriculture in the city. Nevertheless, in the case under review the farm's funding came from a higher level. In Rotterdam the City authorities had the intention to support the regional producers by purchasing regionally produced food via their Municipal canteens but European law forbids such an agreement, therefore, large purchase agreements require an open request to the European market. These examples indicate that the norm in the legal framework still requires that the rural area produces the food and the market should be on a 'Big Societal' or international scale.

It is common knowledge that politics have a profound influence on major changes in land-use<sup>4</sup> but according to the examples given above, this is still valid. Political influence is essential when adapting new standards based on peoples' desires for a sound way of living which is a solution for more habitable places. Therefore discussions on the concept of land ethics are essential from two perspectives; Firstly in order to arouse awareness among influential agents about the moral philosophy they uphold and, secondly to shed light on what needs to be changed in general to facilitate the urban agricultural path.

#### 1.1.1 THE RESEARCH PROBLEM

The **problem statement** of this research is:

Even though it has been recognized that urban agriculture can be merged successfully into sustainable urban development its general growth in cities is slow because institutions need to focus on this meaningful and relevant act rather than on their doubts about it.

#### 1.1.2 THE OVERALL CONTEXT

##### *THE RELEVANCE OF URBAN AGRICULTURE*

The discourse on urban agriculture is closely linked to the idea of sustainable development. Næss (2009) interprets the term sustainable development<sup>5</sup> as follows: "*...sustainable development is first and foremost about ensuring that everybody—both in rich and poor countries, nowadays as well as in future generations—can have their basic needs met. This must be obtained without jeopardizing the natural systems in which life here on earth is dependent...*" (Næss, 2009 p 504).

Urban agricultural development can be linked to the global ethic of sustainability<sup>6</sup> or the 'fair distribution of benefits and burdens' (Næss, 2009). Therefore, cities in the western world need to utilize resources more efficiently e.g. using building sites for food production<sup>7</sup>.

---

<sup>4</sup> See e.g. Ministrie van Infrastructuur en Milieu (2011) or Pothukuchi (2009) who argues that order to develop urban agriculture political influence, applicable resources, and more comprehensive plans are essential.

<sup>5</sup> along the lines of the Brundtland Commission's report, the 1992 conference on Environment and Development in Rio de Janeiro, and the subsequent work of the UN Committee on Environment and Development

<sup>6</sup> According to the United Nations, human survival and well-being depend on the success of elevating sustainable development by applying global ethics (United Nations report on Environment and Development, 1987 cited by Engel & Engel, 1990) United Nations 'common future' dedicated to "Gro Harlem Brundtland" is an holistic ethic in which economic growth and environmental protection go hand-in-hand around the world and take into account social



Until recently, urban agriculture has only been 'marginal' land use, but is now developing inside cities and policies are being drawn up to approve that development (Sonnino, 2009). It is claimed that urban agriculture is a vital part of sustainable food systems<sup>8</sup> and its development can be seen as a strategy to improve a city's livelihoods in various ways (Wiskerke & Viljoen, 2012; Pothukuchi, 2011; Holland & Salle, 2010; Veenhuizen, 2006 among others). Linking urban agriculture to sustainability is possible on account of its multi-functionality (Veenhuizen, 2006). Therefore the activity can be perceived in various ways.

Veenhuizen (2006) describes a linkage between opportunities inside cities due to their dynamic character in spatial and demographic terms on the one hand and various urban agriculture benefits on the other. Therefore the opportunities for agricultural development and its benefits vary from city to city and depend on the situation existing in each of them. Theoretically, the positive influence of urban agriculture development encompasses a wide variety of aspects and its capacity to integrate into sustainable urban development (Bohn and Viljoen 2012, cited by Wiskerke & Viljoen (ed) 2012); Cohen, Reynolds, & Sanghvi, 2012 and Walker et al., 2011)

Many city authorities have acknowledged the potential of urban agriculture because of being pressured by agents at the grassroots level (Veenhuizen, 2006). Therefore, urban agricultural development stems from the citizens' desire for a healthier way of life.

When dealing with problems, the aspect of ethics is particularly relevant. One way of becoming aware of the benefits in developing urban agriculture strategically is to consider how it responds to common urban problems. Some of the most common problems in urban areas based on literature from Rotterdam<sup>9</sup>, Detroit<sup>10</sup> and New York<sup>11</sup> relate to illness caused by unhealthy eating habits, poor access to healthy food, the poor economic climate and/or high unemployment, insufficient social cohesion due to racial, cultural or class segregation, defects in environmental quality and problems resulting from the inability to capture and store rain water etc.

Altogether, urban agricultural development is relevant to the 'global ethics of sustainability', sustainable urban development and a personal desire for a different way of living. Yet, the legal framework might be a barrier in a seemingly lacking agricultural urban development, especially in developed economies (Veenhuizen, 2006; Holland & Salle 2010; van der Schans & Wiskerke, 2012). If there is a gap between reality 'work in progress' and what is legally permitted it may indicate that institutions are still unfamiliar with the development taking place or still have doubts about its meaningful purpose.

But the planning process is a complicated procedure where many agents with different viewpoints are involved. When a new land-use paradigm is developing, diverse perspectives come forward.

---

attributes, principles of justice and human rights. Therefore it is quite common for those involved to refer to the three 'pillars of sustainability'; social, ecological and economical or 'people, planet and profit'.

<sup>7</sup> see Sigurdardottir (2013) for further explanation

<sup>8</sup> According to (Holland & Salle, 2010) a sustainable food production and agricultural system envelopes various alternative food-related issues which all focus on strengthening the local community through food issues<sup>9</sup>. Feenstra (2002, p 100) defines sustainable food systems as;

*"A collaborative effort to build more locally-based, self-reliant food economies – ones in which sustainable food production, processing, distribution and consumption are integrated to enhance the economic, environmental and social well-being of a particular place"*

<sup>9</sup> Rotterdam municipality, 2012

<sup>10</sup> Walker et al., 2011

<sup>11</sup>; Cohen et al., 2012

### *THE DECISION-MAKING PROCESS - MANY AGENTS WITH DIFFERENT VIEWPOINTS*

Planning is a goal-orientated forward-looking discipline that aims to create a framework for future plans within the frames (legal, local customs) that evolve. The process normally attracts a wide variety of agents from different backgrounds (Cullingworth & Caves, 2003; Allmendinger, 2009) whose personal perspectives also vary depending on their values and priorities (Hofstede, 1991).

The development of urban agriculture has thrived more in certain cultural contexts than others<sup>12</sup> which suggest that the cultural and ethical aspects do influence its development. The agents involved in each case and the moral philosophy framing their perspectives could also influence its development.

The participants' viewpoints on urban agricultural development might conflict with one another's moral philosophy which they uphold. An action that results in consequences which maximizes happiness is considered right according to Utilitarianism (Brown, 2001). Utilitarianism has been criticized for being driven by economics (Driver, 2009; Beatley, 1991; Beatley, 1994). Kantian ethics claim that actions are right if they are in line with moral rights and principles and are therefore rational (Brown, 2001). Ethics of virtue deem an action to be right if it is what a virtuous agent would do in the circumstances. A libertarian agent who upholds freedom favors a re-distribution of power, supports the free market and communal co-operative activities.

All in all, agents' contrasting and conflicting opinions concerning the new means of land-use have an influence the decision-making process in general.

### *ETHICAL QUALITIES URBAN AGRICULTURE*

The risks already known in urban agriculture concern contamination (van Veenhuizen, 2006). But these risks are mainly possible when producing food. Other obstacles, related to agriculture in the urban environment, are high running costs and the challenge of integrating dissimilar disciplines into a new design paradigm (Holland & Salle, 2010; van der Schans & Wiskerke, 2012)

To eliminate the doubts about the activity and deal with familiar challenges, the first step is to recognize it as a worthwhile development. One way of looking at the potential of urban agriculture and its ethical qualities and meaningful land-use, is to compare its ability to solve urban problems with a set of ethical principles to guide land-use decision.

Beatley (1991) proposed tentative principles as a guide for ethical land use when making decisions on spatial planning after pointing out the flaws in the prevailing land ethics. He was inspired by Rawls<sup>13</sup>, who favors equality which signifies an equal entitlement to land and/or access to food, i.e. the fruit of the land (Thompson, 2010). Summarized key concepts from Beatley's (1991, 1994) ethical principles for land-use would be: a just society, access to primary goods, a small (human) ecological footprint<sup>14</sup>, the inherent worth

---

<sup>12</sup> In Detroit, a city in the USA where there are many gardening and agricultural initiatives and powerful grass-roots and networking activities (Walker et al., 2011; Giorda, 2012). An interest in urban agriculture has also been aroused in Europe, and is perceived as an industry having a variety of beneficial aspects in a developed economy (van der Schans & Wiskerke, 2012). See also the following case study; Sigurdardottir (2013)

<sup>13</sup> the American (Kantian) philosopher John Rawls (Thompson, 2010)

<sup>14</sup> The Ecological Footprint has emerged as the world's premier measure of humanity's demand on nature ([www.footprintnetwork.org](http://www.footprintnetwork.org))

of plants and animals, responsibility for dealing with environmental damage, obligations for future generations, wide-ranging legal perspectives, respecting a person's chosen way of living or lifestyle, upholding loyalty and considering the public domain (the commons).

By comparing Beatley's (1991,1994) set of principles on ethical land-use and urban agriculture's theoretical relevance there seems to be a correlation on the whole with 'ethical land use'. However, the judicial aspects in agreements that must be adhered to might prove to be problematic in this respect.

## 1.2 THE OBJECTIVE

The **problem statement** of this research is: Even though it has been recognized that urban agriculture can successfully be integrated into sustainable urban development its introduction and general growth in cities is slow because the authorities need to focus on its meaningful purpose rather than on their doubts about it.

Therefore, **the objective** of this research is as follows: *to hint at whether urban agriculture is the rightful course of action and what has to change to make it ethical.*

## 1.3 RESEARCH QUESTION

The **main research question** is:

***Can urban agriculture be considered as 'ethical' land-use; if not, what needs to change to make it 'ethical'?***

In order to respond to the main research question three sub-questions have been formulated;

- 1. Which problems can urban agriculture resolve in urban areas, if it is developed there?***
- 2. Which moral theories have influenced decisions already taken, when changes have had to be made to land or unused terrain (land ethics) and how do agents from different philosophical fields hypothetically perceive urban agricultural development?***
- 3. How ethically sound is urban agriculture as land-use when its theoretical relevance in solving problems in urban areas is compared to Beatley's (1991) ethical principles?***

## 1.4 THE STRUCTURE OF THE REPORT

In accordance with this introduction: Chapter 1 addresses the research problem and reviews the literature which enabled the research to be put into context, the objective and the research questions. The methodology is outlined in Chapter 2. Chapter 3 consists of the literature review in three main paragraphs; 3.1 (The significance of urban agriculture); 3.2 (The decision-making process - many agents with different viewpoints) and 3.3 (Evaluating the ethical quality of urban agriculture) Chapter 4 outlines the discussions and answers are given to the sub-research questions, along with short paragraph about the considered strengths and weaknesses of the study. Chapter 5 is about the conclusions which clarify the response to the main research question. Finally, chapter 6 includes suggestions for further study.

## 2 METHODOLOGY

### 2.1 LITERATURE STUDY - THE PURPOSE

The purpose of this literature review is to gain a new perspective on how ethics influence the development of urban agriculture and draw conclusions which give an insight on the discourse of urban agriculture development in general.

### 2.2 THE FOCUS

The focus of the study is threefold;

1. To introduce the concept of urban agriculture and its various aspects (e.g. its link to global ethics of sustainability, sustainable urban development and also how it relates to a person's chosen way of living). Special attention is given to how the activity's qualities to respond to the problems in urban areas.
2. Reflecting on planning as a decision-making process, involving many agents whose viewpoints differ and explaining the concept of 'land ethics'. The most common philosophies applied in decision-making on land use are reviewed, especially those linked to food production from a cultural perspective. Finally, land ethics are applied by individuals to examine different perspectives in urban agricultural development.
3. Pointing out to what extent urban agriculture can be considered as a means of ethical land use.

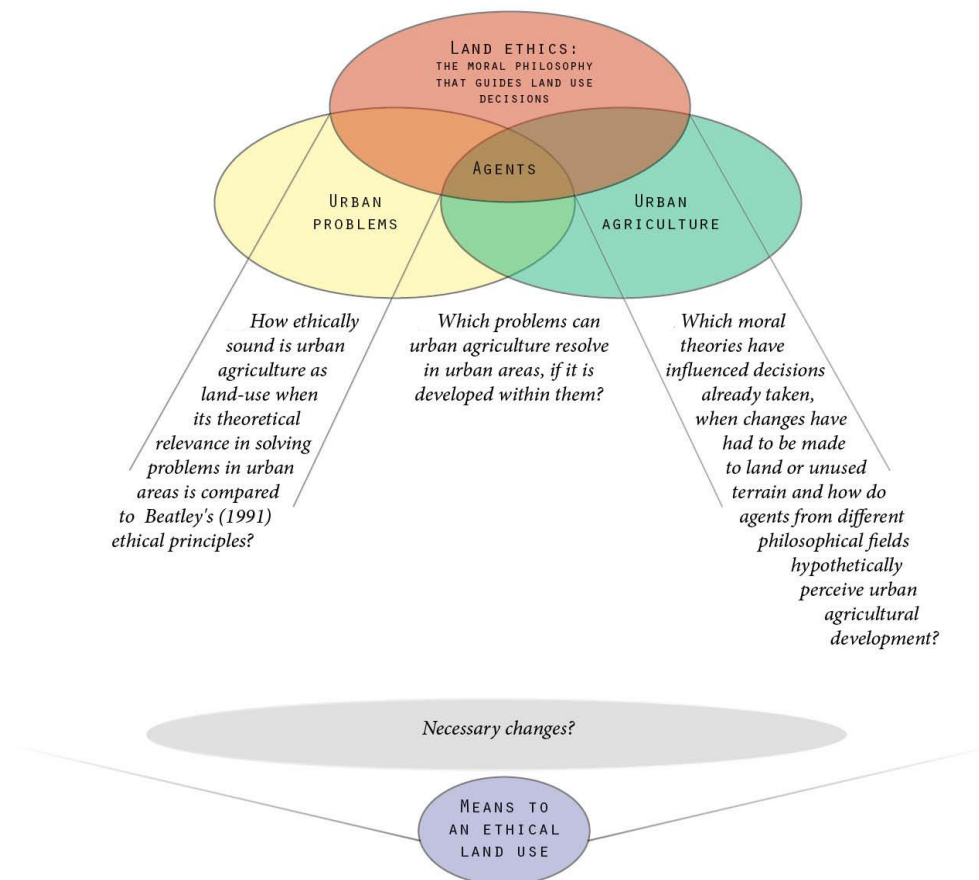


Figure 1 The main topics of the study are interlinked in three colored circles. How these topics are linked and the appropriate sub-research questions posed to find a response to the main research question as to whether urban agriculture is a means of 'ethical' land-use. If not, what needs to be changed to make it 'ethical' (created by the author)

## 2.3 WORKING METHOD

This study was carried out at the same time as the international case study on urban agriculture<sup>15</sup>. The need for understanding cultural and ethical differences that influence urban agricultural development, became clear during the study. 'Google Scholar' was used to search for literature on 'land ethics', 'planning' and 'urban agriculture' and related concepts.

To respond to the first sub-research question official documents on the three cities Rotterdam, Detroit and New York, were reviewed and a summary made of the general problems that urban agriculture might encounter.

In answer to the second sub-research question relevant literature was consulted to find the most common moral theories affecting land-use in relation to food production. A hypothesis was then made on how the various agents involved in urban agriculture perceive the development according to the moral philosophy they uphold.

In dealing with the third sub-question, it has been considered to what extent urban agriculture is a means of ethical land use by comparing; its capability to respond to urban problems and Beatley's (1991, 1994) set of principles as a guide in making decisions on ethical land use. These principles are instrumental in revealing the moral foundations for agricultural development in urban areas. It is important to note that each individual's values and opinion determine which moral principles apply in a given situation. However, based on the above-mentioned comparison, it is assumed that what needs to be changed to make the activity considered to be ethical in general, is evident.

The answers to the sub-research questions formulate a response to the main-question; whether urban agriculture can be considered a means of ethical land use and, if not, what needs to change to make it ethical.

---

<sup>15</sup> The main thesis: author, H. Sigurdardottir; Urban agricultural development on unused terrain, Highlights of the process. Case study research, Earthworks Urban Farm - Detroit & 'Uit Je Eigen Stad' - Rotterdam (2013)

### 3 LITERATURE REVIEW

#### 3.1 THE SIGNIFICANCE OF URBAN AGRICULTURE

##### 3.1.1 INTRODUCTION

This paragraph outlines the main topics in this section. In paragraph 3.1.2 the concept of urban agriculture is defined and a brief explanation is given its of relevance from different perspectives. Various aspects of the activity have been depicted to demonstrate its ability to improve a city's livelihood. Its link to the grassroots level is explained and the apparent slow development of urban agriculture, especially in developed economies. Paragraph 3.1.3 lists the qualities urban agriculture has in response to common problems in urban areas. A brief summary of the section can be found in paragraph (3.1.4)

##### 3.1.2 DIFFERENT ASPECTS OF URBAN AGRICULTURAL DEVELOPMENT

Libertarian socialistic ideas have been described as a response to the 'Big Society' (Frère & Reinecke, 2011). They favour the redistribution of economic and political power by realizing not only a charitable but an economically-empowered civil society. The idea of urban agricultural development blends with this discourse.

Until recently, urban agriculture has only been 'marginal' land use but it is now developing within cities and policies are being drawn up to approve that development (Sonnino, 2009). *Urban agriculture* is defined based on Mougeot (2000 p 11) an industry located within (intra-urban) or on the fringe (peri-urban area) of a town, a city or a metropolis, which cultivates, processes and distributes a diversity of food and non-food products, utilizing human and material resources, products and services found mainly in and around that particular urban area for the benefit of that same area.

The discourse on urban agriculture is linked to the concept of sustainable development from both broad and narrow aspects. From a global perspective, Næss (2009) interprets the term sustainable development<sup>16</sup>, in the following way: *....sustainable development is first and foremost about ensuring that everybody—both in rich and poor countries, nowadays as well as future generations—can have their basic needs met. This must be obtained without jeopardizing the natural systems in which life here on earth is dependent...* (Næss, 2009 p 504). Municipalities all over the world have incorporated sustainability goals in to their policy documents (United Nations, 2006). Næss (2009) refers to 'The global ethics of sustainability' when he argues that developed countries need to utilize resources more efficiently, reduce energy consumption and pollution and thus protect natural areas and arable land. This argument has do with distributive ethics that focus on 'a fair distribution of benefits and burdens'. Effective utilization of building sites inside and encompassing the cities as a part of the larger natural ecosystem is a possible strategy toward this end.

---

<sup>16</sup> along the lines of the Brundtland Commission's report, the 1992 conference on Environment and Development in Rio de Janeiro, and the subsequent work of the UN Committee on Environment and Development

It is claimed that urban agriculture is a vital part of sustainable food systems<sup>17</sup> that can improve a city's livelihoods in various ways (Wiskerke & Viljoen, 2012; Pothukuchi, 2011; Holland & Salle, 2010; Veenhuizen, 2006 among others). Its sustainability is related to its multi-functional aspects (Veenhuizen, 2006). Therefore the activity can be perceived in various ways. Veenhuizen (2006) describes a link between opportunities within cities due to their dynamic characters and various urban agricultural benefits. Therefore the opportunities for agricultural development and its benefits vary from city to city and the needs a city has.

Theoretically, the positive effects of urban agriculture development are many and varied including its ability to integrate into sustainable urban development. Bohn and Viljoen, 2012 cited by Wiskerke & Viljoen (2012) define these qualities in four ways; social, ecological, economical and spatial (see appendix 1). Cohen, Reynolds, & Sanghvi (2012 p 90) are of the same opinion with one exception, i.e. its relevance improves the quality of health rather than classifying 'spatial' attributes specifically (see appendix 2). In symbolic way, Walker et al., (2011 p 22) indicate that urban agriculture is an important element of a sustainable food system and is linked to achieving noble community goals (see appendix 3). Another way of looking at its potential is to create an awareness of its ability to solve urban problems.

Having been pressured by the grassroots; local poverty groups, urban farmers and NGO's, many city authorities have now acknowledged the potential of urban agriculture and collaborate with other local stakeholders in an effort to maximize its benefits and minimize the risks (Veenhuizen, 2006). Therefore it can be affirmed that the development of urban agriculture is fundamental to peoples' desires for healthy lifestyles. However, politics have a big impact on significant changes in land-use<sup>18</sup>; in order to develop urban agriculture, political influence, applicable resources, and more comprehensive plans are essential (Pothukuchi, 2009).

Even though urban agricultural development is relevant both from a global ethical perspective, sustainable urban development or linked to a person's choice of lifestyle, the legal framework might also be a barrier in a seemingly lacking agricultural urban development, especially in developed economies (Veenhuizen, 2006; Holland & Salle 2010; van der Schans & Wiskerke, 2012). If there is a gap between real 'work in progress' and what is legally permitted it may indicate that institutions are still unfamiliar with the development taking place or still have doubts about its meaningful purpose.

The risks already known in urban agriculture concern contamination (van Veenhuizen, 2006). Other obstacles are high running costs and a challenge to integrating dissimilar disciplines into new design paradigm (Holland & Salle, 2010; van der Schans & Wiskerke, 2012). It is obvious that risks in contamination are always possible when producing food. In order to lower that risk, co-operation of diverse disciplines, which is another challenge in urban agricultural development, and requires technical solutions which could lead to higher costs, would probably minimize it.

---

<sup>17</sup> According to (Holland & Salle, 2010) a sustainable food production and agricultural system envelopes various alternative food-related issues that all have in common the idea of strengthening the local community through food issues<sup>17</sup>. Feenstra (2002, p 100) defines sustainable food systems as;

*"A collaborative effort to build more locally-based, self-reliant food economies – ones in which sustainable food production, processing, distribution and consumption are integrated to enhance the economic, environmental and social wellbeing of a particular place"*.

<sup>18</sup> See e.g. Ministrie van Infrastructuur en Milieu (2011)

### 3.1.3 URBAN PROBLEMS AND URBAN AGRICULTURE SOLUTIONS

One way of looking at urban agriculture potentials is to focus on how the activity is considered to react upon urban problems.

In Detroit, the problems that urban agriculture is able to have a positive influence on are related to standards of health (obesity, diabetes, etc.), poor access to adequate amounts of healthy food or food insecurity<sup>19</sup>, insufficient self reliance in economic terms and high unemployment rates, poor social cohesion due to racial (and/or class) segregation and depraved environmental qualities due to neglect and urban decay (Walker et al., 2011). Problems with storm- and rain water which could be collected and used for urban agriculture, is a problem in New York, alongside those of Detroit previously mentioned (Cohen et al., 2012). In Rotterdam, urban agriculture is considered to have a positive effect on health problems (e.g. unhealthy food consumption, insufficient exercise), unhealthy atmosphere such as gray and stony areas, environmental damage and air pollution due to transportation, etc.), temporary dips in the local economy and poor communication between consumers and producers leading to an unawareness of what people consume (Rotterdam municipality, 2012). Table 1. summarizes the above-mentioned urban problems.

Table 1 Summary of common urban problems based on literature about Detroit, Rotterdam and New York

Problems in urban areas
institutions are unfamiliar with development taking place <sup>20</sup> relating to citizens' choice of lifestyle
Poor health <sup>21</sup>
Poor access to healthy food <sup>22</sup> and food insecurity <sup>23</sup>
Poor self-reliance in economic terms, high rate of unemployment rate <sup>24</sup> and temporary dips in the local economy <sup>25</sup>
Insufficient social cohesion due to racial (and or class) segregation or marginalized groups <sup>26</sup> or different cultural backgrounds <sup>27</sup>
Environmental quality is lacking <sup>28</sup> or there is poor access to healthy, green areas <sup>29</sup>
Problems caused by transportation such as environmental contamination <sup>30</sup>
Poor links between consumer and producer and unawareness of what people consume <sup>31</sup>
Contaminated soil <sup>32</sup>
Collecting water during heavy rainstorms <sup>33</sup>

<sup>19</sup> Food insecurity is defined by the US Department of Agriculture (USDA) as a 'lack of consistent, dependable access to enough food for active healthy living' (Walker et al., 2011 p 35).

<sup>20</sup> Veenhuizen, 2006; Holland & Salle 2010 and van der Schans & Wiskerke, 2012

<sup>21</sup> Walker et al., 2011; Cohen et al., 2012 and Rotterdam municipality, 2012

<sup>22</sup> Walker et al., 2011 and Cohen et al., 2012

<sup>23</sup> Food insecurity is defined by the US Department of Agriculture (USDA) as a 'lack of consistent, dependable access to enough food for active healthy living' (Walker et al., 2011 p 35).

<sup>24</sup> Walker et al., 2011 and Cohen et al., 2012

<sup>25</sup> Rotterdam municipality, 2012

<sup>26</sup> Walker et al., 2011 and Cohen et al., 2012

<sup>27</sup> Rotterdam municipality, 2012

<sup>28</sup> Walker et al., 2011; Cohen et al., 2012 and Rotterdam municipality, 2012

<sup>29</sup> Rotterdam municipality, 2012

<sup>30</sup> Rotterdam municipality, 2012

<sup>31</sup> Walker et al., 2011; Cohen et al., 2012 and Rotterdam municipality, 2012

<sup>32</sup> Walker et al., 2011 and Rotterdam municipality, 2012



It is usual to refer to ethics or making changes in an ethical way during discussions, especially when the projects under consideration will improve living standards. Possible problems generally relate to important ethical issues. Moreover, this notion is also featured in literature relating to food planning<sup>34</sup>.

#### 3.1.4 SUMMARY

The relevance of urban agriculture can be perceived from diverse aspects. From a broad perspective, utilization of unused terrain in the western world, i.e. developed countries, to cultivate food blends with the 'global ethics' of sustainability. From cities' perspectives, in general, the multi-functional character of urban agriculture has opened up several channels on how to perceive its attributes. Its links with sustainable urban development are apparent in various ways. The dynamic character of cities create opportunities for agricultural projects which, in turn, benefit the cities in which they are set up.

Urban agricultural practices within cities have strong links with the grassroots level and therefore citizens determination for a healthier way of living. One way of looking at urban agricultural development is to observe it alongside existing problems in urban areas. The problems concerned relate to the unjust distribution of primary goods and unequal opportunities to enjoy a healthy and pleasurable lifestyle. Based on literature listing problems in three large cities, the following issues need to be addressed: poor health due to undesirable eating habits and the lack of access to healthy, nourishing food. Residents are discouraged by the economic situation (unemployment), groups are segregated and marginalized, depraved environment and lack of pleasurable areas, soil and air pollution inadequate retention of excessive water during heavy rainstorms.

Aspects of any problems can relate to ethics in one way or another. The descriptive word 'ethical' features prominently in literature on transformation procedures.

---

<sup>33</sup> Cohen et al., 2012

<sup>34</sup> e.g. Wiskerke & Viljoen ( 2012) argue that producing sufficient food for the world's population in a sustainable and ethically-sound way, is one of the key challenges facing the coming decades

## 3.2 THE DECISION-MAKING PROCESS - MANY AGENTS WITH DIFFERENT VIEWPOINTS

### 3.2.1 INTRODUCTION

This section gives a general description of the significance of land-use planning and how professions have been transforming the planning approach into a more collaborative process (sub-paragraph 3.2.2). Thereafter the concept of land-use ethics is defined (sub-paragraph 3.2.3), as a philosophy that influences land-use decisions. There is a brief overview of the main theories concerning land-use ethics (Utilitarianism, Kantism, Virtue ethics and libertarianism). Finally, the concept of urban agriculture is compared with each of these theories and assumptions made on how agents might react to the idea of developing urban agriculture (sub-paragraph 3.2.4).

### 3.2.2 THE SIGNIFICANCE OF LAND-USE PLANNING

According to Cullingworth & Caves (2003), the process referred to as 'planning' is about formulating objectives and agreeing on the manner in which these objectives are to be met. Planning is forward-thinking; it seeks to determine future activities selected on the basis of alternative considerations and constraints and the possible courses of action to be taken that depend on varying conditions. The actions decided upon are reflected in a particular community's future vision, regarding essential services, and a balance between new development, environmental protection and innovative changes (The American Planning Association, 2012). Generally, land-use planning is done at the national, state/provincial and local/regional level. Cities usually come under the local/regional level. It is also common knowledge that land-use planning is linked to politics.

Civic leaders, businesses, and citizens need to debate problems and issues in order to express their beliefs, perspectives and objectives (Cullingworth & Caves, 2003). This has to do with one of the main features and challenges in planning, that of reconciling differences among participants by dealing with contradictions and conflicts regarding future expectations (Cullingworth & Caves, 2003; the Association of European Schools of Planning, 2012). When the number of participants increases, each one having different interests, the process becomes more difficult (Cullingworth & Caves, 2003). Therefore, an important aspect in planning is to reach an agreement on objectives. The broad objectives can be *'to offer better choices as to where and how people live'* (The American Planning Association, 2012) *'securing physical, economic and social efficiency, health and wellbeing of urban and rural communities... ..responsible planning has always been vital to the sustainability of safe, health, and secure urban environments'* (The Canadian Institute of planning, 2012)

According to the Association of European Schools of Planning - AESOP (2012) a professional approach is required in this process, combining sensitivity, analytical and strategic skills, to deal with the political, social, environmental and economic issues which are at stake. If there are mutual conflicts of interest in this participatory process, a priority must be given to three aspects; *...knowledge, analytical and interactive methods, and ethics'* (The Association of European Schools of Planning, 2012)

One particularly important aspect of planning concerns interrelated problems that pose difficulties to policy-makers and especially to governments (Cullingworth & Caves, 2003). Tackling a problem in a city can prove to be extraordinarily complex.

Land-use planning rationale (from the top-down), is characterized by control and prediction (based on reasoning and fact), often proves to be disastrous when confronted with reality (Allmendinger, 2009). A general shift has occurred with regard to power<sup>35</sup> from being 'top-down' to 'bottom-up'.

Generally speaking, while planning practice has been more dependent on empirical calculations, systems and modeling, it has also become more embedded in social sciences, as discourse is an important factor here. Different perspectives of persuasion have been discussed and analyzed leading to criteria that otherwise might have been lost. Awareness of the social structure <sup>36</sup> is an important factor which infers that all perspectives are framed by language, culture and experience.

During general discourses, it is common to refer to ethics or necessary changes in an ethical way, especially when the topics involve changes required to improve a way of living. Moreover, this concept is also prominent in literature in relation to planning transformation.

### 3.2.3 LAND ETHICS

#### DEFINITION

Ethic is defined as the branch of knowledge that deals with moral principles (Oxford Dictionaries, 2012), and ethics are defined as moral principles that govern a person's behavior when conducting an activity. The field of ethics is also known as 'moral philosophy' (Fieser, 2009).

In general, people act and make decisions with respect to what they consider to be of value in their lives, however, such decisions differ from culture to culture, and also from person to person (Hofstede, 1991). Cultures and societies have developed their own rituals, systems and laws in accordance with their particular set of cultural values. Ethical questions such as; what sort of things can be considered good and which acts are right and the relationship between them concerns moral theory (Jamieson, 2008).

According to Leopold, (1949) *land ethics* is the philosophy<sup>37</sup> that prompts actions on whether land is utilized or if changes to it are defined. When Leopold (1949) defined land ethics, he criticized the dominant individualistic economically-based ethics in land-use policies and argued for a more ecological and holistic approach. He claimed that all forms of life have an intrinsic value and that the needs of humanity should not be considered to be more important than those of other living things (Shaw, 2005). He envisaged the 'ultimate good' where a community would live in harmony with the land and all its agents (Shaw, 2005). He conceptualized a new idea of land. In his view land was the source of life, e.g. soil, water, plants and animals. Harmony in the community – 'the ultimate good' is reflected especially in integrity, stability and beauty of the community.

In a very similar way to Leopold (1949) who was driven by substantive rationality, Beatley (1991) proposed tentative ethical principles to guide people in making land-use decisions. According to him the key concepts for the planning profession to aim for were; a just society, access to primary goods, a small

---

<sup>35</sup> This means that the world-wide view has changed from being mainly an explanatory power and an apparent random illumination (positivism) to one searching for a common understanding linked to agreed actions in which collective beliefs when contrasted with each other play a major role – this idea envelops the subjective world-wide view (post-positivism)

<sup>36</sup> Look at the work of Michael Foucault who was inspired by Friedrich Nietzsche – Faucholt M. (1975). '*Society must be defended*'.

<sup>37</sup> Philosophy is defined as the study of the fundamental nature of knowledge, reality, and existence, especially when considered as an academic discipline (Oxford Dictionaries, 2012)

human footprint, an inherent worth of non-human species, responsibility for reversing environmental harm, obligations towards future generations, a broad jurisdictional perspective, respecting the lifestyle chosen, keeping promises and considering the public domain (the commons).

The philosophies that have guided people in land-use activity are reflected in how land is utilized to produce food. The following section is a general summary of three main moral theories that have influenced land use;

- Consequentiality - (Mills) – Utilitarianism is the concept most generally referred to as the ‘theory of consequentiality
- Deontology or ‘Kantism’ named after Immanuel Kant is well-known as the ‘Deontological theory’
- Virtue ethics - Aristotle’s moral theory

Furthermore Libertarianism and egalitarian ethics have also been reviewed in relation to the above-mentioned philosophies.

The idea of consequentiality has been rooted in decision-making since 400 B.C. (Jamieson, 2008). Consequentiality is all about deciding what should be done and how, checking if it is morally permissible according to the consequences of taking alternative courses of action (Taylor, 2009). It is all about focusing on the external world as well as actions people take and the consequence of such actions. The best known version of consequentiality is Utilitarianism associated with the British philosophers Jeremy Bentham and John S. Mill (Jamieson, 2008). According to Jamieson (2008) Bentham was much more interested in laws and policies than in individual actions. The simplest expression of utilitarianism designated to Mill is defined as the principle of the greatest good (happiness or pleasure) for the maximum number of people.

### *UTILITARIANISM*

Utilitarianism is at the root of decision-making in planning (Faludi, 1986) and has been for a long time (Jamieson, 2008). Utilitarianism has also been referred to as ‘a certain-common-sense-ness’ and is indeed rooted in planning, e.g. it is used in many planning textbooks to evaluate the planning process and without exception is used to evaluate the best designs (Taylor, 2009; Allmendinger, 2009). Furthermore many professional philosophers are in favor of utilitarianism as it is a much appreciated moral standpoint. However, it has been criticized for several reasons. The concept of ‘happiness or pleasure’ is debatable depending on what kind of end is being sought after; is it the right one (welfare, utility etc.) and how can it be evaluated? (Taylor, 2009). Utilitarianism is a self-centered philosophy and has been criticized for that reason by people who are concerned about protecting the environment (Jamieson, 2008). In general, consequentiality is criticized because it sacrifices the interests of a few for the sake of many and that ‘the end justifies the means’. This philosophy which is linked to economy-based ethics (Beatley, 1991; Driver, 2009) has been criticized for being risky from a monetary perspective and may ignore more important perspectives (both social and ecological) which are not easily interpreted cost-wise resulting in an unfair distribution of interests. An example of land-use founded in the spirit of utilitarianism, is industrialized farming of mass-produced and processed food at very low costs.

### *KANTISM*

Kantism is named after Immanuel Kant was a ‘child’ of enlightenment (such as utilitarianism) (Jamieson, 2008). Kant’s view has implications on both how we ought to reason about what we should do and what is permissible for us to do. This kind of ethic (deontological<sup>38</sup>) is sometimes described as a “duty”,

---

<sup>38</sup> Deontology is defined as the study of the nature of duty and obligation (Oxford Dictionaries, 2012)

"obligation" or "rule"-based ethic, because rules "bind you to your duty" (Waller, 2005). According to Kantism, reasoning and facts are the compass and drive for most decisions and actions, the majority of which can be investigated, understood and generalized. Society is supposed to deliberate and decide upon general rules which it adopts so that it functions in accordance with the obligations laid down.

During the era of enlightenment, which was acceptable to some generally, good principles were established (Farzaneh, 2009) such as 'the principle of justice' which accords equal rights and liberty to everybody, i.e. (the right to vote, freedom of speech) and human rights (such as acceptable living standards, work, access to food, health-care etc.). Therefore, every member in a society has the right to an equal claim on their society's good.

### *LIBERTARIANISM*

Libertarianism emphasizes freedom, liberty and voluntary association. Those who advocate libertarianism believe in a society whose government has little scope or there is no government at all (Vallentyne, 2011). They consider that representatives have their own power and certain people have the moral right to use the land and are in favor of redistribution of power (Woodcock, n.d.). According to Long (1998) "voluntary association" takes the form of a free-market or communal co-operatives. Moreover, libertarian-based ethics do not require that people help others and this leads to an unequal distribution of wealth. The libertarian view has been severely criticized because people who make egotistical decisions are often the cause of major ecological disasters (Thompson, 2010). The libertarian perspective is commonly accepted in the United States and generally put in practice by U.S. ranchers and farmers.

### *EGALITARIANISM*

While both utilitarian and libertarian land-based ethics might possibly advocate an unequal distribution, an Egalitarian approach was introduced by the American (Kantian) philosopher John Rawls, who favors equality whether that would signify equal entitlement to land and/or access to food – the fruits of the land (Thompson, 2010). This means that if someone has a right to something such as land or its fruits, then that person is responsible for making this area or its produce available; whether it is an individual or the government. According to Rawls, 'justice' is the 'prime virtue' in society and utilitarianism does not necessarily result in the most just of outcomes (Taylor, 2009). The 'difference principle' by Rawls, states that authorities should seek to minimize social and economic inequalities unless these serve to maximize the condition and benefits of the worst off members in a group (Rawls, 1971). In other words inequality is only acceptable if it benefits those who are worst off. Therefore, egalitarian-based land ethics could provide a powerful argument for the preservation of soil fertility and water because it links land and water with the right to food, an increase in human population, and a decline in soil and water resources (Thompson, 2010).

On the other hand, the basic idea of environmental ethics is instituting moral development and extending moral awareness in a community (Nash, 1989). It emphasizes the inclusion of more than just the 'sentient' species in the planning process, but also representatives or advocates to defend these in the decision-making process.

### *VIRTUE ETHICS*

MacIntyre (1981) outlines the core concept of *virtue ethics* that were practiced amongst the ancient Greeks (Aristotle), who linked them to the practice of cooperative activity (MacIntyre, 1981). He was firmly

opposed to utilitarianism in that authentic moral living could not be based on statistics resulting from cost and benefit analyses. He was also against Kantism because moral living cannot be swayed by rules applied when a dilemma occurs. Utilitarianism focuses on utility, Kantism and egalitarian ethics relate to duty/obligation and rights whereas virtue ethics are connected with a person's character. Virtue ethics raise questions such as: who should I be? And what is meant by good living? How should I live? It was explained earlier in this chapter that Aldo Leopold (1949) who defined the concept of land ethics, was also inspired by virtue ethics, perceiving 'citizenship' and 'respect' as important qualities in humanity which were '*in relationship to [and part of] a network of biotic communities which metaphorically compose the land*' (Shaw, 2005 p 102). Shaw states that it will take time for land ethics and virtues to progress before being firmly established.

Brown (2001) introduces Rosalind Hursthouse's<sup>39</sup> comparison of the three main ethical theories outlined above in table 2. Their relationship and the characteristics of each one are depicted. While Unitarianism is goal-orientated and focuses on the consequences, Kantian ethics draw attention to rationality and rules; virtue ethics highlight virtues, i.e. activities that are considered 'good' depending on the circumstances.

---

<sup>39</sup> According to Brown Hursthouse who describes this in her essay "Virtue Theory and Abortion" (1991)

Table 2 Comparison of the most important moral theories according to Rosalind Hursthouse), indicating how one theory addresses issues that are the main concern of others (Brown, 2001)

	Consequentiality	Deontology	Virtue Ethics
Example	Utilitarianism	Kantianism [Egalitarian]	Aristotlianism
<b>abstract description</b>	An action is right if it results in promoting the best <u>consequences</u> .	An action is right if it is in accordance with a moral <u>rule or principle</u> .	An action is right if it is what a virtuous agent would do in the <u>circumstances</u> .
<b>more concrete specification</b>	The right consequences are those in which <u>happiness is maximized</u> .	A moral rule is one that is based on <u>rationality</u> .	A virtuous agent is one who acts virtuously, i.e., one who respects and <u>puts virtues into practice</u> . A virtue is a character trait a human being needs to flourish in life.
<b>model of practical reasoning</b>	Means to an end reasoning: How do I get what I want/what is good for me?	How do I determine what's rational?	What habits should I develop?
<b>personal identity (what is essential to the self?)</b>	will & reasoning + desires	will & reasoning (desires are considered to be outside forces having the potential to thwart rationality)	will& reasoning + desires + character traits
<b>rationality</b>	getting what you want	doing what reasoning requires (the minimum; not following inconsistent or self-contradictory policies)	having the kind of desires which reasoning determines are best
<b>central question</b>	What ought I to do? (action orientation)	What action should I take? (action orientation)	How can I be the best sort of person I want to be? (agent orientation)
<b>Evaluating the primary objective</b>	consequences (state of affairs)	action	people (agents)
<b>the good</b>	<b>BASIC NOTION</b>  (for most consequentialists, maximum happiness or something similar)	The right action itself (? or possibly circumstances brought about by the right kind of action?/ or circumstances in which people who act righteously are rewarded?)	What results from the actions of good people? happiness? acquisition of goods (material benefit) (MacIntyre)?
<b>rights</b>	actions that maximize the good	<b>BASIC NOTION</b>	the sort of thing a virtuous person would do in the circumstances
<b>virtue</b>	being disposed to maximize utility (for simple versions of consequentiality, there is just one prime virtue; more complex versions might have many consequences)	A positive attitude toward doing one's moral duty(?)	<b>BASIC NOTION</b> ( may be analyzed, e.g. listing the dispositions necessary for the attainment of happiness)

It is quite clear that utilitarian and Kantian philosophies are rooted in the significance of land-use planning (explained in sub-paragraph 3.2.2) as being goal-orientated and regulating the use of land. Yet, the “means to an end” objective has become even more important than ever and so have the methods used, e.g. by reaching out to those at the grassroots level and the NGO's. This is notably in line with the message of sustainability (see sub-paragraph 3.1.2).

As has been mentioned, urban agriculture has been in practice for a long time in 'informal sectors' and has recently become part of strategic development in land-use planning. The hypotheses in the following sub-paragraph (3.2.4), explain how urban agriculture is perceived differently based on dissimilar land use ethics outlined above.

#### 3.2.4 *URBAN AGRICULTURE AND THE AGENTS PERSPECTIVES - HYPOTHESIS*

Deciding as to whether urban agriculture is a good development project on (temporarily) unused terrain and what are the right actions to take in relation to such development, depends on the viewpoint of the one making the decision. According to the previous explanation of the three main moral theories (Utilitarian, Kantian(Egalitarian) and Virtue ethics) which influence decisions on land-use planning, the possible perspectives that might emanate from them regarding the idea of urban agricultural development are explained in this sub-paragraph. The libertarian agent's perspectives toward urban agriculture will be elaborated upon very shortly as well.

From an agent's consequential point of view the possibilities of his main focus are: 'Is urban agriculture the answer to what I/we want' i.e. what is best for me/the community as a whole - is urban agriculture what I/most agents would be happy with'? Then it comes down to what someone considers to be of value, but that differs from person to person. It has been demonstrated that utilitarian thinkers tend to value material benefits first and foremost in monetary terms (Beatley, 1991; Driver, 2009). The question is problematic and depends on the position of the person who answers it and also how that person perceives the quality of urban agriculture. For citizens who have poor access to healthy food, such a development would be both economically and socially viable for them. On the other hand, the authorities might draw a comparison with using the land for housing and conclude that the activity of urban agriculture would not give back the return in terms of finance as real estate would. Therefore it is not as economically viable as housing development, unless it could improve citizens' health and consequently save money that would otherwise spent on health and socially-related problems.

From a Kantian perspective the development of urban agriculture might be problematic at first and for most because, until recently, it had only been considered as 'marginal land use' and was not 'on the municipal registers'. On the other hand some regulations and policies might recommend such development<sup>40</sup>. First of all people should be aware that the general objective of sustainable development is both a recognized condition of the planning process (democratic) and one of the planning profession goal. Secondly, according to Agenda 21 the majority of municipalities have already incorporated it into their policies (United Nations, 2006). Ethics pertaining to the distributive qualities in the sustainability concept require that the western world reduces its negative impact on the environment by cooperating with the participants at the grassroots level. Other basic notions highlighted by the Kantian philosophy are; e.g. 'the principle of justice', equal

---

<sup>40</sup> Since it is known as sustainable food system



fundamental rights<sup>41</sup> for everybody, encompassing liberty, and human rights, i.e. *acceptable living standards, work, access to food, health-care and so on* (Farzaneh, 2009). If the environment cannot offer these basic elements to the community then urban agriculture could influence the community in positive ways to fulfill the essential needs already defined. The Kantian supporter and those who are particularly in favor of a more just society (such as Egalitarians<sup>42</sup>) would propose that regulations be amended to make land-use in urban agriculture a legally-recognized activity.

The agent who upholds virtues would only consider the development of urban agriculture in relation to the circumstances prevailing at that time. If cities have a considerable amount of unused terrain waiting to be used according to coded regulations, the environment can also suffer from a lack of sustainable food chains (e.g. carbon emissions from transportation, depleting natural resources, unfair distribution, lack of access to healthy food etc.) An 'Aristotelic' agent who acts virtuously would most probably support the development as well as agents from alternative food systems who promote the quality and value of their products in a positive way e.g. have a direct link with the preservation of land<sup>43</sup>, refer to healthy lifestyles and uphold virtues. Such people hypothetically consider the 'ultimate good' by giving support to and promoting urban agricultural development on unused city terrain.

Based on claims made by (Woodcock, n.d.; Long, 1998; Vallentyne, 2011) the following speculation has been made about the libertarian and the concept of urban agriculture. The libertarian agent would act according to his own desires and if he is not participating in urban agricultural development he would not object to the development as long as it does not affect his own property rights. Agents working in urban agriculture would cooperate in collective ways if their activities did not fit into the scheme of the libertarian market-orientated society. Therefore networking with NGO's and agents at the grassroots level would most likely influence the 'bottom-up' approach in land-use planning.

Land-use ethics have only been explained briefly in the above summary, especially in relation to new land-use development such as urban agriculture. Even though the summary is only a broad outline and does not go into the topic deeply, it does give a clear impression of how people in communities in different parts of the world have their own distinctive viewpoints and perceive development of urban agriculture in various ways. It is therefore useful, when urban agricultural development projects are compared and their features explained, to bear in mind those different ethical approaches that influence the process.

---

<sup>41</sup> For example: right to vote and of free speech

<sup>42</sup> Willing to maximize the condition and benefits members of the worst-off group (Rawls, 1971)

<sup>43</sup> a community that human beings are a real part of according to Leopold (1949)

### 3.2.5 SUMMARY

Land-use planning involves setting objectives and agreeing on how they are to be met. Planning means forward-thinking about activities after considering alternative methods, and constraints before taking the right course of action. At the regional level in which cities' objectives focusing on the community's benefit must match up with state/provincial, national and global plans and policies. The planning profession has been developing a more collaborative approach which correlates with the idea of sustainable development. There must be cooperation between the authorities, agents at the 'grassroots' level and NGOs.

The philosophy of 'land ethics' applied in land-use planning indicates how land is utilized and whether changes can be made to it or not. The main theories on land-use ethics are based on Utilitarianism, Kantism (Egalitarian), Virtue ethics and Libertarianism.

Urban agriculture within cities has only been 'marginal land use' until recently but its development depends on policies for its approval which will involve various agents with different perspectives.

Utilitarian ethics indicate that the right moves have the best results (consequences). It is claimed that utilitarian ethics are driven by financial reward. Agricultural development could be economically and socially viable for communities who have little access to healthy food. However, the authorities might prefer to use the land for housing claiming that urban agriculture would not be as financially rewarding as real estate. Kantian ethics uphold actions governed by basic moral rules or principles, therefore Kantian supporters of urban agriculture - who are in favor of a more just society (such as Egalitarians) would propose that regulations be amended to recognize urban agriculture legally. Virtue ethics deem an action to be correct if an agent who upholds virtues would do it if the circumstances were ethical. If unused terrain in cities could be used for a more valid purpose than remain unproductive a virtuous agent would most probably take action in support of land use linked with the value of his products. A libertarian agent would act according to his own desires and become involved in urban agriculture in collective ways if his activities did not blend with a libertarian market-orientated society. Therefore, in libertarian societies, networking with NGOs and agents at the grass roots level would most likely influence a 'bottom-up' approach in land-use planning.

Altogether, relatively new development such as urban agriculture is perceived from different aspects depending on the land ethics in force that influence the decisions to be taken in the process.

### 3.3 EVALUATING THE ETHICAL PRINCIPLES OF URBAN AGRICULTURE

#### 3.3.1 INTRODUCTION

This section defines the concept of land ethics followed by a review of Beatley's (1991) tentative set of ethical principles to guide land-use policy and decisions (3.2.2). This has been done to indicate how ethical land-use is perceived. Then the problems listed at the end of the previous section, to which urban agriculture is considered to be a solution, are compared with these principles in a diagram in section (3.2.3). Finally a brief summary is given in section (3.4.4)

#### 3.3.2 BEATLEY'S ETHICAL PRINCIPLES TO GUIDE LAND USE

As has been explained previously (3.2.3) Leopold (1949) defined '*land ethics*'<sup>44</sup>. Planning ethics, developed further in resolving disputes, especially linked to environmental ethics in the 80's and 90's and planners became dispute resolvers (Dotson, Gosschalk, & Kaufman, 1989). The way planners justify administrative caution in a democratic society is an ethical issue defining "public interest" as a key concept in their relationship with decision-makers and the public (Howe, 1992).

The chapter introduces tentative ethical principles to guide land use proposed by Beatley (1991). He criticized the normative framework used in land-use decisions as having a narrow scope, as well as being economical and utilitarian only. This chapter outlines his proposed 11 tentative ethical principles. By this means it is Beatley's intention to expand the ethical foundation when making decisions for land use.

According to Beatley (1991) his proposed ethical principles are as follows:

1. *Land-use decisions must aim to promote the interests of the least advantaged in society; land-use decisions are influential in promoting a just society* (Beatley, 1991 p.3)

This is the Rawlsian basis for ethical land-use policy to ensure that everybody has their basic needs met in accordance with the general principles concerning human rights.

2. *Land-use policy must protect the basic environmental and other rights due to every individual irrespective of income or social position* (Beatley, 1991 p.4).

For a flourishing, healthy lifestyle, all members of the society need to have the right to a minimum level of primary necessities such as unpolluted air, water, personal safety and security, shelter health-care among others such as food. Moreover, ethical land-use policy should only allow systems that enable all members of society access to an interesting and stimulating environment, including basic recreational opportunities.

---

<sup>44</sup> as the philosophy which guides decision-making when land is utilized or changes are made to it or the moral system that is used to determine what is right and wrong in planning process. Leopold (1949) re-conceptualized the idea of land. In his opinion land was for life and for the source of life - for example soil, water, plants and animals. Harmony in the community - 'the ultimate good' is reflected especially in integrity, stability and beauty of the community (Shaw, 2005).

3. *Ethical land-use policy sustains and protects natural ecosystems; ethics require a small human 'foot print'*<sup>45</sup> (Beatley, 1991 p.4).

In land-use policy it must be recognized that nature and the natural system have an intrinsic value, irrespective of their utility to man and therefore minimize the destructive pattern of land development and urban growth as much as possible.

4. *Ethical land-use policy acknowledges that man is not the only species on the planet; non-human life has inherent worth as well* (Beatley, 1991 p.5).

The bio-centrist view maintains that all life has inherent worth (according to Aldo Leopold (1949) and others). An ethical land use policy maintains that man is one of many species on earth who has no right to jeopardize the existence of other species.

5. *Ethical land-use policies prevent or minimize the imposition of harm; the principle of culpability maintains that those causing land-use harm are accountable for it* (Beatley, 1991 p.5).

This principle is the key underpinning any land-use ethic theory. This has to do with using land in a way that is not detrimental to others. Sometimes this is not foreseeable, such as soil contamination. Ethical land-use maintains that the one responsible for inflicting such harm is also responsible for repairing the damage.

6. *Ethical land-use policy acknowledges important obligations to posterity* (Beatley, 1991 p.5)

Land is a finite resource. If it is not used wisely it could be completely exhausted for future generations, making it difficult for them to exist. This principle also applies to the quality and beauty of both the natural and man-made landscapes.

7. *Ethical land-use policy acknowledges that no political jurisdiction is free-standing; ethical obligation exists in other aspects of jurisdiction, particularly those which are adjacent to or surrounding it* (Beatley, 1991 p.6).

Ethical land-use recognizes different jurisdictional levels and does not only take into account the interests of a particular locality in the decision-making process. Exclusionary zoning practices in one locality may impose unfair demands on other aspects of jurisdiction.

8. *Ethical land-use allows individuals to pursue unique lifestyle choices; land-use policy must assist individuals in pursuing their own fundamental life plan* (Beatley, 1991 p.6) .

The role and status of an individual's life plan must be recognized in the broader planning framework. Locations used for purposes other than those for which they were originally intended (Beatley cites here churches used for meetings or theatres). If conflicts arise owing to such land use, the local government must seriously consider whether they restrict personal choice or lifestyle. An important characteristic of a free society is freedom of expression whether it is an opinion, an interest, a choice or an initiative. Beatley calls this principle 'the principle of protecting choices of lifestyle'.

---

<sup>45</sup> The ecological footprint is measured by humanity's demand on the earth's ecosystem. It is a standardized measure of demand for natural capital that may be contrasted with the planet's ecological capacity to regenerate (Ewing, Reed, Galli, Kitzes, & Wackernagel, 2010)

9. *Public authorities must keep the promises they make with regard to land-use; land-use ethics require acknowledgement and respect for explicit and tacit promises made* (Beatley, 1991 p.6)

It is a fundamental part of ethical land-use policy to keep promises. The local authorities are obliged to respect land-use agreements that are legitimate. Therefore regional and national government bodies must affirm the public promises which have or have not been made.

10. *Land-use policies and decisions must be formulated by means of a fair and equitable political process; land-use policy must provide an opportunity for all interested and parties affected to participate in the process* (Beatley, 1991 p.7)

Political equity must be acknowledged and maintained in ethical land use. Each individual in a community has the moral right to voice his opinion about what happens. This requires radical changes to be made to modify the existing level of power in fundamental relationships (financial, education, social status). This may require special programs to help the under-represented groups (animals/future residents/mentally-handicapped etc) to have their positions legitimized.

11. *Land development must be viewed as a privilege, permissible at the discretion of powers that be and subject to the conditions of such authority; land-ownership does not imply the right to make radical changes to environment integrity* (Beatley, 1991 p.7).

Land ownership does not give a person the inherent right to use land in whatever way he wishes. It must always be viewed as being subjected to ethical constraints and standards established by the 'collective' or communal interests.

A summary of the key concepts in the above-mentioned tentative ethical principles for land use are; a just society, access to primary goods, small (human) ecological footprint, inherent worth of non-human species, responsibility for causing environmental damage, obligations for future generations, broader jurisdictional perspective, respecting choice of lifestyle, keeping promises and considering the public domain (the commons)

### 3.3.3 *DRAWING A COMPARISON BETWEEN URBAN AGRICULTURAL SOLUTIONS AND URBAN PROBLEMS, USING ETHICAL LAND- USE PRINCIPLES*

As figure 1 depicts, the tentative ethical principles that Beatley (1991)<sup>46</sup> proposed to guide people in making land-use decisions are theoretically relevant to urban agriculture in many ways. However, there are two aspects of urban agriculture in 'ethical' land-use which are problematic. Initially, the principle concerning 'the broad jurisdictional perspective' indicating that the legal framework must support land-use at all levels needs to be clarified. Secondly, the principle on 'keeping promises' indicates that if a plan has already been made, the current zoning ordinance should be adhered to. Developing urban agriculture in an area that has been coded for different use is therefore debatable. Possibilities of what needs to be done to make urban agriculture ethical

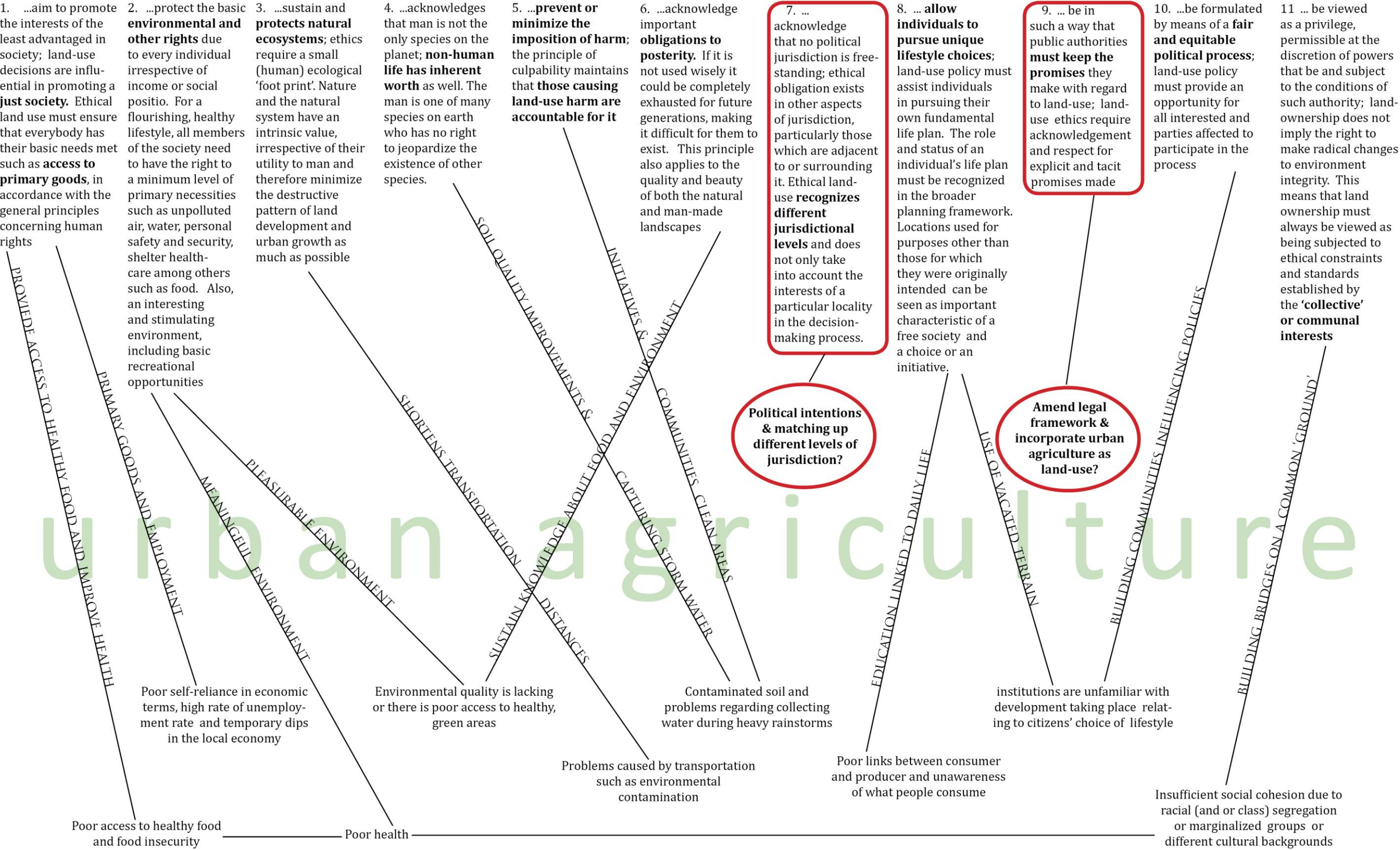
---

<sup>46</sup> According to Beatley (1991) the key concepts of ethical land use are: a just society, access to primary goods, a small human footprint, an inherent worth of plants and animals, responsibility for reversing environmental harm, obligations toward future generations, a broad jurisdictional perspective, respecting a person's chosen lifestyle, keeping promises and considering the public domain (the commons) - See appendix 2 for further information.

are; define political will to align it with the appropriate levels of jurisdiction and amend the legal framework to incorporate the perception of urban agriculture with land-use planning. This means that various agents must cooperate in creating policies and plans.



According to Beatley’s (1991) **ethical principles**, land-use decisions must;



**Urban problems** that urban agriculture is considered to react upon

Figure 2 Urban problems (table 1) linked to principle(s) on ethical land-use and alongside each link is a description of how urban agricultural development could address these problems. Two principles remain unsolved: nr. 7 regarding recognition of different levels of jurisdiction and principle nr. 9 about making/keeping promises. Further research is needed to determine how urban agriculture can assist here, if not, what needs to change. Possible aspects are; general political attitude and official recognition of agricultural land-use in cities and the planning framework.

### 3.3.4 SUMMARY

A summary of the key concepts of Beatley's (1991) tentative ethical principles to guide land use can be seen 'tools' for planners as dispute resolvers. These principles key concepts are; a just society, access to primary goods, small (human) ecological footprint, inherent worth of non-human species, responsibility for causing environmental harm, obligations for future generations, a broader jurisdictional perspective, respecting choice of lifestyle, keeping promises and considering the 'collective' (the commons)

By considering the relevance of urban agriculture as a response to urban problems, many theoretical links have been revealed, which suggest that urban agriculture could be considered an ethical means of land-use. Even so, two aspects seem problematic. Firstly 'the broad jurisdictional perspective' which indicates that the legal framework must support land-use at all levels, needs to be clarified and secondly the principle about 'keeping promises' indicates that if a plan has already been made, the current zoning ordinance should be adhered to. Developing urban agriculture in an area which has been destined for different projects is a possibility, if ethical procedures are applied by the powers that be.

Possibilities of what needs to be done to make urban agriculture ethical are: to define political intentions and match them up with different levels of jurisdiction and amend the legal framework to incorporate urban agriculture as land-use and planning around it.



## 4 DISCUSSIONS

### 4.1 THE MULTIFUNCTIONAL CHARACTER OF URBAN AGRICULTURE

It has been argued that cultivating food on unused terrain in cities in the western world corresponds to the idea of 'global ethics of sustainability (Næss, 2009). The multifunctional character of urban agriculture has opened up several ways on how to perceive its qualities in an urban environment. Its link to sustainable urban development is frequently mentioned and depicted in various ways<sup>47</sup> (see appendix 1-3). Cities create opportunities for agricultural development and then derive the benefit from it (Veenhuizen, 2006).

The known risks of urban agriculture relate to contamination hazards, difficulties in combining dissimilar disciplines and high costs. However, It has been recognized that urban agriculture can be merged successfully into sustainable urban development but it's general growth in cities is still slow because the focus on its meaningful and relevant nature rather than on doubts about it.

Even though the reasons behind urban agricultural development are, at times, due to problems (e.g. poverty or otherwise) it is important to recognize that agricultural practices within cities have strong links with the grassroots level and the inhabitants inherent desires for alternative way of living<sup>48</sup>.

### 4.2 URBAN PROBLEMS AND URBAN AGRICULTURE

*Which problems can urban agriculture resolve in urban areas, if it is developed within them?*

One way of looking at urban agricultural development is to compare it with recurring problems in urban areas. These problems relate to the unjust distribution of primary goods and unequal opportunities to enable residents to have a healthy and pleasurable lifestyle. Such problems can be an intricate part of the social, economical, ecological, spatial and 'health' aspects of cities. Based on literature listing problems in three large cities<sup>49</sup> the following problems that agricultural development is believed to have positive influence on are: poor health due to undesirable eating habits and the lack of access to healthy, nourishing food. Residents are discouraged by the economic situation (unemployment), groups are segregated and marginalized, the environment is depraved and there is a lack of pleasurable areas, soil and air are polluted and there is an inadequate retention of excessive water during heavy rainstorms.

Aspects of any problems can relate to ethics in one way or another. The descriptive word 'ethical' features prominently in literature on transformation procedures. But the planning process is a complicated procedure where many agents are involved with different viewpoints. When a new land-use paradigm is developing, diverse perspectives come to light.

---

<sup>47</sup> E.g. Bohn and Viljoen, 2012 cited by Wiskerke & Viljoen (ed) (2012); Cohen, Reynolds, & Sanghvi (2012) and Walker et al., (2011)

<sup>48</sup> This aspect is vital in planning whereas sustainability overlaps both in the planning profession (see 3.2.2) as well in municipal policy documents, referring to Agenda 21 (United Nations, 2006)

<sup>49</sup> Rotterdam (Rotterdam municipality, 2012); Detroit (Walker et al., 2011) and New York (Cohen et al., 2012)

### 4.3 URBAN AGRICULTURE AND LAND ETHICS

*Which moral theories have influenced decisions already taken, when changes have had to be made to land or unused terrain (land ethics) and how do agents from different philosophical fields hypothetically perceive urban agricultural development?*

Land-use planning involves setting objectives and agreeing on how they are to be met. Planning is a question of forward-thinking; organizing activities after considering alternative methods, and constraints before taking the right course of action. At the regional level where cities are located, objectives focusing on the community's benefit must match up with regional, national and global plans and policies. The planning profession has been developing a more collaborative approach. There must be cooperation between the authorities, agents at the 'grassroots' level and NGOs.

The philosophy of 'land ethics' applied in land-use planning indicates how land is utilized and whether changes can be made to it or not (Leopold, 1949). The main theories on land-use ethics are based on Utilitarianism, Kantism (Egalitarian<sup>50</sup>), Virtue ethics (Brown, 2001) and Libertarianism (Long, 1998).

Urban agriculture within cities has only been 'marginal land use' until recently but its development depends on whether policies have been drawn up for its approval (Sonnino, 2009). Obviously, the ensuing process will involve various agents who have different perspectives of the outcome.

Utilitarian ethics indicate that the right moves have the best results (consequences) (Brown, 2001). It is claimed that utilitarian ethics are driven by financial reward (Beatley, 1991; Beatley, 1994; Driver, 2009). An example of land-use established in the spirit of utilitarianism, is industrialized farming which involves mass-production and processed food in the rural areas at very low costs. Agricultural development could also be economically and socially viable for communities who have little access to healthy or specialized food. However, the authorities might prefer to use the land for housing, claiming that urban agriculture would not be as financially rewarding as real estate. Kantian ethics uphold actions governed by basic moral principles, therefore, Kantian supporters of urban agriculture who are in favor of a more just society, such as Egalitarians, would propose that regulations be amended to recognize urban agriculture legally. Virtue ethics deem an action to be correct if an agent who upholds virtues would do it if the circumstances were ethical. If unused terrain in cities could be exploited instead of remaining unproductive, a virtuous agent would most probably take action in support of land use linked with the value of his own products. A libertarian agent would act according to his own desires and become involved in urban agriculture in collective ways if his activities did not blend in with a libertarian market-orientated society. Therefore, in libertarian societies, networking with NGOs and agents at the grassroots level would most likely influence a 'bottom-up' approach in land-use planning.

On the whole, relatively new development such as urban agriculture can be perceived from different aspects depending on the land ethics in force, and the virtues that each agent upholds. These perspectives can be conflicting and have an influence on the decisions to be taken on the process and its features.

---

<sup>50</sup> see Rawls (1971)

#### 4.4 URBAN AGRICULTURE AS A MEANS OF ETHICAL LAND-USE

*How ethically sound is urban agriculture as land-use when its theoretical relevance in solving problems in urban areas is compared to Beatley's (1991 and 1994) ethical principles?*

Beatley's (1991) tentative ethical principles to guide land-use can be seen as 'tools' which are dispute resolvers for planners. A summary of the key concepts from Beatley's (1991 and 1994) set of tentative principles to guide ethical land-use are; a just society, access to primary goods, a small human (ecological) footprint, the inherent worth of plants and animals, responsibility for causing environmental harm, obligations in respect of future generations, broad jurisdictional perspectives, respecting a person's choice of lifestyle, keeping promises and considering the public domain (the commons).

Considering land-use and the relevance of urban agriculture as a response to urban problems come across as being linked theoretically in many ways. Urban agriculture seems to correlate on the whole with 'ethical land use'.

However judicial aspects in agreements that must be adhered to might prove to be problematic in this respect. First of all, the principle concerning 'the broad jurisdictional perspective' indicates that the legal framework which must support land-use at all levels needs to be clarified. Secondly, the principle about 'keeping promises' indicates that if a plan has already been made, the current zoning ordinance should be adhered to. Developing urban agriculture in an area that is destined for different projects is a possibility, if ethical procedures are applied by the powers that be.

The examples of Detroit and Rotterdam in the introductory chapter describing an ethical dilemma in urban agricultural development, are reflected in the above-mentioned problem.

#### 4.5 STRENGTHS AND WEAKNESSES OF THE STUDY

The strength of the study lies in observing the phenomenon of urban agriculture from an entirely new perspective. By becoming involved in agricultural development inside cities, the agents will certainly broaden their perspectives by taking note of previous developments and considering what the future holds.

Because there is very little literature on the topic of land ethics this report might well reflect a weak overview of it as a whole. However, 'digging deeper' into documented criticism on particular moral theories could well produce a much better image. Nevertheless, literature concerning urban agriculture linked to ethics is non-existent. Therefore an attempt has been made to produce hypotheses on how different agents perceive the activity depending on the moral philosophy influencing their opinion. This might seem unrealistic and too simplified because agents in general are most probably influenced by more than one ethical theory. Society, on the whole, has a variety of different approaches to evaluate what they consider to be right or wrong from an ethical standpoint.

## 5 CONCLUSIONS

***Can urban agriculture be considered as 'ethical' land-use; if not, what needs to change to make it 'ethical'?***

In this study an attempt has been made to gain a new perspective on how ethics influence the development of urban agriculture and draw conclusions which give an insight on the discourse of urban agriculture development in general.

Nowadays, cities must deal with various problems that have their origins in social, economical, ecological, spatial aspects of cities as well as health related issues. In various ways, authors have depicted urban agriculture relevance to respond to many of those problems.

Studies have indicated that urban agricultural activities do not necessary link to what is legally permitted which may indicate that institutions are unfamiliar with the development taking place. They should consider the meaningful qualities of the development in broad and narrow terms, not be afraid of changing their point of view when evaluating urban agricultural development and meet necessary requirements.

Hypothetically, urban agriculture is perceived from various aspects depending on the land ethics in force that influence the decisions to be taken in the process. It might be helpful for the agents involved to be aware of this if cities really want to change the general standards set over the course of time - *by empowering an awareness which sets the basis for new perceptions in peoples' minds*.

Based on the relevance of urban agriculture in addressing common problems in urban areas and the set of ethical principles to guide land-use policy, urban agriculture seems to correlate on the whole with 'ethical land use'. However the judicial aspects that must be adhered to might be problematic in this respect.

In order to classify urban agriculture as 'ethical' it would be necessary to: define political will to align it with the appropriate levels of jurisdiction and amend the legal framework at all levels to incorporate urban agriculture as land-use.

## 6 SUGGESTIONS FOR FURTHER STUDY

A case study on the process of urban agricultural development, would be helpful in order to reflect on the 'work in practice' which would give a deeper insight into its features and qualities. Such a study could result in suggestions clarifying what needs to be changed in order to recognize urban agricultural development as ethical land-use.

It is necessary to have a more detailed review of the criticism pertaining to particular moral theories. It would be interesting to link such a study on a qualitative research comparing opinions in general with such criticism.

## 7 ACKNOWLEDGEMENTS

First of all, I would like to thank my supervisor Arnold van der Valk for his support and encouragement in preparing my minor thesis on this topic. I'm also grateful to my co-examiner Mr. Gerrit Jan Carsjens for his understanding and supportive attitude concerning the unusual procedure of producing this minor thesis alongside my main thesis. I am also incredibly grateful to Enid Tomkinson who has been a great help in editing my English. I would also like to thank my family and friends from the bottom of my heart for being there and for all their support.

## 8 LIST OF TABLES AND FIGURES

Table 1 Summary of common urban problems based on literature about Detroit, Rotterdam and New York	14
Table 2 Comparison of important moral theories according to Rosalind Hursthouse (Brown, 2001)	21
Figure 1 Main topics of the study are interlinked with research questions (created by author)	10
Figure 2 Urban problems linked to principle(s) on ethical land-use (created by author)	29

## 9 REFERENCES

- Allmendinger, P. (2009). *Planning Theory* (Second edi., p. 260). New York: Palgrave Macmillan.
- Association of European Schools of Planning. (2012). What is planning. *AESOP*. Retrieved July 15, 2012, from [http://www.aesop-planning.eu/en\\_GB/what-is-planning](http://www.aesop-planning.eu/en_GB/what-is-planning)
- Beatley, T. (1991). Viewpoint, A set of ethical principles to guide land use policy. *Land Use Policy*, 1(January), 3–8.
- Beatley, T. (1994). *Ethical Land Use*. Baltimore and London: The Johns Hopkins University Press.
- Broekhof, S. M., & Valk, A. J. J. van der. (2012). Planning and the quest for sustainable food systems: explorations of unknown territory in planning research. In A. Viljoen & J. S. C. Wiskerke (Eds.), *Sustainable food planning: evolving theory and practice* (pp. 67–77). The Netherlands: Wageningen Academic Publisher.
- Brown, C. (2001). Ethical Theories Compared, Rosalind Hursthouse's Comparison. Retrieved July 11, 2012, from [http://www.trinity.edu/cbrown/intro/ethical\\_theories.html](http://www.trinity.edu/cbrown/intro/ethical_theories.html)
- Cohen, N., Reynolds, K., & Sanghvi, R. (2012). *Five Borough Farm, Seeding the Future of Urban Agriculture in New York City*. (J. Chou, Ed.). USA: Print Craft, Inc. Retrieved from [http://www.fiveboroughfarm.org/pdf/5BF\\_publication\\_low.pdf](http://www.fiveboroughfarm.org/pdf/5BF_publication_low.pdf)
- Cullingworth, B., & Caves, R. W. (2003). *Planning in the USA. Policies, issues and processes* (p. 354). London and New York: Routhledge.
- Dotson, A. B., Gosschalk, D., & Kaufman, J. (1989). *The planners as dispute resolver: Concepts and teaching materials*. Wasington DC: National Institute for Dispute Resolution.
- Driver, J. (2009). The History of Utilitarianism. *Stanford Encyclopedia of Phylosophy*. Retrieved June 18, 2012, from <http://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=utilitarianism-history>
- Engel, J. R., & Engel, J. G. (Eds.). (1990). *Ethics of environment and development: global challenge, international response* (p. 264). London: Belhaven Press.
- Ewing, B., Reed, A., Galli, A., Kitzes, J., & Wackernagel, M. (2010). *calculation methodology for the national footprint accounts, 2010 edition*. Retrieved from [http://www.footprintnetwork.org/images/uploads/National\\_Footprint\\_Accounts\\_Method\\_Paper\\_2010.pdf](http://www.footprintnetwork.org/images/uploads/National_Footprint_Accounts_Method_Paper_2010.pdf)

- Faludi, A. K. (1986). *Critical Rationalism and Planning Methodology*. London: Pion.
- Farzaneh, A. (2009). The Main Objectives of the Age of Enlightenment. *Philospohy@suite101*. Retrieved July 9, 2012, from <http://suite101.com/article/the-main-objectives-of-the-age-of-enlightenment-a105813>
- Feenstra, G. (2002). Creating space for sustainable food systems : Lessons from the field. *Agriculture and Human Values*, 19, 99–106.
- Fieser, J. (2009). Ethics. *Internet Encyclopedia of Philosophy - IEP - A Peer-Reviewed Academic Resource*. Retrieved October 25, 2012, from <http://www.iep.utm.edu/ethics/#H3>
- Frère, B., & Reinecke, J. (2011). A libertarian Socialist Response to the “Big Society”: The Solidarity Economy. In R. Hull, J. Gibbon, O. Branzei, & H. Haugh (Eds.), *Dialogues in Critical Management Studies* (Vol. 1, pp. 117–137). Emerald Group Publishing Limited. Retrieved from <http://www.emeraldinsight.com.ezproxy.library.wur.nl/books.htm?chapterid=17004626>
- Giorda, E. (2012). Farming Motown: Competing narratives for urban development and urban agriculture in Detroit. In A. Viljoen & J. S. C. Wiskerke (Eds.), *Sustainable food planning: evolving theory and prctice* (pp. 271–281). The Netherlands: Wageningen Academic Publisher.
- Hofstede, G. (1991). *Cultures and organizations, intercultural cooperation and its importance for survival*. UK: Harper Collins Pblishers.
- Holland, M., & Salle, J. de la. (2010). *Agriculture Urbanism Handbook for Building Sustainable Food & Agriculture Systems in 21st Century Cities*. (M. Holland & J. de la Salle, Eds.) (p. 250). Winnipeg Manitoba Canada: Green Frigate Bokks.
- Howe, E. (1992). Professional Roles and the Public interest in Planning. *Journal of Planning Literature*, 6, 230–248. Retrieved from <http://jpl.sagepub.com/content/6/3/230.short>
- Jamieson, D. (2008). *Ethics and the environment*. UK: Cambridge University Press.
- Leopold, A. (1949). *A sand county Almanac*. “A Sand County Almanac”. New York: Oxford University Press.
- Long, R. T. (1998). Towards a Libertarian Theory of Class. *Social Philospohy and Policy*, 15(2), 303–349. Retrieved from <http://www.praxeology.net/libclass-theory-part-1.pdf>
- MacIntyre, A. (1981). *After Virtue*.
- Minestrie van Infrastructuur en Milieu. (2011). *Compact City Extended, Outlines for future policy, research and design*. *Design and Politics nr.4*. (H. Ovink & E. Wierenga, Eds.). Rotterdam: Lecturis,Eindhoven.
- Mougeot, L. J. M. (2000). Urban Agriculture:Defination, Presence, Potentials and Risks, and Policy Challenges. *Cities Feeding People Series, Report 31*(November).
- Nash, R. F. (1989). *The rights of nature*. Wisconsin: University of Wisconsin Press.
- Næss, P. (2009). Urban Planning and Sustainable Development, (July 2012), 37–41. doi:10.1080/0965431012004987

- Oxford Dictionaries. (2012). O. *Oxford University Press*. Retrieved October 30, 2012, from <http://oxforddictionaries.com>
- Pothukuchi, K. (2009). Community and Regional Food Planning: Building Institutional Support in the United States. *International Planning Studies*, 14(4), 349–367. doi:10.1080/13563471003642902
- Rawls, J. (1971). *A theory of justice*. New York: Oxford University Press.
- Rotterdam municipality. (2012). *Food & the city - Stimuleren van stadslandbouw in en om Rotterdam [Encouraging urban agriculture in and around Rotterdam]*. Rotterdam.
- Schans, J. W. van der, & Wiskerke, J. S. C. (2012). Urban agriculture in developed economies. In A. Viljoen & J. S. C. Wiskerke (Eds.), *Sustainable food planning: evolving theory and practice* (pp. 245–258). The Netherlands: Wageningen Academic Publisher.
- Shaw, B. (2005). *Environmental Virtue Ethics*. (R. Sandler & P. Cafaro, Eds.) (p. 237). USA: Rowman & Littlefield Publishers, inc.
- Sigurdardottir, H. (2013). *Urban agricultural development on unused terrain - Highlights of the process. Case study. Earthworks Urban Farm Detroit and "Uit je eigen stad" Rotterdam*. Wageningen University.
- Sonnino, R. (2009). Feeding the City: Towards a New Research and Planning Agenda. *International Planning Studies*, 14(4), 425–435. doi:10.1080/13563471003642795
- Taylor, N. (2009). Consequentialism and ethics in planning research. In F. Lo Piccolo & H. Thomas (Eds.), *Ethics and Planning Research*. England: Ashgate Publishing Limited.
- The American Planning Association. (2012). What Is Planning? Retrieved July 15, 2012, from <http://www.planning.org/aboutplanning/whatisplanning.htm>
- The Canadian Institute of planning. (2012). Planning is... *The Canadian Institute of planning*. Retrieved July 15, 2012, from <http://www.cip-icu.ca/web/la/en/pa/3FC2AFA9F72245C4B8D2E709990D58C3/template.asp>
- Thompson, P. (2010). Land. In G. L. Comstock (Ed.), *Life Science Ethics*. Raleigh: Springer Publishing.
- United Nations. (2006). Johannesburg Summit 2002. Retrieved July 4, 2012, from [http://www.un.org/jsummit/html/basic\\_info/basicinfo.html](http://www.un.org/jsummit/html/basic_info/basicinfo.html)
- Vallentyne, P. (2011). Libertarianism. *Stanford Encyclopedia of Philosophy, Wikipedia The free Encyclopedia*. Retrieved July 4, 2012, from [http://en.wikipedia.org/wiki/Libertarianism#cite\\_note-0](http://en.wikipedia.org/wiki/Libertarianism#cite_note-0)
- Veenhuizen, R. van. (2006). Introduction - Cities Farming for the Future. In R. van Veenhuizen (Ed.), *Cities Farming for the Future - Urban Agriculture for Green and Productive Cities* (pp. 1–17). RUAF Foundation, IDRC and IIRR. Retrieved from <http://www.ruaf.org/node/961>
- Walker, C., Carmody, D., Crouch, P., Hicks, C., Jones, P., Underwood, K., & Weinstein, P. (2011). *The Detroit Food System Report 2009 -2010. System*. Detroit. Retrieved from



[http://www.clas.wayne.edu/multimedia/usercontent/File/SEED/2DetFoodReport\\_2009-10lores.pdf](http://www.clas.wayne.edu/multimedia/usercontent/File/SEED/2DetFoodReport_2009-10lores.pdf)

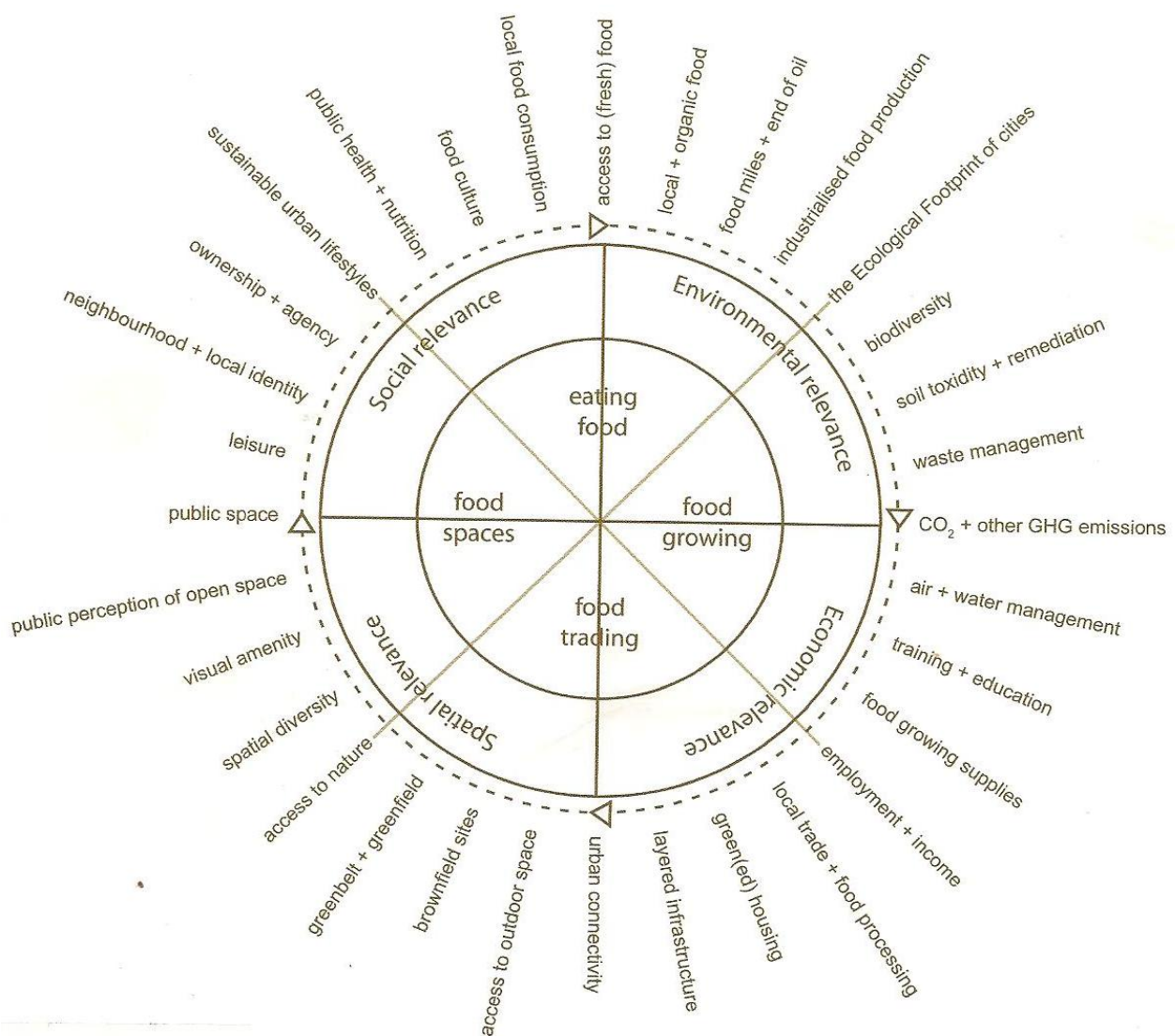
Waller, B. N. (2005). *Consider Ethics: Theory, Readings, and Contemporary Issues*. New York: Pearson Longman.

Wiskerke, J. S. C., & Viljoen, A. (2012). Sustainable urban food provisioning: Challenges for scientists, policymakers, planners and designers. In J. S. C. Wiskereke & A. Viljoen (Eds.), *Sustainable food planning: evolving theory and prctice* (pp. 19–35). The Netherlands: Wageningen Academic Publisher.

Woodcock, G. (n.d.). *Anarchism: a history of libertarian ideas and movements*. Petersorough Ontario: Broadview press. Retrieved from [http://en.wikipedia.org/wiki/Libertarianism#cite\\_note-1](http://en.wikipedia.org/wiki/Libertarianism#cite_note-1)

## APPENDIX 1

The relevance of urban agriculture as sustainable development (Cover illustration of the book on Sustainable Food Planning, Evolving Theory and Practice (Viljoen & Wiskerke (ed), 2012 based on Bohn & Viljoen, 2012).



## APPENDIX 2

Cohen, Reynolds, & Sanghvi (2012 p 90) show urban agricultural relevance related to health, social, economic and ecological aspects.

### METRICS FRAMEWORK

Many studies have shown links between the urban agriculture activities across the top row (such as cooking and nutrition classes, rainwater harvesting, farmers markets) and the health, social, economic, and ecological benefits on the left hand column (such as health eating, stormwater management, and social connections).

● Evidence-based links

#### Benefits

##### Health

Access to healthy food  
Food-health literacy  
Healthy eating  
Physical activity

##### Social

Empowerment & mobilization  
Youth development & education  
Food security  
Safe spaces  
Socially integrated aging

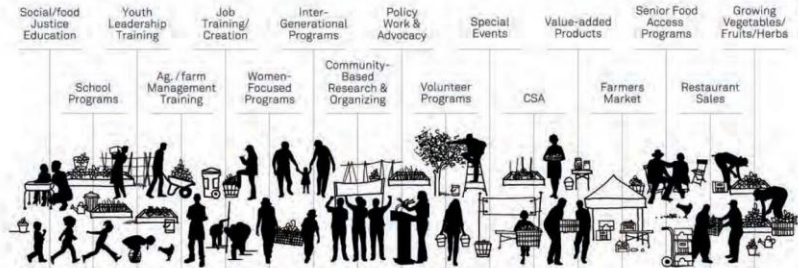
##### Economic

Local economic stimulation  
Job growth  
Job readiness  
Food affordability

##### Ecological

Awareness of food systems ecology  
Stewardship  
Conservation  
Storm water management  
Soil improvement  
Biodiversity & habitat improvement

#### Activities



## APPENDIX 3

In symbolic way, Walker et al., (2011 p 22) indicate that urban agriculture is an important element of a sustainable food system and is linked to achieving noble community goals [The red circle indicated by author].

