



Agricultural Landscape Conservation via Co-Creation in North of Iran

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Abstract

There are said to be numerous factors engaging in agricultural landscapes destruction, comprising of residential areas development. To tackle the problem, in this paper, the concept of citizen's co-creation in the form of socio-cultural systems is elaborated in three phases to maintain farmlands as part of cultural and natural heritage in Gilan province in Iran. The main aim of the study is to reach both agricultural landscape conservation and food system sustainability, which is highlighted through the lenses of economy, society, and culture.

Keywords: Agricultural Landscape; Cultural Heritage; Food System

Introduction

Climate change is claimed to have an increasing effect on environmental deterioration and cause population displacement [1]. Climate change can impact on food security and health, economic situation, freshwater resources, and land degradation, all of which lead to people

- a) mitigating the effects,
- b) accepting a lower quality of life, or
- c) leaving those affected areas [2].

By considering the third choice, receiving areas to which people immigrate may not be prepared in terms of required infrastructures to host such population. In addition, nowadays, urbanites escape various biological pollution in mega cities and try to spend their leisure time in virgin lands and in their own second homes [3]. With these two permanent and temporary movements, deficiency in residential areas in destinations would cause changes in land use

patterns for more people to be occupied. In this way, the adverse effect of this housing development on landscapes can be witnessed in the form of unplanned encroachment on farmlands with the effect of domestic food production and national food security being threatened [4]. This transformation is the main issue which has been seen in north of Iran in the recent decade.

Draught and desertification specifically in central part and south-east of Iran together with severe pollution in cities such as Tehran play an indispensable role in moving people to north of the country with mild weather and pristine nature. In this regard, being covered with vast farmlands, Gilan Province is being pressurized within its socio-technical regimes particularly in terms of food system and landscape which would gradually affect its urban fabric.

Gilan

Gilan Province lies along the Caspian Sea and the main city of the province Rasht is the largest producer of rice in the country.

Having connected Iran and Europe from bygone eras, Rasht was known as “Gate of Europe”. It is also famed for its paddies and other agricultural lands.

Based on what was mentioned, people’s tendency to reside in this area has significantly increased so that land scarcity has recently become a pressing problem while land price has shot. This high demand for land and farmers’ low income out of particularly rice fields have intrigued landowners to sell their lands to real estate firms. In doing so, some major issues occur including

- I. Land use changes ruin agricultural-based landscape characteristics of Gilan which have formed over years.
- II. Conversion of agricultural lands into residential and commercial uses decrease crops and livestock farming in the long run.
- III. Being surrounded by building blocks, remaining land parcels are becoming smaller and separated and they will gradually be demolished.
- IV. Lack of buffers between residential areas and agricultural lands leads to food products polluted on account of waste coming out of houses.

What is worth mentioning is the lack of citizen co-creation in maintaining lands in as much as individuals are taking full advantage of this situation-selling their lands with high prices to real estate agents- rather than taking social and environmental changes into account. The other deficit pertains to considering co-creation as a bridge grafting agricultural activities onto that of businesses whose output is grounded on farm crops. This means that the locals’ cooperation is needed on the way of cutting out middlemen, who mostly have profiteering purposes for their own good, to directly connect local producers with end users.

Stakeholder Analysis

Building boom specifically in peri-urban areas is fueled by the involvement of real estate firms from outside the Caspian Sea region dominated by pro-business and market-oriented approaches, backed by the local authority, without any clear policy [5]. Forests, Range and Watershed Management Organization and the Department of Environment which are involved in monitoring the unplanned expansion; are unable to intervene and they are significantly impacted by the transformation.

A tri-lateral cooperation of Gilan Governor’s Office as the Head, Ministry of Agriculture (Gilan Agricultural Jihad Organization), and Land Affairs Organization of Iran could be a potential solution. The former take measures in “supervising the preservation and protection of natural resources and the environment and the optimal use of the resources and potential facilities of the province” [6]. Ministry of Agriculture executes plans preventing the change and conversion of agricultural and forest lands. Moreover, via proposing programs for regulating the market of agricultural

products with guaranteed prices it supports farmers [7]. The latter a governmental institution affiliated to the Ministry of Agriculture prepares and formulates “necessary provisions for the consolidation of legal and legitimate ownership, conservation of land consolidation and agricultural land use conservation with respect to the rights of people and the government” [8]. Such an integration among the aforementioned organizations policies in line with that of an official board called Commission of Act Five (CAF) which makes decision on land use changes would be influential on the way of preserving farmlands.

Problem statement and Objectives

Problems can be investigated from two different scales including governmental level focusing on politics, rules, and regulations regarding land use changes to occupy immigrants and travelers, and local scale. In this regard, the major setback is that farmland owners’ return from agriculture is low due to middlemen intervention in

- a) providing raw materials and other inputs with overwhelming expenses and
- b) buying crops at low price and selling it to end user’s multiple times more than the purchase price [9].

Such low income and inflation which was mentioned in Problem Analysis, make farmers sell their lands to embark on other businesses (Figure 1).

As it can be seen in Fig.1 there is a vertical relationship among middlemen, producers, and users, which have led to the first one become stronger while the last two participants experience growing dissatisfaction. To counteract the problem, a three-phase project whose aim is to provide equal social and financial opportunities for farmers, manufacturers, and local people is proposed. The objectives of the project would be as following:

- i. To elaborate on different types of co-creation (politics and socio-technical systems), feasible to be conducted regarding land use preservation and food system in different phases of the project life cycle,
- ii. To develop frameworks and hold workshops by which landowners, farmers, and local people would become educated in terms of agricultural products marketing, and
- iii. To create local job opportunities through co-creation activities.

Methods and Activities

According to a public sector official, a top-down decision-making structure is being applied in the region and engaging stakeholders’ views and people’s participation is just attractive in the literature (5). Owing to the current structure, the proposed project will take place in three steps to gradually engage people. In the first year, citizens will be invited by Gilan Governor’s

Office, Ministry of Agriculture, Land Affairs Organization of Iran, Forests, Range and Watershed Management Organization, and the Department of Environment so as to discuss budget allotted to the agriculture sector and how it will be spent on providing inputs as well as cultural and market-based education with the aim of removing middlemen. Workshops will additionally be held to develop innovative ideas of agricultural marketing on a micro and macro scale. In the second year, those who have actively been

participating in workshops will be invited to form Co-Operative Citizen Groups to act as a juncture between farmers and end users under the supervision of Ministry of Agriculture. After two years, the monitoring phase will be initiated by focus groups to scrutinize a) how much the quality of people’s lives has improved, b) how many farmers have sold their lands, and c) how satisfied are end users (Figure 2-4).

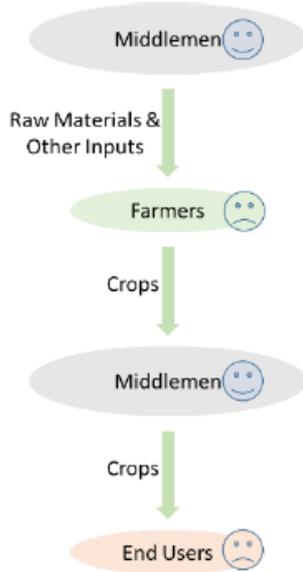


Figure 1: Middlemen intervention



Figure 2: 1ST Step

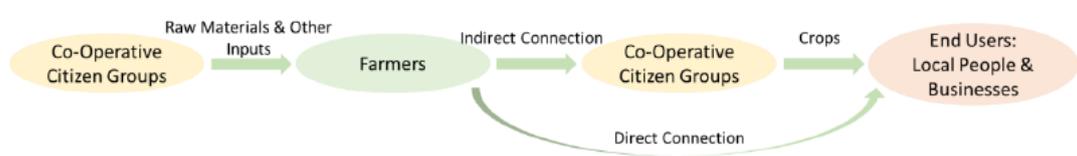


Figure 3: 2nd Step



Figure 4: 3rd Step

Here, landscape architects could effectively take part in the first and third stages mentioned above. In the first step, LVIA (Landscape Visual Impact Assessment) can be conducted to probe into the effects of land use changes on landscape of paddies, which are defined as cultural and natural heritage landscapes, for the locals' acquaintance with their invaluable properties. Landscape researchers could become members of the focus group in the last step in order to explore the effectiveness of the four-year activities and concentrate on upcoming challenges and come up with new concepts in buying and selling behavior.

Conclusion

In this paper, the challenge of food system sustainability and landscape conservation is addressed via a project based on co-creation in the form of socio-cultural systems by stakeholder invitation. The merits of such a strategy can be illustrated in the shape of a triangle encompassing economy, society, and culture.

Economy

- a) Positively affecting food production system, reducing the need for agricultural products import, improving national economy in the long run
- b) Farmers' and the locals' making profit after cutting out middlemen
- c) Creating local jobs and developing the standard of living

Society

People's awareness of their influential role in the urban fabric (demanding their rights in decision-making processes namely land use change permits)

Culture

People's awareness of cultural and natural value of paddies and farmlands.

Acknowledgement

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Conflict of interest

No conflict of interest.

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