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## URBANIZATION AND URBAN DESIGN IN SUSTAINABLE DEVELOPMENT, CASE STUDY OF THE TOLICH RIVER REGIONS IN HANOI

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### HIGHLIGHTS

- Identifying the characteristic landscape of a village or hamlet along the ToLich River.
- A trinodal concept consisting of Society (Culture-Heritage-History), Economy (Trade-Craft-Agriculture) and Ecology (Environment-Habitation) shaping the identity of the regional landscape along the ToLich River.
- A model for the conservation and sustainable development of an ecological landscape and the orientation of urban design.

### ABSTRACT

In Vietnam, as elsewhere in the world, villages, towns and small cities of noticeable interest (in relation to culture, heritage, history or ecology) on the outskirts of larger cities are suffering serious damage from large-scale rapid urbanization. Development principles that merge historical and cultural heritage with dynamic trade and economy, while preserving an urban identity, with affirmative internal resources and ecological initiatives, guarantee a stable environment towards sustainable urban development.

This research refers to urban design and renovation and landscape design orientated towards sustainable development of small towns along the To Lich River, Hanoi, Vietnam. Focusing on residential concentrations rich in culture, history and traditional trades and crafts, this paper determines and develops the tools to identify characteristic landscapes of urban residential clusters situated along rivers.

The proposal is of an open dynamic sustainable urban trinodal concept that maintains and promotes existing values and strengths for the river landscape. The model consists of Society (Culture-Heritage-History), Economy (Trade-Craft-Agriculture) and Ecology (Environment-Habitation). These shape the identity of the regional landscape (those on each side of the ToLich River) and are also applicable for sustainable developments a long other rivers or territories.

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## 1. BACKGROUND

### 1.1 *Urban Dynamics*

The urban space always needs to be renewed continually to suit to the era. This inevitable process has as central role to focus on developing more sociocultural-economic-politic axes. It seems that the "hot" renewed urban construction projects have a tendency to go against the sustainable urban environment. The Urban Dynamics project looks at land use change in urban environments in order to provide a historical perspective of land use change and an assessment of the spatial patterns, correlation, trends, and impacts of that change. This project develops and refines methods for land use reconstruction, geographic analysis, modeling, prediction, and impacts assessment (USGS EROS Center, 2105).

In order to prevent an urban crisis, we need to find the most common views for the society. Firstly, we should resolve the problems of conflict affecting sustainability between the parties, as between dynamic, conservative and stagnant forces. Secondly, we can support more urban functions which are essential for conciliation or other anticipated solutions for sustainable urbanization as preventative goals. Projects include urban embellishment, extra functional projects design and new urban planning which must be considered in all aspects mentioned above. Whilst sustainable urbanization and sustainable urban development apply to a dynamic process towards the suitable conditions, in that in this process pays attention to environmental, economic, social and governance sustainability, each as an equal concern (Shen *et al.*, 2011).

### 1.2 *Sustainable Development*

Sustainability, first defined over 45 years ago, is widely accepted as an important conceptual framework within which to position urban policy and development, providing the context for a considerable literature on planning, architecture and urban design (Williams *et al.*, 2000). There are about 200 definitions for sustainable development, but the definition of sustainable development is still not clear (Parkin, 2000, as cited in Keivani, 2010). The review of definitions of sustainable development often presents the issues and problems that sustainable development should respond to, but the endpoints seem so broad that there is not a specific point of resolution. (Saha & Paterson, 2008).

On the other hand, a dynamic urban structure is required with diverse adaptability fused with a positive development from the internal resources of urban space and autonomy. However this dynamic, while ensuring sustainable development and efficient urbanization, seems to be addressing a non-root problem, which needs a comprehensively correct answer. If it would have the "key" butroots, which are not obvious, to open all the doors, then the concept of "sustainable" could be applied smoothly in all places.

### 1.3 *The concepts and aspects of Sustainable Urbanization or Sustainable Development*

In 1972 during the United Nations Conference on the Human Environment, the concept of sustainable development was brought out in Stockholm (Mostafa *et al.*, 2011). That sustainable development as a concept was developed alongside an acute awareness that the ecological destruction and the 1980s 'retreat from social concerns' – manifested as poverty, deprivation and urban dereliction that blight many parts of the world – are untenable (Carley and Kirk, 1998; WCED, 1987). The underlying tension between the associated aspects of sustainability – environmental, social, economic (Barton, 2000, Du Plessis, 2000) – as well as the wide interpretation of the concept have led to a variety of urban forms

being described as 'sustainable' (Jenks & Dempsey, 2005; Giddings et al., 2002). In 1992, the Earth Summit, in Rio De Janeiro, approved Agenda 21(LA21) in order to promote Sustainable Human Settlement Development; and in 1996 in Habitat II tried to present a statement to Localize LA21 in urban areas (Whitehead et al., 2003). In response to urban challenges, the concept of sustainable development was stated. Due to some major trends such as globalization, decentralization, and rapid population growth, cities faced some challenges (Mostafa et al., 2011).

Despite the anthropocentric focus of the definition of sustainability (Hopwood et al., 2005), surprisingly little attention has been given to the definition of social sustainability in the built environment disciplines. The problems arising out of urbanization, such as, social inequalities, slums, density and climate change...had the impact in economic, social and environmental conditions. With regards to economic, social, environmental and governance aspects, sustainable development was articulated in order to respond to urban conflicts (Malkina-Pykh et al., 2002). Related concepts are more readily discussed in this paper, and examined within a physical context of the Sustainable Urbanization of Vietnam cities, which has a focus on the ToLich River regions in Hanoi. (Fig. 1)

#### 1.4 The Study Area

This paper examines the underlying principles of urban sustainability and their interpretation and provides a concrete definition of urban design sustainability with particular reference to the region of the Hanoi river-lake urban environment in the context of rapid urbanization today.

This research was carried out on concrete examples of small and medium urban forms from the urban design and landscape design specific contextual study: Sustainable Urban Form Consortium (Dempsey et al., 2009), which examined the relationship between urban form and sustainability in Ha Noi city, Viet Nam, at ToLich River regions, over thousands of years of cultural history. Its starting point was the testing of the claim that more compact, high-density and mixed-use urban forms are environmentally sound, efficient for transport, socially beneficial and economically viable without forgetting the design and management tools for Urban dynamics. From this standpoint, sustainable development and associated aspects were examined in specific relation to the built environment. While an overall definition of sustainability was sought for the purposes of the wider research project, this paper focuses on urban design and the urban landscape environment, including case studies of small and medium residential fabrics with cultural historical traditions, specific examples of which, are the villages along ToLich River in Ha Noi. This paper develops deeply the theoretical model of urban design, sustainable landscape, identity and identification, conservation and renovation-urban upgrading. It also develops how to use the potential of internal resources available for urban development in the direction of economic social benefits, expansive green space, ecological and cultural tangible-intangible values, and the traditional livelihoods of that municipality.

The broad discussions of sustainability herein pinpoint not only a definition of urban design and urban landscape sustainability but specifically highlight those aspects of social urban sustainability that are claimed to be influenced by the built environment at this scale. The research section provides such a model suggestive of, an examination of urban sustainability and related concepts within the urban context while considering actual tangible field research.

## 2. METHODOLOGY

### 2.1 Components of a Landscape Identity

In order to identify a landscape, this research was carried out according to two tracks whose quality

and qualitative assessment of the landscape depends on:

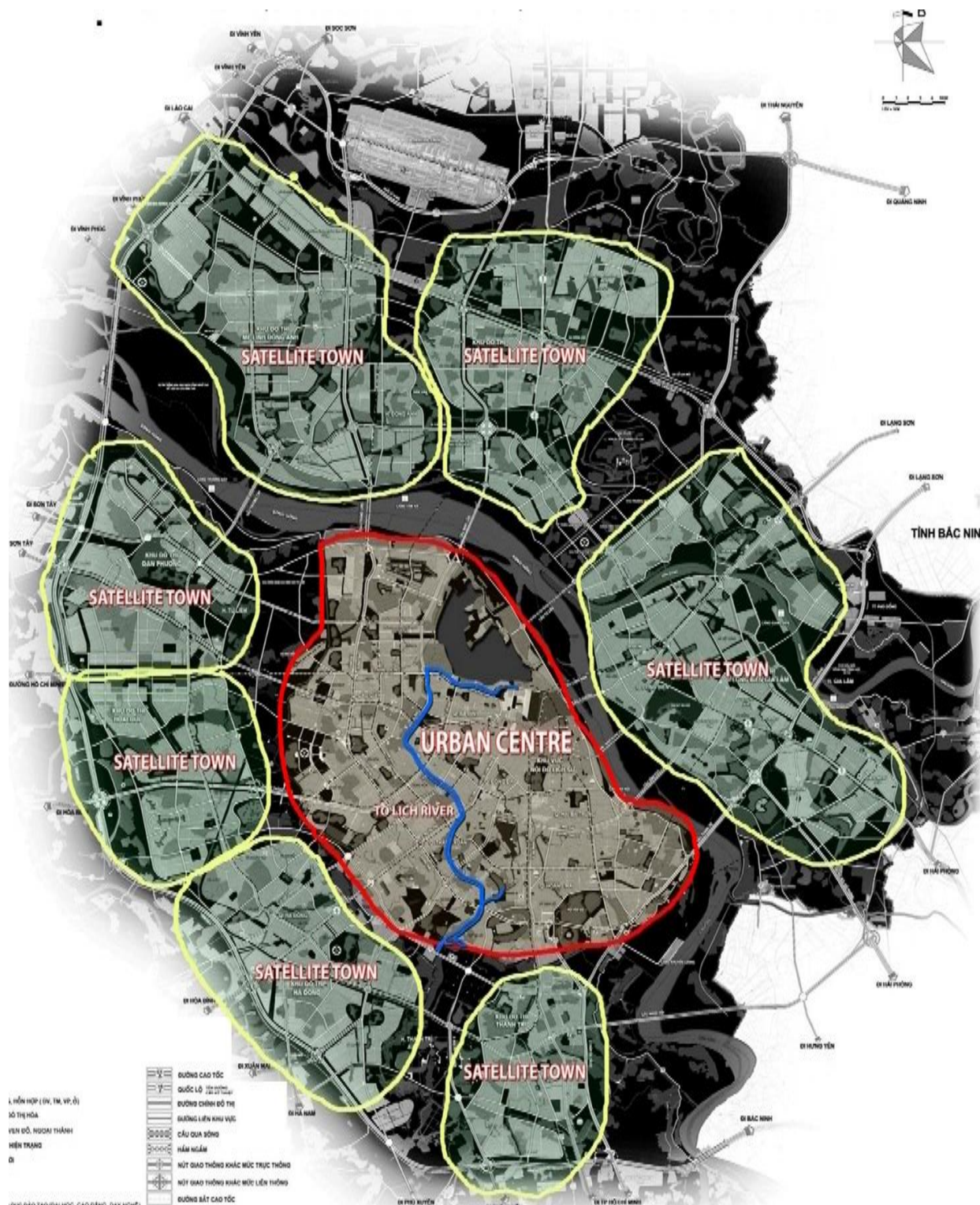


Figure 1: Relationship between ToLich River with Ha Noi. Source: *The Ha Noi capital construction master plan 2030 and vision to 2050.*

First track: it is individuals - observers of a landscape - an invisible internal element that varies in terms of the perception of each one. This does not depend too much on the landscape that remains outside of the observers. They will have observations based on their skills, means and personal situations. They decide the landscape perception. However, we could synthesize the perception modes and individual emotion in favor of a landscape thanks to the "factors of selection" shown by Paulet.J-P (2002) in "Filters between the observer and the landscape in common". (Fig. 2)

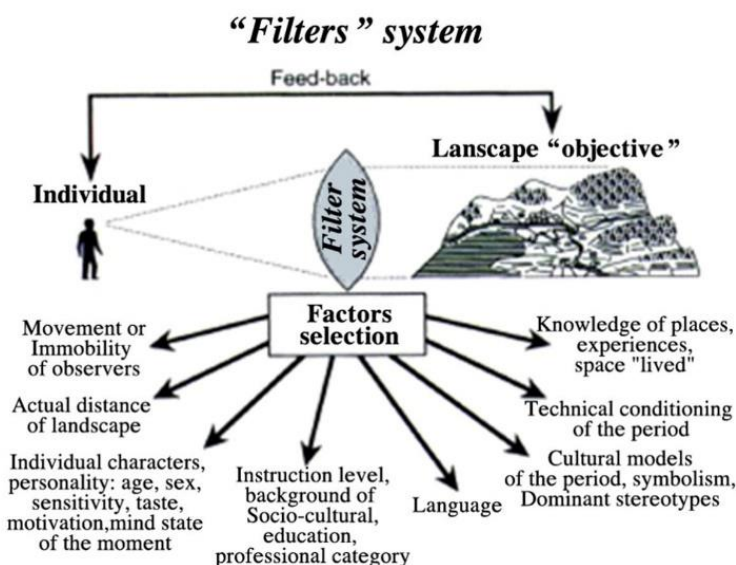


Figure 2: The landscape filter system of PAULET.

Second track: we can talk about landscape-object. This object represents a real landscape, an image of the place that the individual sees and observes around him. It does not depend on individuals, but on their skills and knowledge. This factor, being a personal one, according to the landscape views of Lynch. K (1999); Brunet. R et al., (2001); Collot. M (1997, 1995), is one mode of representation expressing the landscape perception and emotion in the external environment whose values depend on objective and subjective reality of each individual. It will be necessary to take into account the value of the villages it passes through, overall, it will be necessary to take into account all actors, observers, scientists and

geographers who have a direct impact on the landscape. The European Landscape Convention (Florence, 2000) thus defined the landscape as "The landscape ... interrelations". It spoke of "object-landscape". It is therefore necessary to find a way to define this perception of the populations and select the factors that explain the interrelations.

Thus, we can characterize the landscape values of the bridged rivers and crossed villages by emphasizing the positive or negative impact of urban actors on the current state.

The objective is able to propose a solution as one specific approach to be applied to the planning, design, urban management and landscape conservation projects of urban riverside villages, or the landscape projects of the urbanized village with greenery and water surface aiming at sustainable development in an ecological environment. Some components of the river landscape are worth noting.

## 2.2 Landscape of the Course, the important factors driving the characteristic landscape

The ToLich River passes through different villages, each having a distinct landscape characteristic. This line creates a visual and cultural identity for the concerned space within the current city.

The questioning and definition of the landscape remain complex, it is a crossroads where elements coming from nature and culture, geography and history, interior, individual and community, real and symbolic meet. (Collot, 1997).

Study of the contents of the urban landscape of the same city image, which are preferable to physical forms, can be conveniently classified and highlighted into five types of elements: paths, edges, districts, nodes, and landmarks... on study areas (Lynch, 1960).

### 3. RESULTS

#### 3.1 Three Pillars of sustainable landscape development

After the study and the urban sociology survey with questionnaires and direct interviews on this site, in order to identify the characteristic landscape of constructions on the river banks, we propose to determine from the present state, the axes of valuation and development, which constitute one priority of the research. (Table 1).

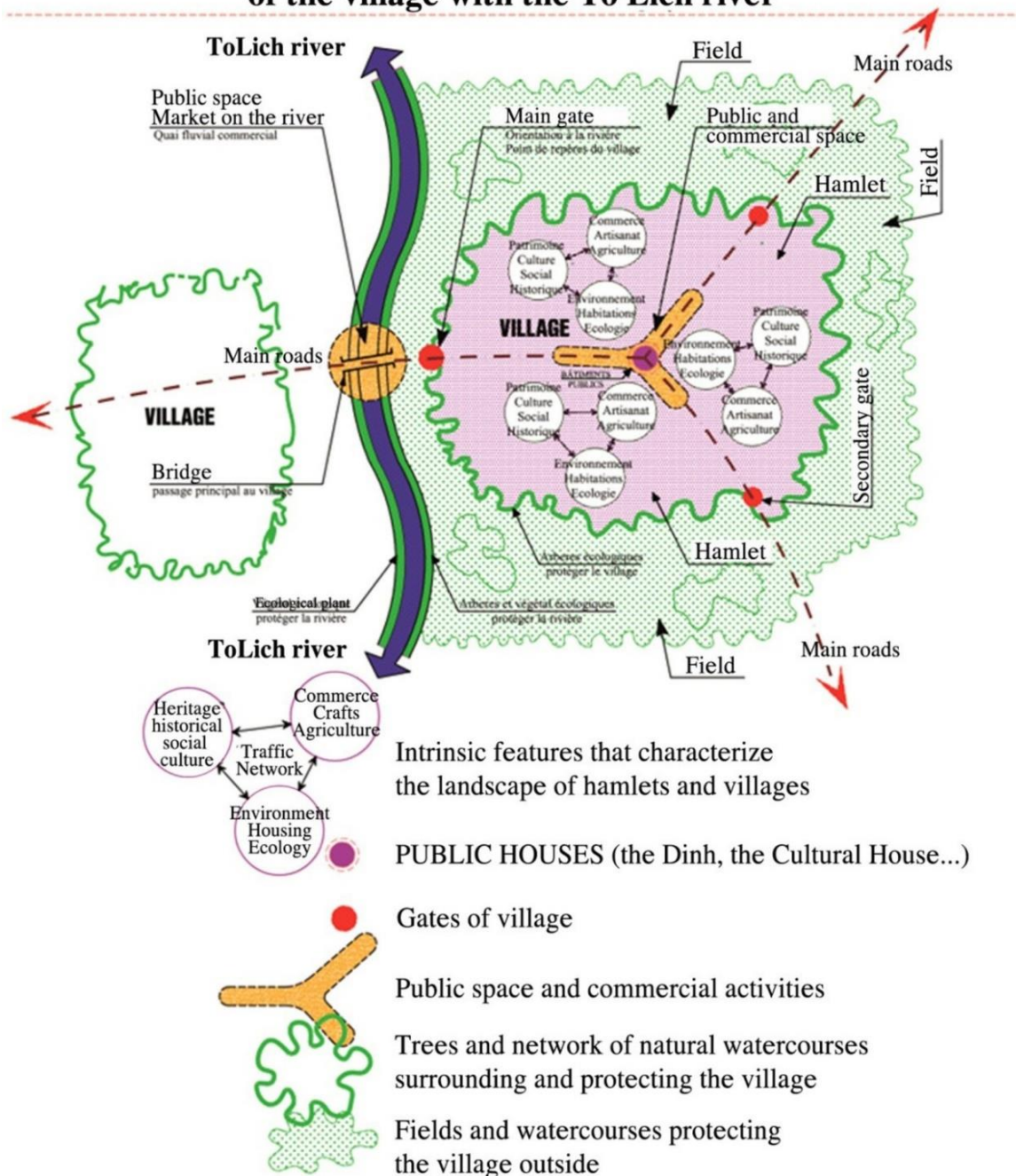
Table 1: Three pillars: society, economy and environment

<b>Society: Culture – History - Heritage</b>	<b>Local Economy: Traditional Trades and Crafts - Agriculture</b>	<b>Ecology: Sustainable Life – Habitat - Atmosphere</b>
<i>Activities (cultural and historical):</i> festivals, common activities, trade, exchanges and communications	<i>Traditional crafts and trades:</i> govern and represent the cultural and professional symbols of the village	<i>The habitable and ecological environment:</i> establishes and rebuilds the living spaces under the type of “garden house” in a traditional Vietnamese village
<i>Morphology of the village and of the habitats:</i> the village or hamlet, the traditional habitat, the local transport network in the village, the feng-shui and landscape axes	<i>The traditional crafts:</i> bind with the morphology and the characteristic habitat structure of the village	<i>Dwellings:</i> inner courtyard and garden, sometimes with a pond in each unit of the habitat -
<i>Heritages:</i> structures, spatial qualities and cultural religious works	<i>The traditional trades:</i> profiled through the spatial structures of dwellings and workshops, individual or collective commercial spaces, each distinguished by the particularity of the profession identified among distinct villages, linking to the living place and to the community activities	<i>Atmosphere:</i> spatial atmosphere, with greenery, surface water, relaxation space and space for worship
<i>The Society and the Community:</i> Both the family level and the community level together constitute the social identity of the village	<i>Agriculture:</i> Large scale agriculture is naturally replaced by smaller scale value intensive horticultural activities supplying market gardens while improving the ecological sensitivity of the village. Ongoing river pollution reduction measures to continue	<i>Natural Light and Ventilation:</i> for the house creates a system of connection, communicating between the open greenery of individual houses to the common network in the village and then connects to the large natural space outside the village
<i>The Desired Result:</i> the urban morphology of the village is expressed on the banks of the river.		
Constructions:		
<ol style="list-style-type: none"> <li>1. must represent the space characterizing the cultural, social and historical aspects and especially the traditional crafts on the plan of the urbanized riverside village;</li> <li>2. for typical high constructions allowed to penetrate the local cultural - historic - heritage values, must breathe good fresh well ventilated air and allow natural light;</li> <li>3. must respect the remarkable works on the river banks which physically represent the spirit of the village/ hamlet, by orienting longitudinally the type of characteristic architecture of any axis. Saving and highlighting the morphological characteristic and traditional spaces of great value inside the village (traditional house structures), with the possibility of combining functions like habitation and production, public and community spaces, open spaces and religious works in the same village...). They constitute nuclei enriching the “place” with identity;</li> <li>4. it is necessary to have enhanced points such as green verges ranging along a line near the new constructions, by harmonizing them with the existing structures.</li> </ol>		

As observed from the landscape of the river through the prism of the “three pillars: society, economy and environment” for a sustainable development, we could see that all these three elements, despite their intrinsic differences, seem similar in the aspects of environment, society and economy. So the implementation of a model for conservation and restoration of a landscape space’s identity for the

riverside elevation of the village with regards to the “three pillars” will respect near all the directions of sustainable development of its landscape.

### Main landscape elements of the village with the To Lich river



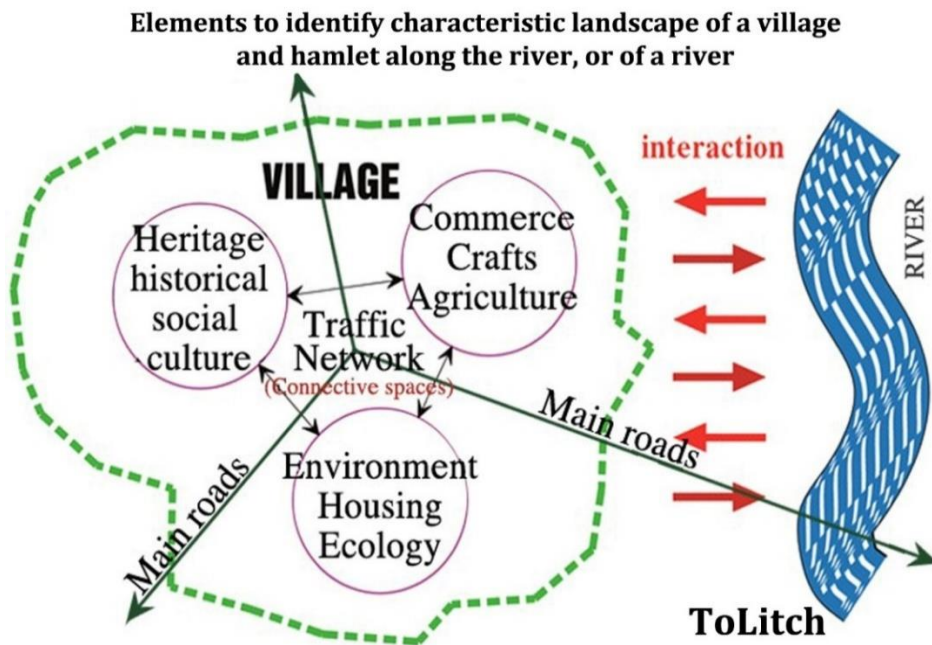
**Figure 3:** Main landscape elements of a traditional village in the past of the river. *Source: diagram by authors*

3.2 Conservation, restoration, valuation and urban design for a characteristic landscape

In order to preserve and to highlight the heritage values in a village, then to do an urban design by restoring the urban facade for evaluating the landscape mirrored in the water of ToLich River, we must first analyze all urban elements to understand the main components of the village's landscape morphology, with a good knowledge of its transformations and of the current problems caused by urbanization. Which value(s) is (are) the most essential?

Thus, through analysis of the river landscape, the role of the ToLich, the evolution of Hanoi and the case study in a river area under urbanization impact, we synthesize a generic landscape structure of a river course having an ancient village, with its main components. (Fig.3)

From there, the village landscape structure is considered towards sustainable development which consists of three main elements: Social-Culture-Heritage, and Local Economy-Traditional crafts and Ecological-Living-Environment, including the elements forming identity of the characteristic landscapes, and therefore the three entities for the landscape of the villages including the river. (Fig.4a)



**Figure 4a:** Identification of characteristic landscapes of a village on the river. Source: diagram by authors

The circulation network represents both the connection line between the separated elements to compose an almost complete spatial plan, and the essential link with the inhabitants to facilitate their access to this riverside area.

The three groups of elements are found in the nucleus of the villages, each of which possesses its specific contents. The river, will be re-valORIZED if its so-called identity values emerge from the village in the form of a spatial landscape. Reciprocally, the landscape of the village near the river is also highlighted by its essential elements which constitute its nucleus.

In fact, it is the liaison and connection of the village with the river that brings out the current heritages. Therefore, when researching for urban planning, we could pay attention to the preservation and respect of the heritages, considered as "the three pillars of the landscape" while enhancing the

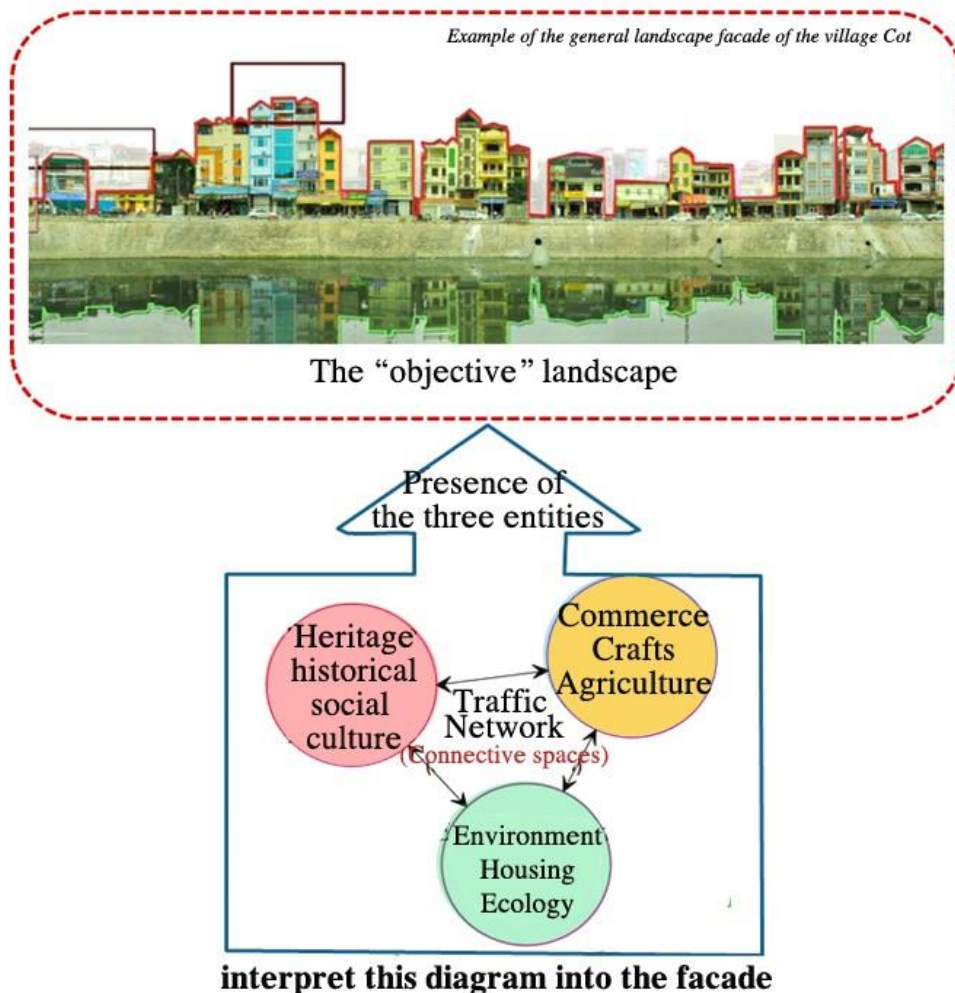


landscape for a section of a riverside landscape, and the landscape of the traditional village as well. The objectives of conservation and development of landscape in a sustainable way belongs to the group of three essential elements, then to the planning, implementation and realization of the work's objectives.

It is necessary to find a good compromise among these various objectives, to negotiate and balance the three pillars mentioned by Conan et al.,(1994) in order to be reliable. Therefore, it is necessary that the implementation of this agreement entails the development of one new broader identity respecting the existing identities by integrating them.

Based on the argued analyzes, it is possible to introduce the evaluation modalities of elements bearing landscape values of a river course, when provided cultural and historical values, but also the morphological and heritage evaluation modalities of the rivers TôLich, Lừ, Nhuệ, and Đáy in Hanoi region in particular, and Vietnam in general. The aim is to show research approaches serving the urban landscape design for one river region and to also characterize a part of elevation or main facade of the water course: river, stream or arroyo. (Fig. 4b)

**The presence of the three intrinsic entities landscape**

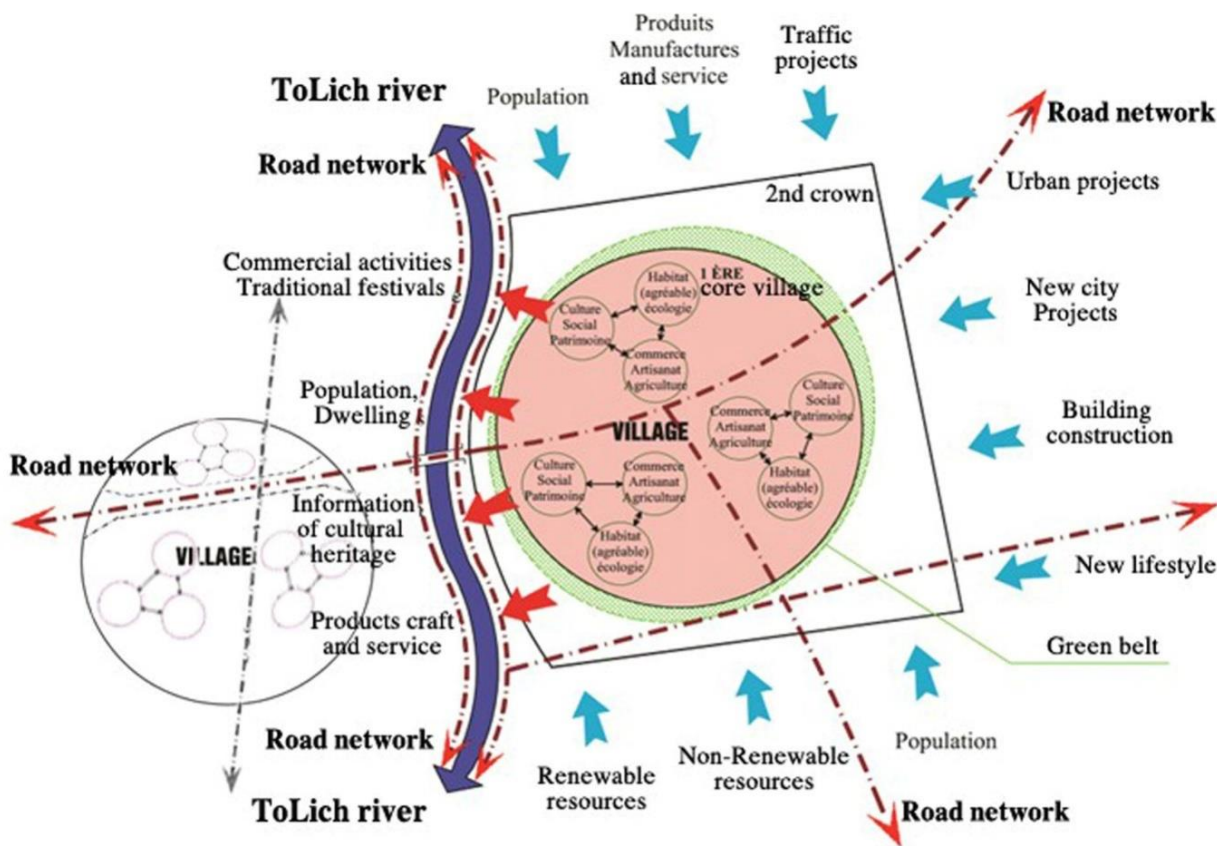


**Figure 4b:** Three intrinsic entities of landscape and urbanization and the traditional landscape values of the village interpreted into the objective landscape elevation. Source:

diagram by authors.

In the perspective of this analysis, we propose to entrust to a landscape architect, called expert-consultant, one strategic tool to help the negotiator to find a sustainable solution to an urban planning and design conflict of the territory.

The present research proposal, hopes to maintain the ecological area because it is the protection element of the environment and obviously of the village and river landscape, a space considered as a biotope that could produce clean plants and foods, providing a healthy atmosphere ensuring human health, satisfying the contemporary trend of civilization to become modern yet ecological, as neighborhoods actually in the world. Utilizing a green periphery - a strong natural extension - could protect a social space, the morphology of the traditional village, the cultural and heritage works, the traditional living space, and the ecological cultural landscape, but also the local economy of Hanoi.



**The entrances of urbanization and the exits of traditional landscape value of the villages and To Lich river**

**Figure 5:** The entrances of urbanization and the exits of landscape value. *Source: diagram by authors.*

Our research shows the problems of the current urbanization in Hanoi which impacts the landscape structure of the river, the characteristic values of traditional villages, elements contributing to the formation of main riverside landscape facade (Fig.5).

## 4. DISCUSSION

### 4.1 *Points of view and solutions for the urban planning and design according to the urban concepts*

According to Wall et al., (2011), "if it is not possible to create a common rule in terms of urban design, political and ideological factors can always influence creations". Political and ideological factors have a great influence in the professional, social and human fields in a direct or indirect way.

A project of urban landscape that will be successful or not is linked to its ability to identify the central element "the sanctuary of soul" of the landscape in its region that can truly impress "the origin" and "the place" of society in the relationship between human and landscape and its environment.

According to the proposal of Cueco (1995) to constitute a landscape, it is necessary to invent it: "apart from a deliberate, conscious and aesthetic approach, it needs a situation of lack or occultation developing imagination ...and "the eye recognizes in these horizontal and vertical, wherever they are, the mark of a faculty to live in harmony with nature".

Concerning the vision and application of the Tô Lịch river landscape in Hanoi, we saw firstly that the principle mentioned above does not correspond to a country like Vietnam, which is distinguished by its geography and history. However, the existing theories of urban planning and design, of urban landscape conservation, and of perspectives for one master plan for sustainable urban development have summarized the general and contemporary trend. The articles in the Urban Planning Code of Legifrance ([www.legifrance.gouv.fr/](http://www.legifrance.gouv.fr/)) will certainly serve as an important reference for many cases in Vietnam, especially in the case of the Tô Lịch river landscape with villages and even for the other river towns throughout the country.

### 4.2 *Proposal for a model to conserve and develop sustainable landscape - ecological spaces and to identify the orientation of urban planning and design*

The Tô Lịch River presents itself as being the geo-landscape and historical-cultural axis of Hanoi, in theory, "urbanism is above all a discipline of space. But it is as much a discipline of time. The concept of "Garden City" by Howard. E (1904) solved the phenomenon of "spreading out" - the extreme urbanization of some cities, as in the case of Greater London. After the war, the Government had built the 14 new satellite cities on the spirit of garden cities around London, a realization of which the English urban planners Harlow and Cumbernauld (Burklin et al.,2007) were the best known. The idea of the "Garden City" was improved by Abercrombie, after more than half a century, in "Satellite City", otherwise called "metropolitan region" which absolutely respected the spirit of a "Garden City" whose nucleus is always the great central city or the mother city.

The observation of the master plan of Hanoi city with an extension planned until 2030 and a prospect in 2050 shows several things (Fig. 1). First, urban planners in Hanoi are partially influenced by the spirit of "Garden City", which is reflected in the development of three large satellite cities composed of the scientific and technological center, the administration center and a large town to the west and south-west, and the other two smaller ones, smaller towns and cities of administration and agglomeration to the north, north-east and south. It is also concerned with the plan of three ecological towns on the outskirts of the city. But urban sprawl may destroy the essential structural morphology of the village with the loss of open areas of fields and rice paddies outside, relegating the control of the streams, rivers, lakes and gardens for other functions. It is a question now for which Hanoi still has no radical solution.

The urbanist Clement (2010), concerned about urban development in Hanoi, shared his views on the Hanoi landscape by proposing his orientation towards a "garden city" where from a smaller scale

structure "Garden house", it must "be integrated into the current development process so that Hanoi moves towards the future of a city model composed of sustainability, ecology, well-being and harmonious landscape in association with water and greenery. It will be a coveted garden-city that we can find in several urban neighborhoods". It forms a posture for an identity of an architectural and ecological landscape in Hanoi. The preservation and enhancement of the village green core is a process that must be the principle approach to be applied to the current urban development. It is therefore necessary to recognize "landscape as a knowledge means of agricultural activity as a means of producing the landscape. The farmer produces the landscape, an agronomist point of view"(AAF report, 1996).

What about the original notion of the "garden city" by Howard, observing the river. Would it be possible to have a real look at the extreme urbanization within the framework of the lower administrative units of the villages - wards - districts? Is there perhaps a difference between the rural model and that of a large city? It is to be confirmed that the morphology - traditional structure of a riverside village whose core is surrounded by the green curtains that can be counted outside the nucleus - the flexible belt of trees (bamboo cords surrounding the village)- irrigation canal - agricultural rice fields (Fig. 5) reflects firstly "a small garden city".

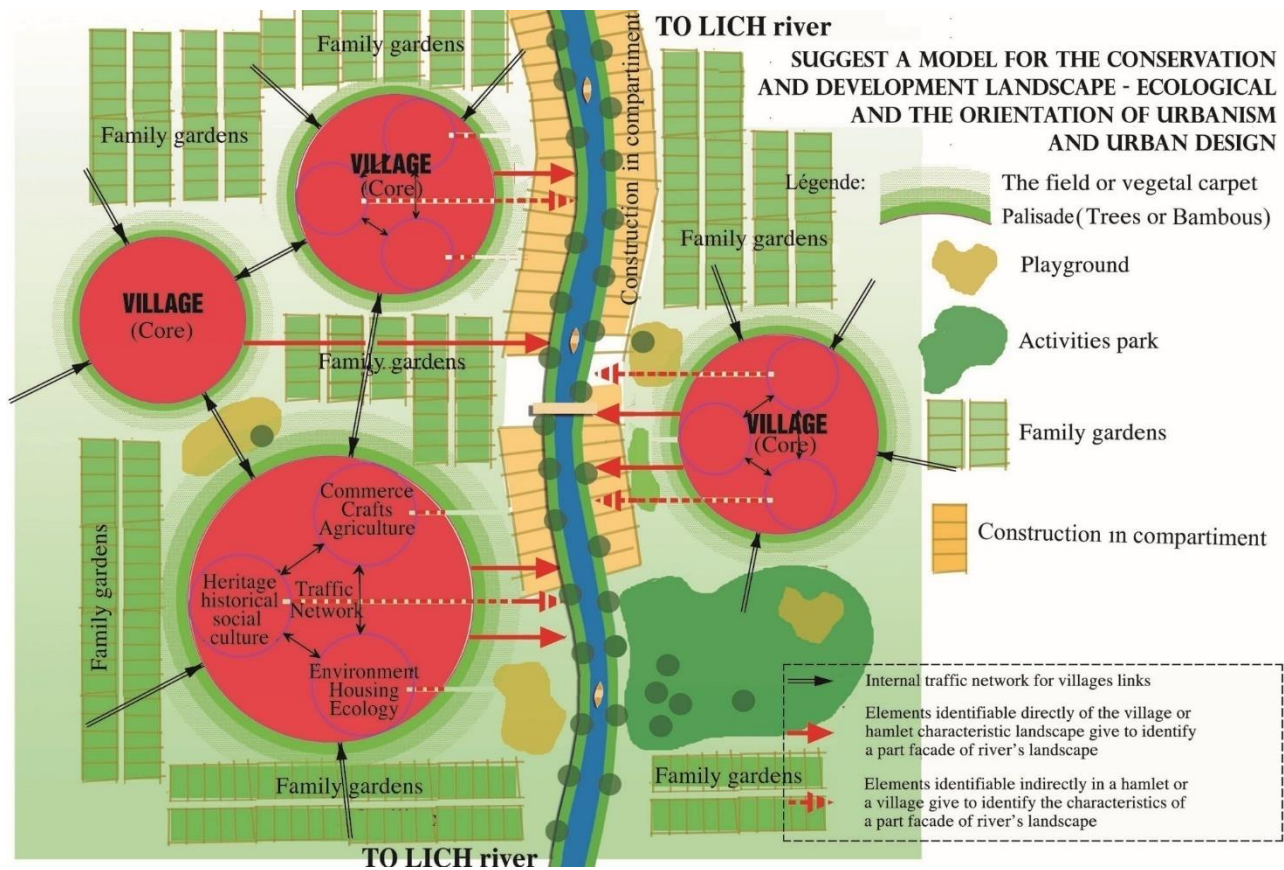


Figure 6: Suggestion for a model. Source: model by authors.

Previously, each individual habitation unit had a green space in the manner of "garden house", whose structure is morphologically composed of a tiled house of 3-5-7 spans, having from one to two sheds, a large courtyard with a surrounding garden and/or lake. If each is considered as a unit of the "small garden city" or the "garden-house", according to Howard, several "garden-houses" are then connected in the "fishbone", and the difference between them is evidently defined by a green belt. Traffic in the

village is served by the main axis passing public spaces and heritage constructions..., its great lakes, and by the axis towards the river. The satellites of "garden-houses" rebalance the development of the center by developing a public space of the village. Indeed, it is difficult to control the spontaneous development of the "big head" center (Hanoi), which has caused urban sprawl.

Thus, it is obligatory to respect good control for an effective limit of this urban sprawl, in particular that for the purpose of new settlements within each block and each parcel. To this end, it is agreed to have measures to protect the green belt including the yard, the garden, the vegetation, the lake of each of the dwelling cells of the satellite "garden houses" by proposing and specifying their urban planning in the framework of urban design for detailed analyzes.

In reality, the green space has been developed without taking into account any rules within each village or dwelling unit. The plant distribution of each one is evaluated and analyzed in a mentioned study of Yokohari (2011) (Fig. 7), so some elements or all of which are found in this summary table, depending on the morphology, the impact of the urbanization and the village situation in its zone. The most general and adapted model is therefore proposed with the green space - garden - agricultural culture inside and outside of the village to characterize the landscape of the riverside villages, which protects the ecological environment of village and river.

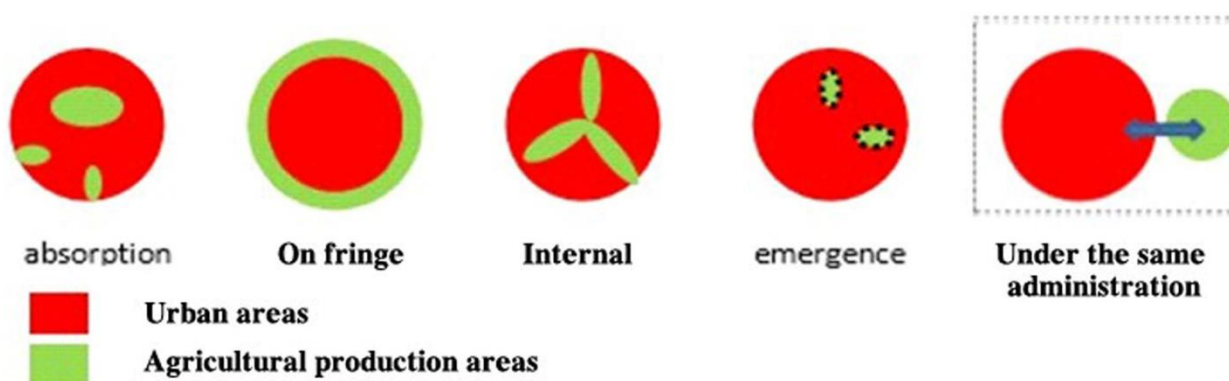


Figure 7: Functions cited by Yokohari

## 5. CONCLUSION

### 5.1 *Reconstruction of existing and potential values in today and future's society solutions for the urban planning and design according to the urban concepts*

The original visible existing elements from both the history and today of the river that we analyzed represent the "advantages and potentialities" for Hanoi's development. They are the "live materials" for a sustainable city. It is the question of identifying clearly the bases of our study object that means the values which constitute the nucleus - patrimonial space - or the landscape identity. We can so consider these elements as the characteristic constituents of the river landscape identity for Hanoi's land as well as for the region, for territories and villages which are traversed by the river. The river constitutes a live heritage space rich in material with its particular and grandiose character in terms of historical, social, geographical, environmental, cultural tangible and intangible, etc. It will be a various "advantageous and potential" heritage space for the sustainable development of the city.

## 5.2 *Proposal for a model in preservation - restoration and sustainable development of landscape spaces for the orientation of urban planning and design on a part of the river, with characteristic landscape values.*

We analyzed and found that the landscape structure of the village is composed of three groups of fundamental elements "three pillars of the landscape": Culture-Heritage-Social-History, Commerce-Craft-Agriculture and Environment-Ecology-Habitation", which shape the characteristic landscape identity of a village.

The road network is like a thread connecting the isolated parts, combining and structuring them. It composes the connection between the landscape space of the village and that of the river.

These three groups of elements, having dialectical relations, constitute the landscape nucleus of a village, distinct from one village to another by its characteristics, which make it possible to raise the identities of the village and/or those of the region. In reality, villages are essentially structured in dialectical relations around these three element groups. In different ways and at different levels of expression, these elements govern interactions and influences on the river landscape. They reflect the emotions and the identity representations of morphology, on the river banks at the places of the village corresponding to the river.

The river is governed, directly or indirectly, as attached to the identity values characterizing the space image of its landscape. The landscape facade of village parallel to the river is transformed into a landscape identity of the stretch of river formed from the intrinsic landscape of the village through essential elements of its landscape.

In fact, each section of the river corresponding to the village also has identity values that harmoniously associate 4 with the three groups of village landscape elements to enhance the river landscape (elevation, ecology, river space), and obviously contribute to the development of the landscape of this village (especially in terms of environment).

From these arguments and verification, we re-affirm and propose the following consideration: the first work to be given importance is absolute respect for the orientation of preservation and restoration "Three Pillars of Landscape" of the village and river mentioned above. It concerns all development aiming at the preservation, restoration and valuation of the landscape value of a stretch of river, of a river line elevation or the traditional village landscape (Fig. 8), in connection with this river stretch or the river landscape as a whole entity.



**Figure 8:** Dinh Cong jewellery craft village along the ToLich River. Village pond, village gardens, temple dedicated to the craft of Jewellery, village temple, jewellery artisans studio, central village common area and green space. *Photos by co-author D. Thomas 2017.*

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