

Report on the Definition Phase:

Work Package 4: Definition of Practical Implementation Activities

Cu De River Valley – Sustainable Tourism Development of Hoa Bac

Prof. Dr. Michael Peterek

Dr. Susana Restrepo Rico

M. Sc. Yaman Hebbo

M. Sc. Melissa Dopf



Empowering urban regions for cooperative, synergistic and practical implementation of sustainability and resilience strategies considering the urban-rural nexus

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1. Introduction

The rapid urbanization pace experienced by developing cities has extended impacts beyond the urban boundaries and affected the surrounding region. There is a symbiotic relationship between the region and the development of urbanisation, in which cities can only meet the demands for natural resources if there is an appropriate consideration of the systemic city-regional nexus.

In this context, the research project *emplement!* aims at developing transferable tools and the needed capacities to transform regional development strategies and plans into practical, efficient and sustainable regional projects. These tools and capacities would enable administrations and relevant stakeholders in the regions of Da Nang and the adjacent Quang Nam Province in Vietnam to utilise effectively the synergies between different sectors of development, namely, tourism, agriculture, industry and the built environment. Integrated regional implementation of sustainable projects would increase the effectiveness of planning procedures both at the planning and the practical level, steering development towards resilience.

As a pilot project, the *emplement!* Project focuses on the Cu De River Valley as it represents a fitting research ground, where the project can illustrate its development proposals, and formulate a practical strategy to improve the social, economic and environmental development conditions of the local population of Da Nang's regional hinterlands through a proper utilisation of the region's flourishing tourism sector. Development, in this regard, is seen to go hand in hand with the promotion and preservation of the valley's nature as well as local culture and identity.

It is important, therefore, to address the spatial context of the case study to stand on the major characteristics of its local planning environment. It is also important to establish a firm understanding of the status of development in the valley, assess its dominating socio-economic as well as environmental conditions and identify the associated gaps and potentials. On this basis, the research can then propose a development concept for sustainable tourism in the valley and discuss the possible implementation strategies and entry points, as in the following sections of this paper.

In the definition phase, the FRA-UAS research team has worked closely with the research partners across Germany as well as with the local stakeholders representing the associated communities and planning authorities in Da Nang and its region. To facilitate the research tasks and activities on the ground, an intense cooperation with the Da Nang Architecture University (DAU) was conducted engaging an interdisciplinary group of German and Vietnamese students and resulting in an extended summer school activity that took place from September 23rd to October 5th 2019. In harmony with the project's case study, the summer school focused on development of a sustainable tourism concept for the Cu De River Valley. The outputs of this summer school were conceived to contribute to the general

progress and findings of the Work Package 4, which are reported in the following chapters of this documents.



Figure 1: The emplement! Summer School Activity. ©Hebbo 2019

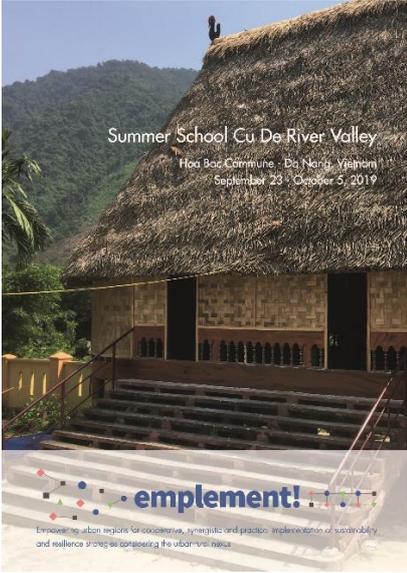


Figure 2: The emplement! Summer School Documentation

2. Spatial Context of the Cu De River Valley Development

In its definition phase, the emplement! Project focuses on the *Cu De River Valley* as an ideal development space connecting Da Nang with its regional and more rural depths. In this regard, the valley is conceived to provide an entry point for Da Nang’s visitors to expand their stay and experiences in the region through a proper provision of sustainable tourism options. Through an active engagement of the local stakeholders, including local planning authorities and entrepreneurs, sustainable tourism is instrumentalised to drive the needed socio-economic development progress, especially of the local and less-developed communities in the region. In this regard, the research and summer school activities that took place in the river valley can be seen as a pilot project that can illustrate the regional potential for sustainable tourism and urban-rural development. The following points are meant to provide contextual information on Da Nang and the Hoa Bac Commune and introduce the river valley in a very rough manner, to establish the regional context of the development area.

2.1. Da Nang City

Da Nang is a dynamic growing city in central Vietnam, the fifth largest urban agglomeration in the country with approximately 1.1 million inhabitants (UN-ESCAP, 2020). The city plays an important economic role in the country based on the services industry, transport hub and tourism (UN-ESCAP, 2020, p. 11). The economic development has resulted in booming urbanisation and considerable burdens on natural resources as well as on urban

infrastructure. The city is divided into eight administrative districts, including six urban and two rural districts. These districts, in turn, are divided into 45 wards in the urban area and 11 communes in the rural areas (UN-ESCAP, 2020).



Figure 3: Da Nang by Night. ©Peterek 2016

In Da Nang, tropical cyclones have caused severe damage to vulnerable coastal areas in the past, leading to the resettlement of many low-income households. Furthermore, flooding is a recurring problem both in central and peri-urban districts undergoing fast urbanisation. The development of tourism on beaches subjected to typhoons, storm surge and coastal erosion increases the vulnerability of these areas. During the dry months, Da Nang can experience prolonged droughts that significantly impact agriculture production and water supply, often accompanied by severe saltwater intrusion. Agricultural activities play an important role in the overall economic development and food production in the city, although these represent only a small part of the city's GDP.

Changes in land-use, environmental degradation and the depletion of natural resources have accompanied Da Nang's fast urban development. Concerns about the environmental repercussions of economic growth resulted in the city's government taking the lead to develop Da Nang into an *Environmental City*. This initiative focuses on developing a sustainable city by controlling the development of industrial sectors, relocating polluting industries and protecting natural areas such as the Ba Na Forest zone. In addition, the plan aims at improving the environmental management in the areas of solid waste, water supply and wastewater. Processes of urban redevelopment and densification are expected to be triggered and incentivised by the controls over land conversion and protection of vulnerable ecosystems.

The “*Plan for Developing Da Nang – The Environmental City*” lays the foundations for city planning in the context of sustainability, green growth and encourages resource efficiency.



Figure 4: *Da Nang's Coastal Tourism Development.* ©Peterek 2016

2.2. Hoa Bac Commune

Hoa Bac is a rural commune located about 40 km from the centre of *Da Nang* City. The commune has a total of 7 villages located along the *Cu De* River. The population of the commune is 3.758 inhabitants, mostly working in the agricultural sector. However, 96% of the total area in the commune is a forest area, including natural and planted forests, while only 1% is used for agricultural production and aquaculture of shrimp and small fish (Dung, 2019).

The area is characterised by the presence of the *Cu De* River basin and is in the buffer zone between two natural forest reserves, i.e., the *Bach Ma* National Park and *Ba Na - Nui Chua*. *Hoa Bac* plays an important role in biodiversity conservation in Vietnam. The surrounding forest has provided the local populations with an opportunity for economic activities based on logging. Although logging represents a good opportunity for higher incomes, the cultivation of a single species causes erosion and endangers the biodiversity of the natural forest.

The local government has identified the challenges of protecting the natural forest and are looking towards sustainable tourism as the means to improve the socio-economic condition of the population without depleting the local natural resources.



Figure 5: Cu De River Basin. ©Restrepo Rico 2019



Figure 6: Lang Nhu Homestay in Gian Bi Village. ©Hebbo 2019

The local community has also started to work towards tourism development to increase their incomes, thus one homestay model, named *Lang Nhu* homestay, has been operating since October 2019 by a local entrepreneur funded by governmental funds in the *Co Tu* ethnic

minority village *Gian Bi. Lang Nhu* welcomes responsible tourists who want to explore the *Co Tu* culture and protect the environment. It has also offered some jobs for women in the local area who are encouraged to partake in ecotourism activities, e.g., music performances, cooking classes, knitting, etc. The ecotourism model in *Ta Lang* and *Gian Bi* villages is supported by city leaders as it shows positive promises to increase the living standards while raising awareness of environmental protection in the area (Dung, 2019).

2.3. The Cu De River Valley

The selected area for the emplement! Project implementation and focus point of the first activity of the FRA UAS Team, the Summer School, was the Cu De River Valley in the district of Hoa Bac. The area, extending some 30 km into the mountains north of Da Nang City, is a rural area with a sparse population distributed among six villages along the Cu De River basin. The population is ethnically diverse, low-income and their main economic activity is agriculture.

The realisation of the Summer School Green River Valley in the months of September and October 2019 brought together Vietnamese and German students, along with local and German experts in infrastructure, social and development issues. The purpose of the Summer School was to investigate, understand and map the main characteristics of the Cu De River basin and the socio-economic condition of the population located in the area. Through this exercise, the emplement! Consortium gained a more integrated and clearer perspective of the Hoa Bac Commune and highlighted the priorities and objectives of the project in the area.

3. Assessment of the Cu De River Valley

To study the *Cu De* River Valley, the river basin was divided into three main sections to facilitate the research activities as well as the student’s work. Each section comprises different environmental, socio-cultural and economic characteristics that have been addressed. The conclusions of this definition stage of the emplement! Project are summarised as in the sections below.

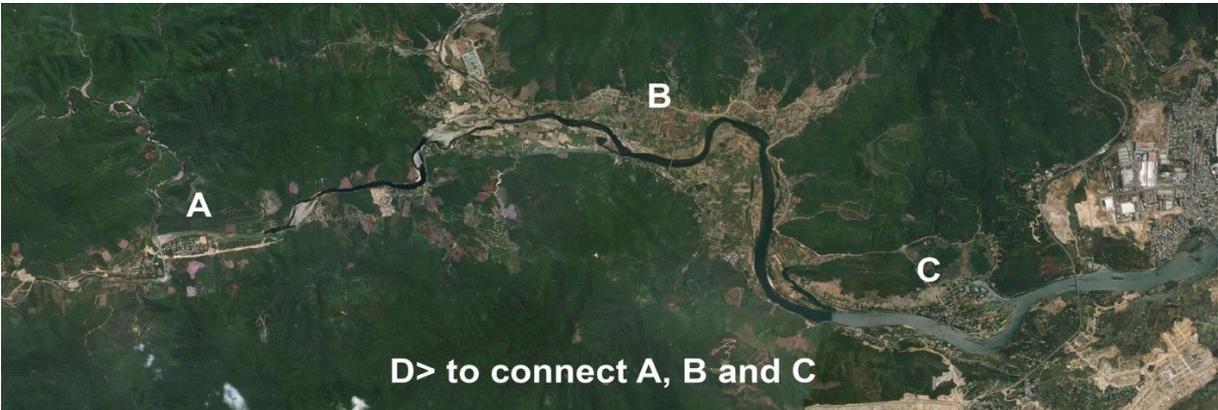


Figure 7: Cu De River Valley Sections for the emplement! Project. FRA UAS Research Team 2019, based on Google Maps

3.1. Section A – Co Tu Ethnic Minority Villages *Ta Lang* and *Gian Bi*

The western *Cu De* River valley accommodates the village of *Ta Lang*, where the *Co Tu* ethnic minority was relocated in 1984. The village is composed of two sparsely urbanised areas, separated by a tributary of the river and the new highway connecting central Vietnam with the coast-side.



Figure 8: Section A – Co Tu Minority Villages *Ta Lang* and *Gian Bi*, Hoa Bac Commune. Google Maps in 2020



Figure 9: Summer School at the *Ta Lang* Community Centre. ©Hebbo 2019

The urban structure of the *Ta Lang* village is composed of two main unpaved streets surrounding a community centre where some cultural traditions of the community are displayed, and ceremonies take place. In this area, the housing conditions are similar for all

residents since the housing units have been provided by the Vietnamese government. The houses have a narrow façade, but the houses extend to the back of the plot. The densities are low, due to the low occupancy of the plots, which provides spaces for housing extension or economic activities such as agriculture or commerce.



Figure 10: Typical Housing Unit, Ta Lang in Hoa Bac Commune. ©Hebbo 2019

The *Gian Bi* village exhibits more consolidated housing units, with already built-in extensions or small gardens to grow fruit and vegetables. The socio-economic condition of the residents seems to be better than the in *Ta Lang*, with some commercial activities i.e., refreshment kiosk, the first homestay or a shop for medicinal purposes.

An extension of the village is being constructed on the eastern end for the relocation of the housing that must be evicted for the construction of the highway. Some housing is already in construction, and some empty houses can be observed in the western part of the Hoa Bac Village.



Figure 11: Commercial Activities in Gian Bi Village, Hoa Bac Commune. ©Peterek 2019

3.1.1. Examining the Existing Development Conditions

To stand on the current conditions of development in section A, the project examines the socio-economic settings of the targeted settlements as well as the available communal spaces, facilities and infrastructure, as in the following points:

3.1.1.1. Local Community

The Co Tu minority villages are embedded in a valley with beautiful tropical vegetation and natural landmarks, such as the Cu De River basin, the Bach Ma Mountains in the background and an exuberant forest surrounding the villages. The Co Tu villages are quiet places, friendly with foreigners and the community shows a strong cultural identity reflected in the preservation of their cultural traditions as well as their language.

The socio-economic condition of the population seems to be homogeneous. The community survives from small agricultural and logging activities. However, the amounts and time-consuming processes for agriculture products do not allow increases in incomes, while the logging activities, although permitted by the government, endanger the natural environment and are not sustainable in the long term. There is a need for educational facilities and skill training to diversify the income generation activities, hence the emplement! Project aims at defining a sustainable tourism concept for the Cu De River Valley to open opportunities for

the population to diversify their economic activities and improve their socio-economic condition.

The *Co Tu* culture is different from the Vietnamese culture, which could become an opportunity for interested visitors. The population speaks mostly Vietnamese, with some residents only speaking the traditional *Co Tu* language. For tourism purposes, the local language capacities should be strengthened, including basic training in Vietnamese, Chinese or English for the service-oriented facilities.

3.1.1.2. Built Environment and Infrastructure

The *Co Tu* community has settled well in the area. The inhabitants reside in housing units provided by the government along with some public services, e.g., water, electricity and a public primary school. Nevertheless, the villages lack proper public infrastructure such as wastewater and solid waste management facilities.

Some of the housing units need improvement, and perhaps a concept for utilising efficiently the open spaces between the plots. The density of the villages is very low, which results in plots with low occupation and open spaces that could be utilised for small-scale agriculture activities or renovated for sustainable tourism facilities. Some of the interviews during the Summer School highlight the interest of the residents in developing tourism activities, as evidenced by the newly built homestay in Gian Bi.

The villages are located inside the mountains and the access from Da Nang city is rather difficult; there is a rudimentary road that floods often in the heavy rain season and thus disconnects the villages from the city. There is no public transport available and most transportation is done on privately-owned motorcycles. However, the new highway could represent an opportunity for connecting the area with other villages in the region. The impacts of the highway should be mitigated from the beginning because, although it could bring new life and attractiveness to the area, the proximity to the village represents a threat for the *Ta Lang* community as it required the expropriation of housing relocation of these residents to other areas of the valley. Moreover, in the future, the highway will bring pollution in the form of greenhouse gas emissions as well as noise.

3.1.1.3. Natural Environment

The impact of climate change in the region means that during the dry season the volume of the water in the river and its tributaries is very low, endangering the water provision of the residents and other economic activities, while in the rainy season these villages are prone to flooding and heavy rains, endangering the economic survival of the communities.

The proximity to nature and tropical forests presents a good opportunity for eco-tourism activities or education-oriented activities related to environmental protection and nature.

Lack of control of informal and industrial logging activities threaten the natural forest surrounding the villages with erosion and exhaustion of the soil.

3.1.2. Objectives and Development Strategies for Section A

The overall objective in this section of the Cu De River basin is to improve the living conditions of the population by diversifying their incomes while protecting the local traditions and culture. To achieve this goal, the concept is divided into four strategies:

3.1.2.1. Strategy 1: Cultural Promotion and Preservation

The *Co Tu* community has rich cultural traditions that are foreign to most Vietnamese people living in the Da Nang region, therefore it could be motivating for the preservation and continuation of the *Co Tu* culture for the residents to share their culture and traditions with visitors interested in these practices.

Likewise, the culture-based tourism could become a reason for more education and training for the *Co Tu* people to diversify the possibilities of economic activities and training and to increase incomes. This includes necessary trainings on keeping and learning traditions like clothing, unique festivals, cuisine and ancient languages, along with training for the tourism industry in skills related to eco-tourism management, cultural knowledge sharing, sanitation practices and languages.

3.1.2.2. Strategy 2: Built Environment

The lack of public infrastructure has a strong impact in the condition of the built environment as well as the natural surroundings, including the *Cu De River*. The analysis has identified sanitation as one of the main concerns regarding infrastructure in the villages. Therefore, the proposal is to establish a centralised wastewater management for the area. In an integrated planning vision, this biogas could be used for cooking purposes in the village, reducing the demand for electricity or the depletion of the surrounding forest. Sanitation to avoid the pollution of the soil and the river water also includes the collection and treatment of greywater that could be treated through a simple technology called “Constructed Wetlands” which is simple, easily accessible and does not impact the visual quality of the landscape. Moreover, a three-fold approach on “Separation-collection-education” to sustainable waste management is suggested to implement for the villages; there is a need for a system for waste separation at the household level.

3.1.2.3. Strategy 3: Environmental Protection

Deforestation is a present threat to the natural environment in the Hoa Bac, causing erosion and endangering the biodiversity of the area. There is a need, therefore, for long-term, mid-term and short-term visions for the logging industry in the area, i.e., fast-growing industrial

wood would secure the immediate incomes, while long-term forestry and recovery of the native flora would prevent biodiversity concerns and protect against erosion; medium-term growing forestry in the area would increase the incomes in the long-term for the communities as these can be sold at higher prices.

3.1.2.4. Strategy 4: Sustainable Eco-tourism

A repertoire of travel activities could offer many possibilities for eco-tourists in Hoa Bac and its surroundings. Team-building activities or extreme sports could be a good option for the CO TU minority villages, since these are organised in small groups and could be easily controlled by the community. Moreover, in cooperation with local businesses, community home- and farm-stays can offer many activities in their proximity for the visitors and guarantee an authentic experience.

3.1.3. Conclusions for Section A

Located at the western side of the project area, Section A comprises two neighbouring villages of the *Co Tu* ethnic minority, *Ta Lang* and *Gian Bi*. This area requires a robust eco-tourism concept, which may include homestays, cultural events, guided visits to the forest, animal watching (monkeys), but also presentation and marketing of local agricultural products. Ideas for improving the built environment are also required for general beautification of open spaces or for improving public infrastructure. Some of the minority women are coming from other villages located in the Quang Nam province, which represents an opportunity to connect the province on a community level.

The cultural identity is a foundational characteristic of the *Co Tu* minority village. Their traditions, ceremonies and culture-specific traits give this community a sense of belonging and guide the community towards a culture-resilient future based on community cohesion and identity. However, the *Co Tu* community has many difficulties in social development as can be evidenced by the decayed condition of the housing, and the difficulties of finding employment outside the unsustainable logging trade in the nearby forests. Low incomes hinder the possibilities for housing improvement and development of community-based initiatives. Moreover, unsustainable economic activities are endangering the local ecology, reducing the possibilities for ecological conservation of the rainforest and increasing the pollution running down to the *Cu De* River.

One possible solution for improving the living conditions of the *Co Tu* community is the diversification of the economic activities in the Valley, introducing small-scale projects focusing on nature and culture-based tourism that could be implemented by the communities themselves. Small-scale tourism developments require high commitment from the community. Therefore, intensive capacity development measures are required to empower the locals with sufficient skills to propose and implement community-based initiatives on their

own. The small-scale culture-based tourism projects should become the catalysts for a community development process where the residents oversee their own futures.

The village has unsatisfied basic needs regarding public infrastructure and services. This issue hinders the implementation of many economic activities in the area, but it could also be seen as an opportunity for proposing and implementing decentralised small-scale sustainable infrastructure projects with the collaboration of the locals and the administrative authorities of the region. This village could become a pilot project for off-the-grid sustainable infrastructure.

The residents are interested in any kind of development that could improve the living situation and their incomes; however, the existence of a brand-new homestay suggests that there is already a notion among the Co Tu people about developing tourism in the area. It is important to avoid the development of mass tourism projects if the idea is to protect, enhance and preserve the local cultural traditions and identities. This cultural character is a strength that needs to be maintained and utilised to attract tourism to the area.

The construction of the highway near the western end of the Co Tu minority village is an important factor to address when proposing any kind of projects in the area. More than avoiding the highway, the strategies should be directed at managing the social and environmental impacts of a new functioning highway in the region, as well as taking advantage of the connection it can create with the other villages and towns, increasing the possibilities for visitors to the area.

3.2. Section B – Hoa Bac Administrative Centre and Agricultural Area

The Cu De River is essential for all the economic activities in the valley, though the characteristics of the villages change with the topography and the cultural traditions of the residents. Section B shows a strong agricultural character based on sugar cane and rice crops, combined with the logging activities present in the whole region. One or two rustic cafés can be found on the main road, along with a camping facility which comprises all the commercial activities found in this section.



Figure 12: Section B, Hoa Bac Administrative Centre and Agricultural Areas. Google Maps in 2020

An administrative centre can be found in the middle of this agricultural area, also showing an increase in the urbanisation trend in the Cu De River Valley. However, most of the residents live close to the agriculture fields, along the main road and on the base of the forest.

3.2.1. Examining the Existing Development Conditions

To stand on the current conditions of development in section B, the project examines the socio-economic settings of the targeted settlements as well as the available communal spaces, facilities and infrastructure, as in the following points:

3.2.1.1. Local Community

These communities are culturally different from the Co Tu minority in Section A, being mostly populated by Vietnamese communities. This cultural distancing is highlighted by the existence of a Christian church in the centre of the Valley, which becomes a landmark for communities and visitors alike.



Figure 13; Church of the Community Surrounded by Agriculture. ©Hebbo 2019

The more urbanised area in the centre of the valley shows a consolidated community linked closely to the government. Nevertheless, the economic activities and socio-economic condition of the community is not too different from Section A, where the community survives from agricultural activities and logging. This socio-economic problem has pushed many young people to find employment in Da Nang city, changing the demography of the region towards

an older population. This population needs more social services for the elderly as well as skill training for the younger people to promote innovation in agricultural practices and implementation of sustainable tourism capacity building activities, i.e., language training or service-oriented skills, as the means to diversify the incomes and prevent the economy-fuelled rural-urban migration.

The research showed that, like Section A, the residents have an interest in developing tourism. However, the emplement! Project considers that the tourism concept to be proposed for Section B should have strong differences with the concept for Section A, promoting sustainable agriculture as a mode of living and focusing more on eco-tourism or educational tourism activities.

3.2.1.2. Built Environment and Infrastructure

Similar to Section A, the housing units are consolidated and concentrated around the administrative centre. The houses have water and electricity but lack other public infrastructure services such as wastewater and waste management systems.

Access to this section is easier since there is a paved road leading to the administrative centre. However, there is no public transport available from the main street and most transport is done by private motorcycles.

There are no facilities for tourism or recreation in this section, and open spaces are limited to the road street in front of the houses.

3.2.1.3. Natural Environment

Agriculture production is based on sugar cane and rice farming. The continuous work in these agricultural crops has built specific farming capacities among the community that could be transferred to other sections of the valley or other communities in the region. However, the mono-crop farming model could, in the long term, cause problems for the biodiversity of the valley as well as the region. Building capacities for innovative sustainable agricultural practices can reduce the risks of exhausting the natural resources and create new opportunities for economic development.

To promote sustainable agriculture practices and eco-tourism activities, it is essential that the commune focuses the infrastructure development on the provision of the basic infrastructure needs, such as sanitation and waste management, thus preventing pollution the Cu De River that becomes the main source of water for the residents along the valley and the main source of income in the river mouth.



Figure 14: Primary Agricultural Structures. ©Peterek 2019

3.2.2. Objectives and Development Strategies for Section B

The general development strategy for the “*Edu-tourism Village*” comprises eco-tourism, rural and cultural tourism and agro-tourism. The specific objectives of this section are capacity building in language and tourism, improvement of the built environment and development of agro-tourism, eco-tourism and edu-tourism. The agricultural character of this area leads to an integrated approach for the proposal of projects that could achieve the objectives.

3.2.2.1. Strategy 1: Capacity Building

The first strategy aims at knowledge transfer and capacity building of the community in innovative farming techniques that could diversify the typology of crops and increase the profit from selling the produce in the local or city markets. These capacity building activities could be coordinated with other communes or villages in the region, establishing a network and fostering knowledge transfer among communities.

3.2.2.2. Strategy 2: Infrastructure

The second goal is to improve infrastructure and public spaces. Proposals for this are to focus the provision of infrastructure on sanitation, open spaces, education facilities and mobility infrastructure. In places where connection to the infrastructure grid is not feasible, there is

the possibility to build off-the-grid compost toilets connected to small water treatment systems.

Regarding the infrastructure development, besides the basic infrastructure need, the plans should include connection to information systems, i.e., internet and Wi-Fi, to provide the possibilities of accessing information for the community and the visitors.

3.2.2.3. *Strategy 3: Eco-Tourism*

In the case of the eco-tourism concept, the existence of a few cafés on the side of the road and the church could represent an opportunity for introducing service-oriented skills for the population, based on eco-tourism and aiming at promoting an education-oriented agro-tourism development in the area. Moreover, the eco-tourism goal requires open spaces for recreation and facilities as the spaces to bring together the local community and visitors, creating inclusive spaces where the social barriers disappear.

Organised festivals like a *Sugar Cane Festival* could become attractive temporary activities to bring visitors to the valley. Other sport or environmentally friendly recreational activities could also promote income increase and community development.

3.2.3. Conclusions for Section B

The main character of section B is agricultural production. More diversity in the crop typology could supply vegetables to the communities along the Cu De valley, promoting the connection between the communities and reducing their dependence on external produce.

Activities linking existing activities with eco-tourism could involve the socio-productive agricultural activities existing in the village so that tourists can experience through practice the production process of watermelon, rice, bananas, etc. The suggested activities are biking and walking through the agricultural fields, as well as educational workshops by farmers. To reach this experience, informative signals and roads for the bikes and walking paths are infrastructural needs. The required capacities for Sector B are communication skills and the knowledge on how to conduct a workshop.

Agricultural activities are an important reservoir of local knowledge that needs to be preserved. Argo-tourism initiatives where agricultural experiences are transferred from farmers to other communities or visitors could become the centre of the sustainable tourism development strategy in this area. The residents already have agricultural experience and have been moving towards more organic agriculture. Likewise, the inhabitants showed interest in introducing tourism but have a lack of direction and a lack of funding. Thus, capacity building and governmental support for sustainable rural development are crucial for the improvement of the living conditions of the farmers along with the development of sustainable agriculture in the region. The potentials of agriculture and tourism must be linked to Da Nang city, where there is a demand for practical education as well as eco-tourism.

The connection of economic activities to the Cu De River is stronger in this section, also connecting the middle valley to the river mouth villages. This connection could be used to promote income-producing activities based on agro-tourism and day-visitors. The river irrigates the agricultural fields, provides water and flows down to the river mouth villages where the economic activities are based on fishing, therefore, it is important to address the deficiencies in the basic infrastructure i.e., proper sanitation systems, wastewater treatment and waste separation and collection.

3.3. Section C – The Cu De River Mouth

This section is located at the entrance of the river valley and closest to Da Nang city. The section comprises two villages with slightly different economic characters, as both villages show high urbanisation patterns with consolidated housing, paved roads and a stronger economic activity based on fishing, aquaculture and commerce.

The Truong Dinh village, with a considerably less population, is located further inside the valley. The main character of this village is the emphasis on aquaculture and fisheries, all dependent on the Cu De River. The area is not visible from the main road along the riverbed, therefore, the commercial activities in this village are directed only at the local inhabitants with a few ground-floor shops.

The Thuy Tu village, closest to the main highway connecting Da Nang with the town of Hué, exhibits a more commercial vocation, with shops and restaurants located conveniently along the main road. This village also shows fisheries as commercial activities, taking advantage of the widening of the river.



Figure 15: Section C Villages, Hoa Bac Commune. Google Maps 2020

3.3.1. Examining the Existing Development Conditions

To stand on the current conditions of development in section B, the project examines the socio-economic settings of the targeted settlements as well as the available communal spaces,

facilities and infrastructure. Due to the size of in both villages constituting this section, Truong Dinh and Thuy Tu, which are considerably larger than the other settlements in the valley, the project examines the development conditions of each village, separately, as in the following:

3.3.1.1. Local Community

In the Truong Dinh village live about 450 households and approximately 2250 inhabitants. The socio-economic conditions of the residents seem to be better compared to the Co Tu villages or the agricultural areas. One of the reasons for the improved socio-economic condition could be the proximity to the Da Nang – Hué highway and the possibility of transport to the city. Moreover, the isolated character of the village, combined with the presence of the river have promoted the diversification of fishing techniques, as well as the adoption of aquaculture activities, that increase the possibilities for economic growth. The aquaculture techniques could become an important part of the knowledge reservoir for the community. Knowledge sharing activities among the residents in the Cu De River valley would help with the diversification of economic activities, along with strengthening community relationships and increasing the possibilities of a circular economy among the villages based on agricultural and aquaculture produce.

In the Thuy Tu Village, based on the condition of housing and urbanisation, it could be said that the socio-economic condition is better than the conditions of all the other settlements in the valley. The assumption is that the residents of the Thuy Tu village can mobilise easily to Da Nang city and find employment, while still living in the village. Likewise, the presence of the highway offers opportunities for commercial activities in many sectors. The residents of this village are more connected to the city than the other villages in the Cu De River valley. However, some of their commercial activities are based on fishing on the river mouth; activities that are affected by agriculture and logging activities, as well as the condition of public infrastructure inside the valley.

3.3.1.2. Built Environment and Infrastructure

The Truong Dinh village is compact, though not densely constructed. There are clear roads and paths within the urbanised area and also clear demarcations of the properties. The housing units are built in the traditional Vietnamese style and are well established; most dwellings have two stories with a small garden in the front. The properties have space for domestic animals and some lower levels are refurbished for commercial activities. Crops of banana and vegetables can be seen in the surroundings. Regarding public infrastructure, the residents have access to electricity and water. Sanitation, wastewater and garbage collection management systems must be implemented to prevent the pollution of the aquacultures and the Cu De River. There is a public school, but there is no presence of health facilities in the area. As mentioned in the former sections, the residents see an economic opportunity in increasing tourism activities in the valley. The consolidated condition of housing and green

spaces in many of the properties create an opportunity for homestays and touristic accommodation facilities. However, in order to promote tourism in the Truong Dinh village, the community requires capacity building in the hospitality sector, from language training to management of small tourist groups.



Figure 16: Commercial Spaces at Truong Dinh, Hoa Bac Commune. ©Dopf 2019



Figure 17: Aquaculture at Truong Dinh, Hoa Bac Commune. ©Dopf 2019

The area in the Thuy Tu village is densely populated, with consolidated housing constructed in the traditional Vietnamese style. The urbanisation is mostly located along the main road going into the Cu De River Valley, and an adjacent pedestrian road closer to the river. Most houses have two stories, but no garden or areas for cultivation. There are some areas next to the river where public spaces could be developed for the community and tourists. There is already a train and bus connection as well as road infrastructure, making the village is very accessible by motorbikes and cars. Besides this, there are cafes, shops, bars and restaurants with touristic potential. The public infrastructure in the Thuy Tu village provides energy, water and waste collection services, but no proper sanitation. Similar to the other villages, this area requires comprehensive wastewater and waste management system in order to avoid further pollution of the river and the negative impact on the fisheries.



Figure 18: Housing in Thuy Tu, the Hoa Bac Commune. ©Peterek 2019



Figure 19: Commerce in Thuy Tu, the Hoa Bac Commune. ©Peterek 2019

3.3.1.3. Natural Environment

The secluded character of the Truong Dinh village has created an atmosphere of peaceful harmony between urbanisation and nature. There is an important connection not only to the Cu De River as a natural resource but also with the surrounding mountains as part of the landscape and opportunities for eco-tourism activities. Compared to the Thuy Tu village on the river mouth, the Truong Dinh village connects the visitor mentally to nature and a peaceful way of life, while remaining accessible from the city. To sustain aquaculture and fisheries as economic activities, public infrastructure systems for the control of waste products are essential. Pollution of the river due to waste and wastewater produced further inside the valley and industries located on the other side of the river have caused a decrease in the quantity and quality of the fish. Moreover, climate change combined with illegal activities in the forest and along the river increase the risk of floods. Flooding is a recurring issue in this area; although it brings nutrients to the soil increasing productivity, it also affects the lives and property of the residents. Thus, the households are structured to keep the furniture in the upper storeys, while the ground level is left vacant in case flooding occurs.

In the Tuy Tu, the residents have a strong connection with the river for fishing and service-oriented activities but the connection of this community with the surrounding forest is not thoroughly developed. The residents buy their vegetable and household needs in Da Nang.

3.3.2. Objectives for the Cu De River Mouth

Although these two villages have different social, economic and urbanisation characteristics, this preliminary analysis has led to the realisation that both require the same kind of improvements regarding public infrastructure, economic growth and community development. Therefore, these sections proposed the development strategies for both, the

Truong Dinh and the Thuy Tu villages. These strategies can be adjusted to the needs of each community when specific projects are proposed.

The general objective is to strengthen the existing economic activities and introduce controlled touristic activities in the valley. The strategies to achieve this objective are based on offering capacity building activities for locals, where specific knowledge can be exchanged among the residents of the Cu De Valley and skill training in the hospitality sector for promoting small scale eco-tourism.

The projects should be small-scale and in a manner that protects the local culture and practices. The benefits for the section need to distribute between both villages, so if one village establishes restaurants, they could get their fish and shrimps from the other village, to improve the economic situation of the people along with the following objectives:

3.3.2.1. Strategy 1: Improving the Built Environment

The main conceptual work focuses on the development or improvement of recreational areas near the waterfront. The target groups considered to be attracted by this kind of development would be Da Nang residents and foreign tourists. Due to its location, close to Da Nang and with access to the highway, strategies are based on day-visitors or evening events with possible overnight stays. These villages could function as a starting point for further activities into the valley.

The improvement of the conditions of wastewater and waste management are essential. The choice of combined or separated sewage treatment plant is a leading question. Waste collection and waste separation already exist in the village, however, raising awareness about the importance of waste collection and separation are crucial for the success of waste management systems.

3.3.2.2. Strategy 2: Economic Development

The economic development strategy is focused on strengthening the existing aquaculture and fishing activities while diversifying the economic base through the implementation of small-scale eco-tourism project. The villages could also provide spaces for the commercialisation of agricultural products produced further inside the Cu De River Valley, thus connecting the communities and supporting the economic activities of the other villages.

Public areas are important for community development. The development of the riverside is a concept of projects for public use. The objective is to get tourists and local people closer through unique experiences. Cooking workshops, campfires and music performance are the main activities which contribute to night activities.

3.3.2.3. Strategy 3: Community Development

The objective of this strategy is to generate social cohesion and development among the residents of both villages. Workshops for knowledge sharing about agriculture, aquaculture and fishing techniques could motivate collaboration among villagers while increasing the possibilities for revenue from existing economic activities. These workshops could become a starting point for introducing new concepts into the economic activities of the population, i.e., Eco-tourism and hospitality.

It is important to create intangible value in the existing traditions and activities of the community, motivating them to improve the techniques instead of starting new businesses and activities without the necessary know-how.

3.3.3. Conclusions for Section C

The analysis suggests, as a first step, to improve the socio-economic and ecological conditions of both villages. The key concept is to use the existing infrastructure, facilities and unused buildings, upgrade them and transform them into public infrastructure for recreation and tourism. The improvement of the built environment in this area should be focused on the improvement of public services and urban infrastructure for the residents.

The high density and high consolidation condition of the housing means that infrastructure development projects should involve of the local population, not only to guarantee the sustainability of the projects but also to build capacities among the locals for the generation of community-based self-help improvement initiatives and small-scale tourism projects.

Despite the improved condition of the village, there can be seen several houses derelict or abandoned. The interviews with the residents revealed that real estate speculation processes have been happening in the village, with external people buying large properties to later transform them into commercial facilities. However, the transformation of these properties has not happened yet, thus the condition of the properties deteriorated, along with the urban landscape and the overall atmosphere of the village. The reason for the delay in building renovation is the expectations created by the new development on the opposite riverbank, where large areas are being prepared for mass tourism developments. The development of mass tourism infrastructure could promote tourism activities in the Cu De River valley, but it could also endanger the sustainability of the river along with the preservation of the local culture and community structure.

This area has the most potential for economic development. However, its proximity to Da Nang and the developments happening on the opposite side of the river suggest that the activity offer in this section should be targeted to a specific typology of visitor to avoid competing with the large mass tourism areas in the region. Economy, culture and ecology are combined in the character of this area, thus the activities developed here should have an integrated development character without neglecting the capacity development processes for

the community. Capacity development for a diversification of the economic activities in the area would benefit the residents.

4. Integrated Sustainable Tourism Concept for the Cu De River Valley

Based on the previous examination of the existing settlement and infrastructure, socio-economic conditions and environmental and natural settings of the three sections of the river valley, the project proceeds to propose an overall strategy to develop the entire valley connecting the three sections and integrating all elements of the suggested objectives and development strategies.

The strengths of the Cu De River Valley are the natural diversity, cultural uniqueness and proximity to popular tourist attractions. An investigation of the whole area shows some weaknesses as well, such as pollution and environmental exploitation, a lack of basic infrastructure and activities offered in the valley. The main threats consist of the increase of pollution and environmental exploitation posing a risk to health and further development with the implementation of a tourism approach in the whole valley. However, the opportunities for a successful implementation of a sustainable tourism strategy could be the integration into a regional programme around Da Nang. Traditional cuisine, feasts, garments, buildings, as well as the establishment of a local market, are options for the future of an Eco-Cu De River Valley.

In this chapter, the project discusses the main development components that need to be considered thoroughly in the later stages of the research project for the development of an integrated sustainable tourism development concept for the valley.

4.1. Goals for the Cu De River Valley Tourism Development

As a synthesis of the objectives proposed for the three sections constituting the targeted area, the main goals of the overall development concept for the Cu De River Valley can be categorised in accordance with the scale as well as the intervention fields of the project. In this regard, two scales of intervention are conceived to lead progress at the local and regional levels of implementation to enhance the development settings of the local communities as well as the valley's environmental conditions, as in the following points:

4.1.1. Sustainable, Local and Community-based Development

As a prominent field of intervention, community development is a development approach on its own but also a major intervention field for the implement! Project. It stresses the potential of the local inhabitants to drive fruitful processes of social, economic, environmental and cultural development that can enhance the life standards and socio-economic settings within the valley and improve the general condition of public spaces, facilities and infrastructure. In this approach, the project should encourage a community-based development process, where community members can respond to common challenges, cooperate, plan and act together,

in partnership with the development stakeholders. In this context, the following development goals of the valley fall under this category:

4.1.1.1. Enhancing the Socio-economic Conditions of the Local Population

A proper development strategy should support and optimise the current practices of the local population and diversify their income sources. Since it is mostly agriculture that contributes to the incomes of the local communities and makes their living, it is crucial to promote efficient agricultural and practices, expand the valley's agricultural products and add to their value through high quality food-processing and to advise feasible marketing tactics to extend the farmers' reach to more potential clients across the region. Attached to this point is to stop the inefficient exploitation of forest lands for logging purposes and replace it with a sustainable and productive process of reforestation.

Sustainable tourism, as a development engine, can also contribute to the incomes of the locals, significantly. It is important, therefore, to firstly enable the local communities to get involved in the tourism business, either directly providing direct products and services for the visitors or indirectly working in associated businesses. And, secondly, it is important to increase the touristic flows within the valley through highlighting its historical and traditional attractions and its natural monuments, connecting them with the major touristic attractions of the region and provide reliable and safe mobility and public transport options, without over-burdening the area with mass tourism, or with numbers that cannot be handled in terms of available facilities and services but also from an environmental perspective.

A proper integration of the valley with the region is a critical point. In this regard, the valley together with its proposed socio-economic development measures should be seen as an integral part of a circular regional economy that tries to keep the generated wealth within the region.

4.1.1.2. Enhancing Public Spaces, Facilities and Local Infrastructure of the Valley

To improve the living standards of the local communities and increase the valley's ability to attract tourists and sustain touristic businesses, it is crucial to secure a certain minimum of public amenities. In this regard, deploying a sufficient share of the touristic revenues can secure the basic funds for needed investments in the communal affairs and qualification of public spaces, facilities and infrastructure. In this manner, many solutions, creative alternatives and improvements can be realised to provide:

- Critical infrastructure such as water provision, sanitation and waste management
- Necessary public spaces such as communal roads, squares and walking paths in compliance with the safety and legibility standards
- Basic facilities such as meeting-, information-, communication- and health-points

Such improvements can significantly improve the valley’s competitiveness in the region and enhance its capacity to organise a wider range of touristic offers and activities and host more interested visitors, which can generate more revenues and thus feed the economic growth as well as help fund the further development measures of the valley.

4.1.1.3. *Enriching the Touristic Experiences of the Valley’s Inhabitants*

Since the main target groups visiting the valley are usually locals from Da Nang City seeking daily or long-term trips and the international tourists, the project collected the specific needs and expectations of both groups to be covered by the infrastructure of the Cu De River Valley. The field research concluded then a set of action fields, which are also relevant for the sustainable development of the valley. The main touristic potentials should invest in the valley’s rich cultures, nature and history and relates strongly to relaxation, adventures and authentic nature-related experiences.

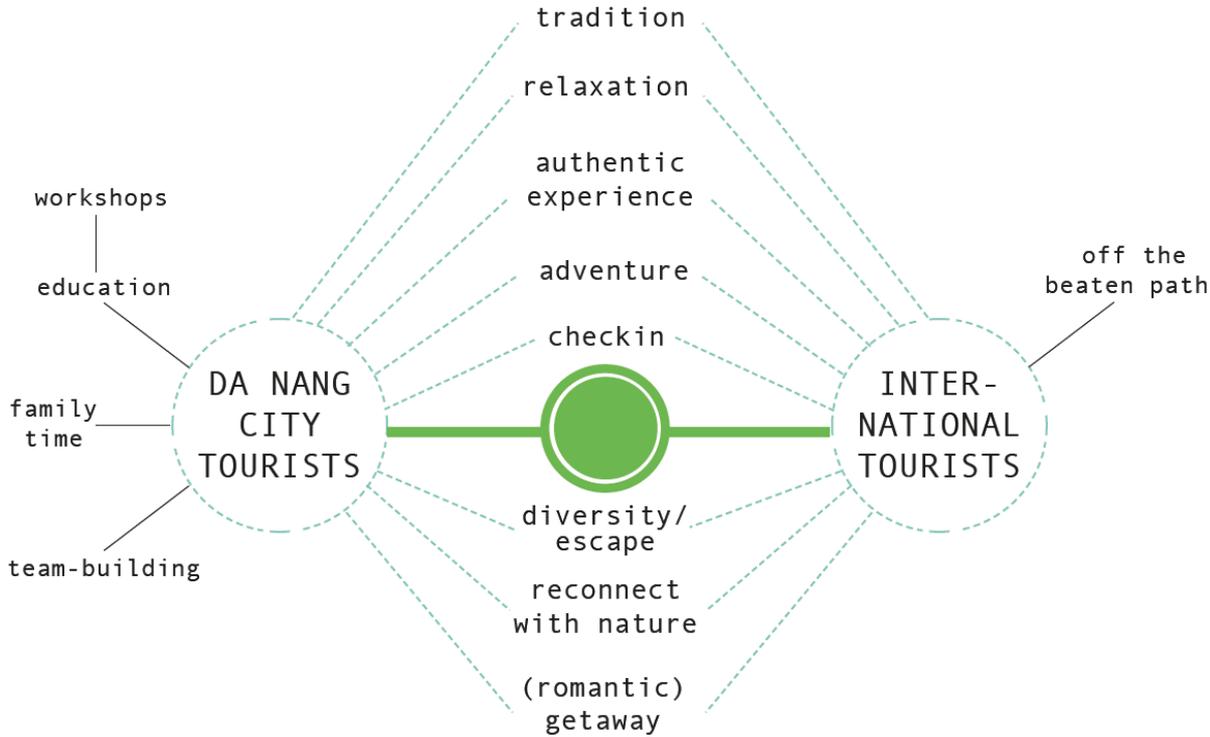


Figure 20: Target Groups and Anticipated Activities for the Cu De River Valley. FRA-UAS Research Team 2020

4.1.1.4. *Enhancing the Capacities of the Valley’s Inhabitants*

To ensure the capability of the local communities to run successful touristic businesses and operations and interact well with the valley’s visitors, it is important to address the existing gaps in their current capacities, especially about management, operation, marketing and communication skills as well as foreign languages education. Another point of capacity building in this regard is also to elevate the local knowledge regarding the environment, ecosystems and natural habitats of the valley as well as the formulation and implementation

of eco- and community-based tourism activities and practices that can take advantage of the valley's natural sceneries and heritage without harming the environment. And, in a context other than sustainable tourism, it is also required to increase the farmers' capabilities to conduct sustainable and more efficient forms of agriculture, diversify and process their products and marketing them, keeping in mind that agriculture represents the highest share of local incomes in the valley. In all three fields of local capacity building, hospitality, environment and agriculture, the local inhabitants should acquire the knowledge, skill sets and tools they need to build their capacities.

4.1.2. *Integrated Regional Development*

Integrating the Cu De River Valley to the region of Da Nang and Quang Nam is necessary to sustain the desired local development progress. After all, most of the valley's production goes to the region, and most of the required services and goods come from the region. The following aspects, therefore, address the most relevant integration fields, from the perspective of sustainable tourism development that is seen to drive the development of the river valley.

4.1.2.1. *Connecting the Local and Regional Touristic Hotspots and Points of Interest*

Focusing on existing touristic destinations around Da Nang, there is already a variety of well-visited areas. Historical destinations like Hue, My Son or Hoi An with temples or ancient ruins show contrasting options to the mass tourism activities developed in Da Nang city. The inland destinations and national parks offer tourists natural experiences that are adequate for day trips. The Cu De River Valley, in this regard, is directly surrounded by many of these tourism hotspots. It is important, therefore, to connect all touristic attractions throughout the valley with each other as well as with the surrounding regional hotspots through safe and legible regional routes and interesting touristic tracks, which stresses the importance of the next point of regional integration that is mobility.

4.1.2.2. *Regional Mobility and Public Transport*

Through, reliable and diverse regional mobility and public transport options, the valley can be better connected with the busier parts of the region to draw larger flows of interested regional, national and international tourists. These options should invest in the current infrastructure, modes and hubs and expand them to enhance the quality, reach and efficiency of public transport throughout the region. They should also promote a multi-modal system of eco-, green and barrier-free motorised and non-motorised mobility that suit a variety of users.

4.1.2.3. Regional Infrastructure Development

If applicable, infrastructure development within the Cu De River Valley should be aligned the regional development plans and policies and make use of available regional infrastructures that can expand their services to include the valley.

4.1.2.4. Regional Socio-economic Development

Similar to the previous point, socio-economic development measures in the valley should also be aligned with the wider perspective of the region, if available. In this manner, the region should be conceived to accumulate the regional added value and promote self-dependence in terms of the required regional capitals, assets and resources as well as to close the production and consumption cycles within the region, based on the principles of circular economy.

4.1.2.5. Regional Marketing Strategy for Sustainable Tourism

The emplement! Project's obsession to keep the river valley as a haven for sustainable, authentic and ecological development can be transferred into a regional brand that stresses the uniqueness and authenticity of the Cu De River Valley in specific and the entire region in general. A proposed regional tourism concept, therefore, should follow a dual marketing strategy. On the one hand, it should lead visitors to get-off-the-beaten-tracks for hiking and trekking activities. And, on the other, it should work closely and continuously with the regional communities to promote and advertise their cultural and social events, inside a natural landscape. For this marketing approach, a well-thought branding strategy would help strengthen awareness for the valley and for the entire region.

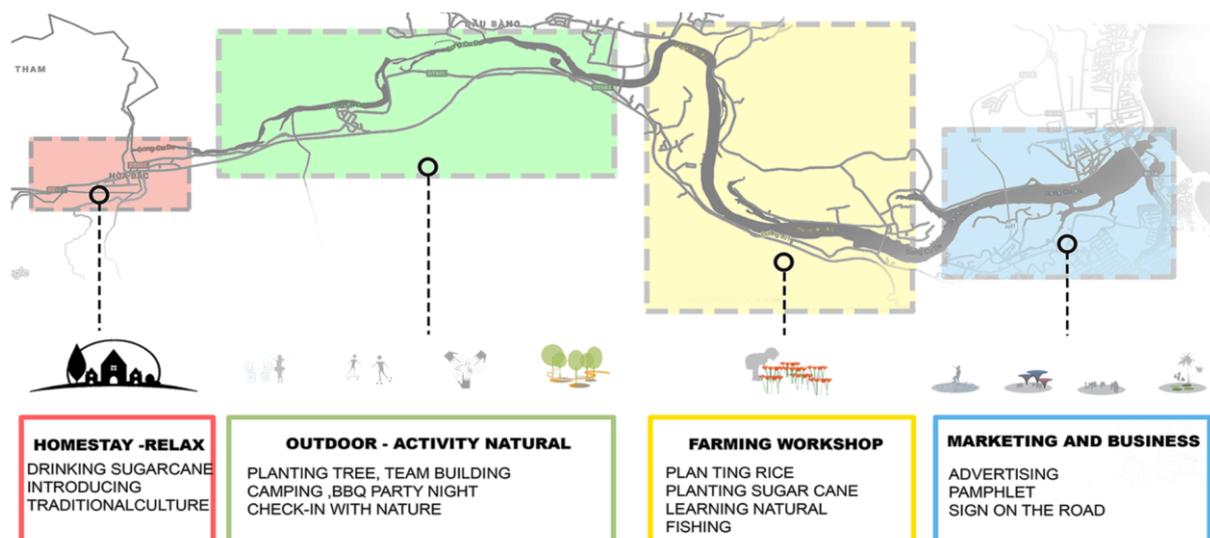


Figure 21: Marketing Focusing on the Special Characteristics of the Cu De River Valley. The emplement! Summer School Activity in 2019

In all, the project's approach is based on the connection between the local and regional scales of development connecting the areas constituting the valley. For a holistic solution on the regional level, the whole valley demands marketing through social media and regional implementation of a tourism strategy. Locally, this proposal provides ideas for infrastructure, water and environmental management, as well as ideas for the Cu De River and the roads as connecting elements. In this sense, this proposal requires sustainable building blocks that will enable the Cu De River Valley to develop in terms of a circular economy. Already existing components such as the Cu De River, the road, infrastructure, water management and environmental management must be improved in physical and non-physical ways. Integrating the A, B and C sections of the valley requires a further connection to the entrance of the valley. This is in addition to other connecting possibilities with the highway that is in construction.

Connecting the valley with its regional depth, in terms of touristic offers and competitiveness and mobility and public transport as well as infrastructure and socio-economic development, indicates the necessity of deep regional coordination and active involvement of the regional development partners. Therefore, developing a wider regional network for sustainable tourism that incorporates the valley together with the other regional settlements and clusters in an integrated development engaging a variety of sectors is necessary.

4.2. Proposed Implementation Strategy and Entry Points

As mentioned, the implementation! Project utilises the tourism sector as a catalyst to drive the development of the valley, in a manner that brings benefit to the local population and drive their socio-economic, infrastructural and environmental development. In this regard, the research proposal for developing an integrated tourism concept for the Cu De Valley can be implemented on the basis of the strategic planning approach, that can be seen under three main strategic stages:

- Data collection and analysis of intra-sectoral synergies
- Proposal of an integrated tourism concept for the Cu De Valley
- Implementation, monitoring and evaluation of the selected pilot projects

In implementation, the project should continue to focus on the target groups identified by the analysis: the locals from Da Nang and international tourists. In this regard, Da Nang's residents should be invited to strengthen their connection with the Cu De River Valley and its nature and culture. International tourists should also be encouraged to get off the-beaten-path and explore areas outside the common and most prominent touristic places in the region.

From a strategic perspective, to connect the different areas constituting the valley, the focus is to encourage the growth of local communities from within. Developing the valley, in this regard, should be based on the unique characters and traditional inputs of each of its three sections. Connecting of the valley's growing communities will require physical linkages, such as public roads and trails but also the river itself. In this regard, creative mobility and transport

networks become essential for promoting social interaction between the communities living in the valley. Besides these tangible spatial connections, it is crucial to implement non-physical intangible connections such as common functions or activities. Therefore, community cohesion activities together with tradition, culture and nature exploration represent many possible action fields. Raising money from responsible forms of tourism should contribute to the social, economic and environmental development of the valley as well as for cultural promotion and preservation.

It is shown that the valley offers three development themes throughout its different areas. In this regard, section A focuses on culture and tradition, section B on agricultural production and education, and section C on traditional fishing. The objective of the suggested strategy is to illustrate the three pillars of sustainability in the three sections of the valley matching with the dominant development themes. In section A, therefore, implementation can focus mainly on the social aspect of development, in B on environmental and in C on economic sustainability. Through a proper connection of the three sections, the valley has the opportunity to create a unique brand and also develop in a sustainable and resilient way, becoming the Eco-Cu De River Valley. The following points are conceived to represent valid entry points for the implementation of the development concept. Entry points, in this regard, are meant to drive development on the ground in accordance with the mentioned development goals and also to ignite the development of similar cases in the surrounding area and beyond.

4.2.1.1. Infrastructural Implementations

In the case of infrastructure, especially on the roads and the Cu De River, the improvement of tangible connection elements has to be established. The uneven road surface has to be improved in order to increase the accessibility to the area and improve the livelihoods of the residents.

One of the priorities of the sustainable tourism strategy should focus on a wastewater treatment system through a decentralised approach in each village. Centralised systems have high costs; decentralised systems could be implemented on-demand and provide the first step towards larger investments in wastewater management.

For waste management, there is already a local strategy to reduce the volumes of waste, along with the strategies of recycle and reuse. The existing waste management strategy in Da Nang should be extended to the Cu De river valley as an initial stage in creating an effective waste management system. Reusing bio-waste (60%) in the form of compost could reduce the needs for waste collection and management while reducing the expenditures in fertilisers and increasing the health benefits of the products.

It is important to connect the road and the river as transport ways by expanding the quantity of multi-modal transportation. For this to work, some stations need to be implemented; stations can also function for locating public facilities and offer special facilities for water or

land transportation. The stations would be connected to the different tourism activities suggested in the sections. Besides, public infrastructure such as streetlights, public toilets, internet and waste collection points should be built as part of the public space development for the stations. Likewise, the social infrastructure inside the valley as well as medical care has to be improved in the long term.

4.2.1.2. Advertising the Cu De River Valley

Marketing is crucial for tourism development. The strategy should follow two directions: visible marketing and an adequate online advertisement.

A visitor centre is important to encourage tourists to come and explore comfortably and in an informed manner. A gathering point for visitors could also integrate the whole valley and allow access to visitors and locals to online platforms and online marketplaces to sell agricultural products.

For the connectivity of the valley, physical connections like the road and river can be used. Advertisement with signs should start from Da Nang to guide the potential visitors. Transport stations should also combine facilities such as commercial activities i.e., drinking and food stands, rent facilities, landmarks or location maps. A boat station on the river mouth near the bridge could attract people to visit the rest of the valley. Activities like kayaking can be offered in areas where the river is not deep enough for boats.

4.2.1.3. Capacity Building for Administrators, Practitioners and Local Entrepreneurs

All the strategies in the Cu De River Valley require capacity building for communities, local leaders and involved stakeholders. Therefore, initiating capacity building and development measures to address and knowledge and skill gaps within the local and regional planning authorities, development stakeholders and local businesses and entrepreneurs represents a great starting point for implementation. The targeted groups in all capacity development measures should acquire an exchange the available knowledge, skill and know-how and the necessary technologies and tools to fulfil their associated roles in the development in an appropriate manner.

5. Conclusion

This paper highlights the progress and key findings of Work Package 4 of the emplement Project in its definition phase. After an introduction to the spatial context of the project's case study, the Cu De River Valley, the FRA-UAS team, together with its research and local partners, examined the valley's actual development settings in terms of the socio-economic conditions of its local population, existing infrastructure and available public spaces and facilities. It reviewed the common land-uses, economic practices and jobs in the valley's settlements as well as the surrounding natural environment. Such a basis of understanding allowed the

research to run a spatial analysis demonstrating the valley's strengths, weaknesses, opportunities and threats as well as to propose a set of development strategies, accordingly. For efficiency and in order to facilitate the research conceived activities, the valley was divided into three main sections, representing its different development settings, where each has accommodated its own processes of data collection, mapping, analysis, conceptualisation and local development measures.

Section A is the farthest to the west and has a strong presence of an ethnical minority, the Co Tu, which emphasises the significance of the cultural dimension of development. It is required, therefore, to qualify the deteriorating public spaces and infrastructure in a sufficient manner. Innovative development measures such as decentralised and off-the-grid infrastructural solutions can be very suitable. It is also required to enable the local community to host a variety of cultural events and related activities and run small-scale community-based tourism projects promoting culture and environment. Unsustainable economic activities, such as logging, are endangering the local ecology, reducing the possibilities for ecological conservation of the rainforest and increasing the pollution running down to the Cu De River.

Agricultural production, mainly crops, dominates the scene in section B. Its central location emphasises its importance as a passing area that connects both ends of the river valley. Therefore, it is required in this section to provide a variety of touristic activities that could attract passing visitors of the valley and invite them to stay and explore. Such activities are suggested to focus on both eco- and agro-tourism. In the first case, the area should provide tracks for walking and cycling as well as appropriate sites for camping. In the second, it should promote socio-productive agricultural activities that are centred around the agricultural knowledge, practices and products of the local farmers. Also, a proper infrastructure enhancement is needed, especially regarding sanitation, waste management and water treatment. Similar to section A, innovative, decentralised and off-the-grid solutions are preferred.

Due to its proximity to Da Nang, infrastructure and road network in section C seem to be more developed than the rest of the valley. Population density, however, is considerably more, with stronger presence of fishing activities as well as a growing interest in real estate development. In this section, it required to improve the socio-economic and ecological conditions of the local population. The existing infrastructure, facilities and vacant plots may help the upgrading efforts. In order to balance the large touristic development taking place on the opposite side the river, avoid competing with it and retain the potential benefit, this section should focus on providing authentic experiences and high-quality services that opens the door for Da Nang's visitors to expand their reach and visit the valley.

Afterwards, the project connected the three development sections in an overall integrated development concept for sustainable tourism for the entire Cu De River Valley, covering the local as well as the regional dimensions of the proposed development. At the local level, all development measures are seen to adopt a community-based approach engaging the local

citizens in all development stages among at strengthening the socio-economic conditions, public infrastructure, space and facilities of the locals as well as enriching the touristic experiences of the valley's visitors and expanding their interaction with the local products, culture and traditions. At the regional level, connecting the valley's touristic spots and natural sceneries with those of the region through an integrated regional grid of touristic attractions to attract more visitors is a priority. A proper regional development for improved mobility and public transport that take advantage of existing infrastructure and expand it integrating a variety of green and eco-mobility options. For a smoother implementation, the development of the socio-economic and infrastructure conditions together with the enhancement of the quality of the valley's settlements should coordinate and fall in line with the enacted regional development policies. An overall vision for the sustainable tourism development along the Cu De River should concentrate on a proper marketing strategy that emphasises the uniqueness and authenticity of the valley as a brand. This is important to expand the valley's share of the tourism sector in central Vietnam. In all case and development scales, to ensure a proper management and operation of touristic practices as well as competency of tourism planning, capacity development for the local entrepreneurs and regional administrations is necessary.

Then, the research adopts the principles of strategic planning as basis to organise future implementations. All future implementation efforts should engage the local stakeholders in the further data collection, mapping and analysis, conceptualisation and implementation efforts. They should also represent the different characters of the valley's areas, i.e., local culture in section A, agricultural production in B and fishing in C, representing the social, environmental and economic dimension of development, respectively. To facilitate implementation and obtain support, pilot projects or entry points are needed to illustrate the project's proposals on the ground. Based on the research, action fields relating to innovative infrastructure development, capacity building and digitalisation can be highly suitable.

All research steps in the definition phase are seen to provide a basis for the emplement! Project in its later stages. Also, all research steps are performed from a touristic perspective, focusing on tourism and relating strongly to the identified touristic offers, gaps and potentials of the Cu De River Valley and its region.

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