Emerging Towns and Municipalities in Nepal:

Rapid Development Concepts
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Results of a case study project 2012

Technische Universität Berlin
Urban Management Program in collaboration with
GIZ Cooperation Project ‘Sub-national Governance
Program, Nepal (SUNAG)’ and the Department of
Urban Development and Building Construction
(DUDBC)
Cover
Women Selling Flowers at Temple in Nepal
Source: Laura Bright-Davies (2012)
Informal Vendor in Kohalpur
Source: Gloria Gaviria (2012)
Local Craftswoman Elaborating Paper Mache in Bhaktapur
Gloria Gaviria (2012)
Vulnerable Condition for Children
Source: Jieun Lee (2012)
Water Pump in Ward No. 3 in Kohalpur
Source: Gloria Gaviria (2012)
Tharu Community in Kohalpur.
Source: Gloria Gaviria (2012)
Rooftops of Bhaktapur
Source: Josefine Fokdal (2012)
Resident of Bhaktapur
Source: Gloria Gaviria (2012)
Bhaktapur
Source: Gloria Gaviria (2012)
(from top to bottom and left to right).
The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has been collaborating with the Technische Universität Berlin (TUB), Urban Management Program (UM), in the field of capacity building on urban development issues for several years. The UM Program aims to develop skills for the formulation of integrated approaches and implementation of efficient, flexible and action-oriented strategies for urban planning and management. In this context, the UM Program has carried out several joint study projects with GIZ programs in recent years, e.g. in Syria, Montenegro, Bangladesh, Egypt and Ukraine. In 2012, the UM Program cooperated with the GIZ in Nepal.

The Sub-National Governance Program Nepal (SUNAG) is a continuation of the long-standing cooperation between the Government of Nepal and the Federal Republic of Germany. It was initiated in September 2011 and aims at promoting local governance and civil society. It is jointly executed by the GIZ and the Nepalese Ministry of Local Development (MLD) and is supported by several partner institutions including the Department of Urban Development and Building Construction (DUDBC).

The aim of the collaboration between the three parties, DUDBC, SUNAG and the UM Program, was to develop ‘rapid development concepts’ which can serve as a starting point for further elaboration. Two weeks of fieldwork were jointly conducted by four teams comprising students from the UM Program and local staff from GIZ Nepal, DUDBC, and the Municipal Support Team. The fieldwork included participative planning processes aimed at developing comprehensive ideas including institutional, social, financial, and spatial aspects relevant for the respective three emerging towns and municipalities.

The results of the cooperation are presented in this report. We hope the experience can be an inspiration for further cooperation and exchange between students and professional staff working within the field of urban management.

Dr. Mahendra Subba, Director General, DUDBC
Dr. Horst Matthaeus, Program Manager, SUNAG (MLD – GIZ)
Dr. Bettina Hamann, Dean of Studies, UM Program
Nepal is a landlocked country located between People’s Republic of China and India. It is largely rural, and has one of the smallest urban populations worldwide. It is well known for its natural resources; the Himalayas in particular are a popular magnet for international tourism. Within this setting, the spatial planning process is slow and capacities at the local level are lacking. While municipalities struggle to develop and simultaneous to compete with each other, smaller towns located at strategic locations along national highways are experiencing growth but lack even the most basic planning instruments. This leads to the diminishment of natural resources. In this highly complex context, there is a need for urban managers to avoid a complete neglect of resources and to ensure a balanced development between urban growth and agricultural development.

Within the framework of the Sub-National Governance Program in Nepal (SUNAG) nineteen students from the Urban Management Program of the Technische Universität Berlin (TUB) had the opportunity to work together with professionals from SUNAG, the Department of Urban Development and Building Constructions (DUDBC) and the Municipal Support Team (MST). The SUNAG Program, jointly run by the German Development Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit - GIZ) and the Ministry of Local Development (MLD) aims to promote local governance and strengthen civil society in Nepal. The program is a collaboration between the Government of Nepal and the Federal Republic of Germany. It is divided into several phases, with the first phase running from 2011 to 2014 focusing on four priority areas: National Policy Reform, Subnational Institutional Reform, Civil Society Participation, and Sub-national Service Delivery and Infrastructure.

The young experts from the UM Program are a very heterogeneous group representing thirteen different nationalities (Australia, Bangladesh, Columbia, Egypt, Germany, Great Britain, Indonesia, Kenya, Mexico, Norway, South Korea, United States of America, and Zambia) and multidisciplinary professional backgrounds (university degrees in Architecture, Business administration, Media and social sciences, Education, Sustainable management of Natural Resources, Government and International Relations, Renewable Energy, Urban and Regional Planning, Civil Engineering, Public Affairs, and Project Management).

They have experience in the public as well as in the private sector in their respective home countries. The UM Program has a long-standing working relationship with the GIZ. Since 2003 GIZ staff have been deeply involved in teaching in the UM Program, e.g. with the senior expert Prof. Günter Meinert, who is an honorary professor of the program. In addition to the close collaboration in the classroom, fieldwork has been conducted in cooperation with GIZ throughout the years. The fieldwork includes projects in Aleppo, Syria (2007), Montenegro (2008), Bangladesh (2009), Cairo, Egypt (2010), and L’viv, Ukraine (2011). Furthermore, the fruitful cooperation has resulted in a frequent recruitment of graduated UM students into several programs around the world where they apply the gained knowledge in order to manage some of the current complex urban challenges.
In collaboration with GIZ and DUDBC, two emerging towns, Kohalpur and Panchkhal, respectively in the Terai region and in the Hill Region, were selected for the fieldwork. They are both among the 41 towns suggested by the MLD to become municipalities. As a third town, Lekhnath municipality was selected as a last moment decision.

The scope of the work was twofold due to very diverse stages of the planning process of the emerging towns and the municipality. Therefore, the scope for the two suggested municipalities was to work out strategic plans as support for further development, thereby developing first hand experience with the Rapid Assessment Techniques (RAT) for a simplified planning process. In parallel, the scope of the two teams working in Lekhnath was to generate a concept for the development of a city center and to brainstorm on concepts for economic growth through ecotourism.

The preparation of the fieldwork started in February in Berlin and included research on aspects of urban development and administrative structures in Nepal as well as a review of the RATs. All aspects were consolidated in a reader, which was prepared in advance of the fieldwork.

On April 11th 2012 an initial meeting between the three partners took place in Kathmandu. The following nine days were spent by the four groups of students together with staff from GIZ, DUDBC, and Municipal Support Team (MST) in the three selected areas: Kohalpur, Panchkhal, and Lekhnath.

During the fieldwork, the teams in Kohalpur and Panchkhal first made an initial diagnosis of their respective areas based on participative data collection methods. The diagnosis was followed by proposals for strategic planning. Finally, actions relevant to achieve the strategies both for the suggested municipality and for one selected ward were proposed. In Lekhnath, concepts and
actions were developed after an initial data collection process. Finally, reflections on the implementation of the proposed actions were made and shared with the local stakeholders. In all the localities the proposals were presented to the local community and the feedback was incorporated into the projects. Upon returning to Kathmandu, one presentation was consolidated and the results were presented to the GIZ and DUDBC on the 25th of April. Upon returning to Berlin, the consolidation phase took place during an intensive nine day work process and included the feedback from Kathmandu as well as further elaborations.

This report presents the results of the work produced in collaboration between the TUB UM Program and the GIZ SUNAG program, as well as their partner DUDBC. The data collected have a first hand value since there is a lack of data in most of the relevant areas. Therefore we hope that the presented data form an initial step towards understanding the three emerging towns and the development mechanisms in greater depth. In addition, this report presents strategies and actions for urban development relevant for the respective three areas. These suggestions should be seen as inspirations for further development in the areas.

We owe great thanks to Dr. Horst Matthaeus (Program Manager of SUNAG) and the entire SUNAG team for their time, trust and guidance. Furthermore, the collaboration with DUDBC, especially Dr. Mahendra Subba (Director General), Mr. Girija Gorkhali (Deputy Director General) and Ms. Sarita Shrestha Maskey (Senior Planner) made our experience unforgettable. Thanks to the MST for their support in preparing and accompanying the field research in Lekhnath, here we owe a special thanks to the Team Leader, Dr. Alexander Jachnow.

Thanks to all the local experts who worked with the teams and dedicated their time and energy to the project: Suresh Acharya, Chandani KC, Dinesh Pote, and Deepak Shrestha from DUDBC and Pushpa Bandari, Jeewan Gurung, Arjun Koirala (MST), Laxman Rajbhandari, Bandana Sharma (MST), Arun Shrestha, Bijaya Rajbaidya Shrestha, Rita Tamang, and Lalita Thapa from SUNAG. Also to all the local residents of the respective communities, the engaged community organizations and the Village Development Committees in Kohalpur, Rajhena, and Panchkhal as well as the Municipality of Lekhnath, who all shared their knowledge with us and made this project possible, we owe our deepest gratitude.

Last but not least we want to thank all the young professionals of the UM Program for their great commitment, impressive dedication and huge inspiration to this project.

Josefine Fokdal and Gesa Schöneberg
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<th>Full Form</th>
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<tbody>
<tr>
<td>CA</td>
<td>Constituent Assembly</td>
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<tr>
<td>CBO</td>
<td>Community Based Organization</td>
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<tr>
<td>CBS</td>
<td>Central Bureau of Statistics</td>
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<tr>
<td>CBT</td>
<td>Community Based Tourism</td>
</tr>
<tr>
<td>DCC</td>
<td>District Chamber of Commerce</td>
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<tr>
<td>DDC</td>
<td>District Development Committee</td>
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<tr>
<td>DUDBC</td>
<td>Department of Urban Development and Building Construction</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>GIZ</td>
<td>Gesellschaft für Internationale Zusammenarbeit</td>
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<tr>
<td>LED</td>
<td>Local Economic Development</td>
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<tr>
<td>LSRA</td>
<td>Local Self-Governing Act of 1997</td>
</tr>
<tr>
<td>MLD</td>
<td>Ministry of Local Development</td>
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<tr>
<td>MST</td>
<td>Municipal Support Team</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
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<tr>
<td>PP</td>
<td>Periodic Plans</td>
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<td>RAP</td>
<td>Rapid Assessment Process</td>
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<td>RAT</td>
<td>Rapid Assessment Technique</td>
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<td>RWH</td>
<td>Rain Water Harvesting</td>
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<td>SUNAG</td>
<td>Sub-National Governance Program</td>
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<tr>
<td>TDC</td>
<td>Town Development Committee</td>
</tr>
<tr>
<td>TIES</td>
<td>The International Ecotourism Society</td>
</tr>
<tr>
<td>TUB</td>
<td>Berlin Institute of Technology</td>
</tr>
<tr>
<td>UGDP</td>
<td>Urban Governance and Development Program</td>
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<tr>
<td>UM</td>
<td>Urban Management</td>
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<tr>
<td>VDC</td>
<td>Village Development Committee</td>
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<tr>
<td>WCF</td>
<td>Ward Citizen Forum</td>
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</table>
1 Introduction
Nepal is a country of over 26 million people on an area of 147,181 square kilometers (CBS 2011). The country is geographically divided into three regions; the flat and fertile Terai region in the south; terraced cultivation and swiftly flowing mountain rivers in the central hills; and the Himalayas in the north.

With a per capita GDP of $640 USD, Nepal is considered to be one of the world’s poorest countries (IMF 2011). Nepal’s economy centers on agriculture: 80% of the labour force relies mainly on agriculture for employment and 86% of the country’s households cultivate smaller pieces of land (NDF 2002).

Administratively, the country is divided into five development regions, eastern, central, western, mid western and far western. It is bordered by India on 3 sides and by China to the north. Its capital, Kathmandu, is in the central part of the country. Due to the extreme variations in altitude and geographical landforms, Nepal’s environment ranges dramatically. In 2001, the urban population constituted about 17% of the total population living in 58 designated urban centers as compared to 14% in 2001 (CBS 2001, CBS 2011). The most fertile land found in the Terai is experiencing rapid urbanization and accommodates up to 50.15% of the population while the hill region constitutes 43.1% and the Himalayan region 6.75% of the total population (CBS 2011).

Urbanization and the increasing urban population is caused by several factors 1) a high natural growth rate (ranging from 2.6 to 3.0% per annum in the last four decades); 2) high levels of rural to urban migration due to relative growth in urban economies; 3) extension of municipal boundaries; 4) designation of new municipalities (ADB 2012).

The rapid development of already established municipalities and emerging towns at strategic locations formed the core direction of the work.
Emerging Towns and Municipalities in Nepal: Rapid Development Concepts

presented in this report. The Nepali Government can declare any urban area as a municipal area based on certain criteria. In order to secure a systematic short- to medium-term development - linked to a long-term perspective - , Periodic Planning has been incorporated into the municipalities. The aim is to improve local capacity building and promote social inclusion. However, the adoption of this land use planning tool has been identified as rigid and difficult to implement. The mandate for land use planning is vested with the Central Government with the Municipal Governments lacking financial and technical capacities for the implementation of these land use plans (Herrle/Ley 2010).

Besides the already established 58 municipalities, MLD recently proposed 41 new municipalities. The decision was approved, but withdrawn after a few days, leaving the total number of actual municipalities at 58, including the 15 year old Municipality of Lecknath. Two of the emerging towns dealt with in this report, Kohalpur and Panchkhal, were among the 41 proposed municipalities.

The transition of the emerging towns results in spatial, institutional and economical transformations not only in the urban form, but also in the lives of the inhabitants. Most of these emerging towns, however, lack even the most modest forms of urban planning and development strategies. Urban growth with no planning has resulted in several challenges, including increased poverty levels in urban areas, environmental pollution, inadequate provision of infrastructure and services by the local governments and loss of fertile agricultural land. The combination of population growth and expansive urbanization is causing a significant reduction of the nation’s highly fertile cultivable land. The nation’s poorest people, especially in urbanized areas, are already experiencing the effects of rising food prices. It is estimated that 3.5 million Nepalese are currently facing food shortages and insecurity (DFAT 2011).

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**Figure 1.2:**
Organizational Structure of the Municipality
Source: Urban Management 2012
The objective of the projects presented here was to develop rapid concepts for the three selected emerging municipalities/towns, that serve as a basis for investment and urgent planning decisions. The concepts and strategies presented here are based on Rapid Assessment Techniques (RATs). Instead of prolonged fieldwork and iterative data analysis and additional data collection, these techniques use intensive team interaction in both the collection and analysis of data, to quickly develop a preliminary understanding of a situation from the insider’s perspective (Beebe 2011). However, the results presented in this report should be seen as inspiration for later refinement and consideration.

The fieldwork was conducted in close collaboration with the Department of Urban Development and Building Construction (DUDBC), supported by the Municipal Support Team (MST), and the Gesellschaft für Internationale Zusammenarbeit (GIZ) within the framework of the Sub-National Governance Program (SUNAG).

Building on a long standing cooperation between Germany and Nepal, the SUNAG Program is a continuation of the collaboration between the Federal Republic of Germany and the Government of Nepal. It is executed by the Nepalese Ministry of Local Development MLD and GIZ.

The objective of the SUNAG Program is to support the development of local governance and civil society, with the aim of strengthening the capacity of local bodies in selected fields at district and municipality level. Building upon experiences of ongoing programs such as the Urban Development through Local Efforts (UDLE), Poverty Alliavation in Selected Rural Areas (PASRA) and the Federalism Support Program (FSP), the SUNAG Program has four key areas: 1. Enhance capacities and capabilities at central government level to enable consistent policy making for sub-national government, 2. Administrative capacity and capability at sub-national government level, 3. Organisational capacity and capabilities of sub-national non state actors or civil society organisations, 4. sub-national services delivery and infrastructure that focus on improving level local business and poverty reduction.

The first phase of the SUNAG Program commenced in September 2011 and will end in June 2014. The program is aligned with Nepal’s Three Years Interim Plan (TYIP). The TYIP has three goals aligned with the Millenium Development Goals (MDG): 1. improve living conditions, 2. reduce economic disparity and 3. increase social inclusion to create sustainable economic and profitable employment opportunities. The SUNAG Program also aligns itself with the TYIP through its strategies that include the development of physical infrastructure which supports the planned new federal structure of Nepal and the forecasted provincial economic growth. Other strategies include the strengthening of social inclusion and social justice–oriented development and the promotion of development that is built on the pillar of good governance and effective service delivery. The program aims at four outcomes: 1. National Policy reform, 2. Sub-national institutional reform, 3. Civil Society Participation, 4. Sub-national service delivery and infrastructure.

Within this first phase of the SUNAG Program 19 students of the UM Program conducted fieldwork between the 11th and 26th of April 2012 under the guidance and support of staff from GIZ and DUDBC as well as the MST. The aim of the collaboration was to carry out fieldwork related to urban management and rapid development assessment in the two emerging towns of Kohalpur and Panchkhal, as well as in the municipality of Lekhnath. The students were divided into four groups, each focusing on institutional, social, financial and spatial aspects relevant to the development of the respective emerging towns and municipality.
1.1 Planning Process and Three Cases: Kohalpur, Panchkhal and Lekhnath

In order to give an overview of the work the four groups have completed, a simplified framework is adopted for emerging towns in Nepal. As fieldwork was carried out in two emerging towns, designated as municipalities, and one already established municipality, it is important to determine what stage of the planning process the teams were working with in order to understand the strategies and actions developed for the three areas. This section will explore the unique situation of each study site, present each site’s planning stage, and discuss the relation of the various studies within the overall framework model. The model relates to the following five phases of planning:

1. DIAGNOSIS, which is the research, data collection and analysis phase;
2. STRATEGY, where the analysis is used to define a clear strategy to achieve the vision;
3. ACTION, where practical and comprehensive action plans - which take into account short-term and long-term steps - are developed;
4. IMPLEMENTATION, where the action plan is rolled out according to the determined time-frame; and
5. EVALUATION, where a framework for monitoring and evaluating the planning progress - developed during the action phase - is adhered to.

Presently, 58 municipalities have been designated by the national government. As part of the greater national planning strategy, 41 Village Development Committees (VDCs) were recently proposed by the MLD as potential municipalities, but the designated status was declined by the cabinet. This attempted mass upgrading ties into a national objective to decentralize planning authorities, as municipalities - by definition - have greater local autonomy, receive additional fiscal support from the central government, and are driven by periodic planning and participatory process requirements (The Tenth Plan: Poverty Reduction Strategy Paper: 2002-2007; NPC 2003, 2007). These emerging towns (VDCs) are classified according to the following criteria that define an “urban center”: A minimum population of 20,000 inhabitants; basic facilities; a population density greater than 10 persons per hectare; population above 10 years of age in non-agricultural economic activity should be greater than 50%; and contiguous physical development and expansion (DUDBC 2007b). The declaration reinforces part of the national strategy to provide greater local autonomy for regional development. The Local Self-Governing Act 1999 (2055 B.S.), for example, empowers local governance bodies to collect revenue and to implement local development planning (DUDBC 2007b). Nevertheless, the two emerging towns dealt with in this report (Kohalpur and Panchkhal) were among the suggested municipalities, and in the following we

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1 In the hilly and mountain regions however, minimum population has been fixed at 10,000 people and other requirements remain the same.
will deal with the aspect of status change from a VDC to jointly developing a municipality.

1.2 Panchkhal and Kohalpur

The most significant factor related to the planning stage of two of the sites, Kohalpur and Panchkhal, is their suggested municipality status. For this reason, the two sites are “clustered” together regarding their position on the planning circle (Lekhnath will be considered separately below). Both sites are currently designated as VDCs that have been proposed to be upgraded to municipality status.

While the declaration for upgrading is promising, it also entails some unforeseeable disadvantages. Forestalled ratification of the national constitution has left the administrative transition in limbo. The limbo has stymied planning efforts; the coordination between the various local agencies (e.g. VDC and Town Development Committee (TDC)) have been muddled and effectively disjointed. Another disadvantage pertains to the increased taxes for which the suggested municipalities are to become responsible. The specific issue here is that the services and supplemental funding for the municipalities have not been appropriated, despite the fact that they are already required to make higher municipality-level tax contributions. This has lead to slimmer financial resources for both towns in the interim; it has also piqued frustration from local planners and the community.

The additional planning conditions identified in the two emerging towns, Kohalpur and Panchkhal, are outlined in the table below.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Kohalpur</th>
<th>Panchkhal</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of administrative capacity</td>
<td>Leadership, authority, technical savvy</td>
<td>Leadership and networking skills from the VDC Secretary and the staff</td>
</tr>
<tr>
<td></td>
<td>Appointed official (not elected), short duration in position (changing political authority), unestablished technical knowledge (one former VDC chair was an engineer)</td>
<td>Adequate physical accommodation for VDC and TDC, frequent electricity service disruption, lacking technological resources (computers, etc.), poor storage amenities for data</td>
</tr>
<tr>
<td></td>
<td>Adequate physical office of the VDC: It was a new building with the main facilities for holding meetings and basic services available</td>
<td>Insufficient staff working with the government due to the political instability</td>
</tr>
<tr>
<td>Physical infrastructure of agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human capacity: adequate, knowledgeable, productive staffing</td>
<td>Reported inadequacy of sufficient staff to monitor planning efforts</td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Kohalpur</td>
<td>Panchkhal</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td><strong>State of inter-agency collaboration</strong></td>
<td>Undetermined adequacy of staff’s technical skill and knowledge (or training provision) to effectively apply planning regulations [further study required]</td>
<td>Good staff networking with the community and with good organisational skills</td>
</tr>
<tr>
<td>Data management</td>
<td>No apparent mechanism in place to adequately archive and retrieve data (documents, maps, etc)</td>
<td>We observed there was inter-agency collaboration, nevertheless, there is no evidence of the extent of it</td>
</tr>
<tr>
<td>Information relay</td>
<td>No observable mechanism for coordinated information relay aside from scheduled meetings with various stakeholders (reported with varying frequency)</td>
<td></td>
</tr>
<tr>
<td>Communication regularity and effectiveness</td>
<td>Limited sharing of collected data, city profiles, planning schemes, strategies and goals, and even basic maps. (e.g., lack of awareness by most agencies that the VDC had completed a formal city profile document for Kohalpur in 2010; lack of knowledge about the current population of the VDC)</td>
<td>Most of the stakeholders mentioned the continuous dialogue and working with the VDC</td>
</tr>
<tr>
<td></td>
<td>The agencies interviewed expressed that joint meetings were regularly held to ensure effective communication relay and collaborative efforts. This self assessment was in conflict with the degree of information agencies had about each other’s endeavors</td>
<td>There is evidence of collaboration in specific projects between the VDC and the CBOs</td>
</tr>
</tbody>
</table>
As Kohalpur and Panchkhal are yet to be recognized as municipalities, they are at a different stage of the planning process to Lekhnath, which is an established municipality (see framework).

The process of creating periodic plans for Panchkhal and Kohalpur has only been initiated recently, therefore greater focus is required at the Diagnosis (data collection) and Strategy stages of the planning circle to create a solid foundation for the following stages of Actions, Implementation and Evaluation.

The applied research conducted in these two emerging towns developed inquiry objectives specific to site assessment and strategy development. A further step was taken to develop one Project ('Action') for each site to exemplify the application of the outcomes from the Diagnosis and Strategy stages. In the case of Kohalpur, a community-based project was developed detailing the action steps, stakeholders, and timeline for establishing Integrated Solid Waste Management (ISWM) at the ward-level. The Panchkhal team developed exemplified actions addressing four priority strategies with focus on a specific study area (Wards Five and Six). These included rainwater harvesting, land-pooling (e.g., the categorization of agricultural land), establishing a shop-owners association responsible for the management of the market, and forming agricultural cooperatives. These four actions are linked in their operation and execution.

### 1.3 Lekhnath

Lekhnath became a municipality in 1997, when four VDCs merged in order to increase administrative efficiency. While it has already been a municipality for 15 years, several factors have resulted...
in Lekhnath being largely unplanned and under-developed. Most notably, this is due to a lack of capacity and resources among municipal staff, the ongoing political instability and the unplanned development of the majority of land, which is privately owned.

This does not imply that there have been no attempts to plan the municipality, but rather, there has been little or no implementation of the suggested plans (e.g. a Periodic Plan (PP) was developed for 2006–2012). The lack of implementation is partially due to the absence of comprehensive and pragmatic plans (DUDBC 2007b) and partially due to resource constraints.

In the planning circle, the two Lekhnath case studies fall into the latter part of the framework, with a focus on the Action and Implementation phases. The Diagnosis and Strategy phases are still vital in order to develop a realistic and implementable urban development plan, but as other consultants have already worked on these stages (data collection and strategic planning), there is a greater emphasis on the Action and Implementation phases.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Lekhnath</th>
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<tbody>
<tr>
<td>State of administrative capacity</td>
<td>Leadership, authority, technical savvy</td>
</tr>
<tr>
<td>Physical infrastructure of agencies</td>
<td>Adequate physical space with a generator which provides almost uninterrupted electricity. Poor knowledge management and related facilities</td>
</tr>
<tr>
<td>Human capacity: adequate, knowledgeable, productive staffing</td>
<td>Varying levels of competency but limited staff numbers and funds limit the potential effectiveness of the competent staff</td>
</tr>
<tr>
<td>Data management</td>
<td></td>
</tr>
<tr>
<td>Information relay</td>
<td>No apparent system in place to adequately archive and retrieve data (documents, maps, etc). Most of the information has been collected separately and repeatedly, as each consultant creates and then takes the information with them</td>
</tr>
<tr>
<td>No observable mechanism for coordinated information relay aside from scheduled meetings with various stakeholders</td>
<td></td>
</tr>
<tr>
<td>Limited sharing of collected data, planning schemes, strategies and goals, and basic maps</td>
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</table>
1.4 Summary

The three urban areas are representative for the different phases of planning for emerging towns in Nepal. The initial phases of the cycle (Diagnosis and Strategy) are explored primarily in the Kohalpur and Panchkhal cases, while in the two Lekhnath cases, the focus is placed on the later phases (Action and Implementation) (see Figure 3). Crossover occurs at the Action phase, as actions are proposed in all four projects based on their context, however in the case of Kohalpur and Panchkhal these are not as fully evolved and as immediately implementable as the action plans developed in the Lekhnath projects.

It is important to note that one stage of the planning process framework was not investigated. While the Evaluation stage is of great relevance, it is beyond the scope of this report. This report is broken down into four chapters detailing the specific areas of study. Following the steps of the planning process as indicated above, the first chapters focus on the analysis of the suggested strategies and actions for Kohalpur and Panchkhal, followed by two chapters on the concepts and actions developed for the municipality of Lekhnath. Conclusions and recommendations will later be drawn on the challenges and opportunities experienced by the team in the adoption of the Rapid Assessment Techniques and recommendations for improved urban planning practice.
2 Kohalpur
Kohalpur is located in the Terai region in the Mid-West of Nepal. It belongs to the Banke District, which is in the Bheri Zone, and comprises a total area of 2816.6 hectares (VDC 2010). It is strategically located at the junction of the north-south and east-west highways which provide important national transport links as well as connecting Nepal to China and India. Kohalpur is 16 kilometers away from the Nepalgunj municipality, which is accessible by air, and 6 kilometers from the Indian border. It is one of the 41 emerging towns proposed as a future municipality.

Kohalpur has a population of 26,962 predominantly Hindu inhabitants (96.80%), comprising 39 different castes; the main ones being Chetri (24%), Tharu (19%) and Brahmim (18%) (VDC 2010). Immigrant households constitute 68% of the total population of the VDC. The huge migration of people from the hill areas to the Terai region in Nepal was caused mainly by political changes and generated instability. However, the annual population growth rate has declined from 5.91% in 2001 to 3.63% in 2009/2010 (VDC 2010). The main employment sector is agriculture and livestock (52.88%) and the rest of the population earn their living from day labour (21.90%), business (11.27%), governmental and non-governmental organization work (13.86%) and small industry (0.09%) (VDC 2010).

Kohalpur has a forest area, which is currently threatened by deforestation. From a total of 1025.1 hectares, 16.20 hectares (1.58%) were deforested in 2010. The forest area belongs to the buffer zone.
of the Banke National Park, which is connected with the Bardia National Park in the Bardia District. Nowadays the Bardia National Park is an ecotourism area and one of the objectives of the national government is to promote ecotourism in the Banke National Park as well (Department of National Parks and Wildlife Conservation 2012). The land of the VDC of Kohalpur designated for agriculture is 1452.8 hectares, from that area 91% is used for agricultural purposes. One of the existing environmental issues in Kohalpur is flooding, affecting around 185.8 hectares of the VDC. Mostly in the monsoon period, from June to September, it affects the population located near the Dudhuwa River, which crosses part of Kohalpur in the south-north direction.

Map 2.2: Environment Sensitive Map of Nepalgunj-Kohalpur Highway Corridor
Source: Modified from DUDBC (2007a)
Basic services do not cover all of Kohalpur’s population and are sometimes limited to the planned area of the VDC which is in Ward Two. There is no official solid waste management system in Kohalpur. Garbage collection, disposal and treatment services are not officially provided to the population. In some areas, garbage is collected by private initiatives in a tractor; how it is finally disposed of is unknown.

Regarding water infrastructure, 68% of the VDC households have water pipelines while 31.15% use hand pump systems to obtain underground water; the rest of the households use other sources. In terms of sanitation, of the total 4735 households in Kohalpur VDC, 1548 (33%) do not have a toilet. Septic tanks are used by 2046 households (43%), 841 use temporary toilets (18%), 131 have biogas toilets (2.99%) and 169 units (3.01%) are connected to an open canal. The existing central electricity line of Kohalpur VDC covers 87% of the households, 13% are without electricity and use kerosene. A small part of the remaining households use alternative environmentally friendly sources such as solar panels and biogas (VDC 2010).

The District Development Committee (DDC) of the Banke District has recently been chaired by a Local Development Officer (LDO), nominated and appointed by the government. Projects of urban development within the district are prioritized and approved by the District Council before implementation.

The current political situation in Kohalpur is tied to the town’s status (e.g. the uncertainty of jointly upgrading Kohalpur VDC and the neighboring VDC to a municipality). At the present time, local authorities are not elected by citizen vote; they are nominated and designated by the national government. Consequent to the political instability coming from the national government, there is high political turnover in the local official institutions. Most of the officials were recently appointed to their chairs, making continuity and control within steering processes difficult.

Kohalpur’s VDC has 9 wards, each with a Ward Citizen Forum (WCF). If the proposed municipality is created from the two existing VDCs, Kohalpur and Rajhena, a total of 13 wards is expected. Over the last 5-year transition period Kohalpur’s VDC has been managed by a nominated and appointed secretary.

Although the community does not have legal power, Community Based Organizations (CBOs) play a crucial role in Kohalpur’s development; they have the capacity to propose and carry out projects according to their community priorities. In some cases, they participate financially with the VDC and other organizations to implement projects due to the lack of resources in the local government.

Citizen participation in official political processes is limited, but citizens can elect their WCF representatives and channel participation in development projects through them. Meanwhile, the VDC has committed to working on an identification system for its citizens.

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2 Solid Waste Management - refers to the collection, transportation, treatment, final disposal and recycling of solid wastes.
3 WCF is the body elected by the community of each ward, i.e. a ‘bottom-up approach’ which gives the community the opportunity to express their priorities to the local government bodies. This facilitates the identification and prioritization of their needs for the allocation of financial resources at the different levels of government. The election of the members of the WCF is encouraged by the so-called social mobilizers who are designated by the DDC with the aim of empowering the community, making it actively involved in local decision-making. Social mobilizers are the linkage between the local bodies and the community. The WCF is a component of the multi-lateral Local Governance Community Development Programme (LGCDP).
4 Community Participation is the process by which individuals and families assume responsibility for their own health and welfare and for that of the community and develop the capacity to contribute to their own and the community’s development. They come to know their own situation better and are motivated to solve their common problems. This enables them to become agents of their own development instead of positive beneficiaries of development aid.
2.1 Kohalpur Ward Three

Of Kolapur’s nine wards, Ward Three was chosen for analysis due to its prime location in the west of Kohalpur’s VDC. It includes the densest residential areas, the crucial north-south/east-west highway junction, as well as commercial activities carried out along the highways. The ward’s 4712 inhabitants have a variety of 17 caste backgrounds, with the majority being Brahmin (Pahade), Chetri and Tharu. Of the ward’s 646 migrant households, 11% come from the Banke District and 89% are from other districts.

Apart from the spatial and social aspects mentioned, waste management and provision of basic services and infrastructure are crucial issues in Ward Three, which also includes informal settlements. However, these aspects are not only relevant for this ward, but can be seen as representative for the entire VDC of Kohalpur. Used by 76% of the households, septic tanks are the ward’s most common sanitary system; 6% of the ward’s households do not have a toilet and the rest use other systems. Of the 835 households in the ward, 60% have water pipelines, 38% use hand pump systems to collect underground water and the rest use other sources (VDC 2010). In terms of health infrastructure, the Medical College, which is Kohalpur’s main health center, is located in Ward Three. Most of the herein identified potentials and challenges of Ward Three will be addressed in suggested actions for the development of this ward. However, in the following section the objective and data collection methods will be presented in order to understand the analysis on which the suggested strategies for the declared municipality are developed.

2.2 Objective

The Kohalpur VDC does not have the capacities for developing local strategies for spatial development. As Kohalpur is one of the VDCs to have been proposed as a municipality, one of the objectives was to support Kohalpur during the transition period in terms of management and planning by applying a simplified planning process (not a periodical plan). Thereby three of the five planning stages i.e. diagnosis, strategy and action are embraced.

Firstly, the potentials, weaknesses and challenges of Kohalpur were investigated by applying rapid assessment techniques. Accordingly, the objectives were constantly revised and analyzed throughout the process. Thereby it was important to consider facts such as availability of data or findings in the research process.

The final objective of the study is to develop strategic planning for the future municipality of Kohalpur addressing immediate urban development issues.

2.3 Methodology

During data collection, several methods were applied in order to find accurate and up-to-date data as a basic foundation of analysis and planning.

2.3.1 Interviews

Interviews served as the primary method for data collection to identify many issues from different perspectives. In total, 14 interviews (see annex) were conducted during a span of five days, of which ten were formal sit down interviews and four were informal discussions. The interviews were based on the following process:

1. Identify target data and the information gap that is being sought
2. Identify appropriate actor(s) and consider profile of actor(s)
Translation was one of the challenges when conducting interviews in a different language. However, the variety of perspectives from the interviews provided a list of relevant issues (see page 199 for a list of interviewees).

3. Develop strategic interview questions related to target data
4. Plan interview dynamics and logistics
5. Conduct interview with best practices
6. Triangulate and document
2.3.2 Direct Observation

The objective of direct observation is to identify issues in a spatial context. The process of direct observation started with 1. map visualization, 2. identification of the main points, 3. identification of strategic site with local support or secondary data, 4. discussion about objective in spatial context, and 5. recording, photographing. The main challenge of direct observation was the lack of coverage time.

2.3.3 Collecting Secondary Data

Secondary data, such as documents and maps, are needed during the data collection process to have background information about the study area. Processes that were carried out in Kohalpur were to 1. read background data, 2. seek additional secondary data, 3. translate data, and 4. discuss main data points. Challenges during the collection of secondary data included outdated data and the language barrier of the data, which are in Nepali.

2.3.4 Feedback Evaluation Survey

The evaluation survey aims to collect feedback from actors after the first presentation in the TDC office of Kohalpur. The steps of the evaluation survey were to 1. develop survey questions, 2. translate into a second language, 3. distribute and collect, 4. translate the responses, and 5. analyze. From the result of the survey, a great deal of feedback about existing conditions, planning, and strategies for the future municipality was collected.

2.3.5 Focus Groups

The Kohalpur group also arranged a focus group discussion with the Ward Citizen Forum of Ward Three with an objective of identifying the general perspective of the members. The process was started by arranging the meeting, developing the questions, conducting and recording the discussion. The diversity of participants was considered as one of the main pros of the discussion, while the challenge of scheduling was one of the cons. Within the discussion, some new information and prioritization of issues were revealed, including the relationship with the community.

2.3.6 Community Mapping

Community mapping was one of the methodologies used to identify and prioritize issues in a spatial context taking into account the challenge of the illiteracy rate in an indigenous settlement of Kohalpur. The process started by dividing groups of the community and asking the group to draw their ward, including the streets, landmarks, and their houses. Then the groups were asked to draw the things that they like and dislike as the means to identify problems and potentials. After the drawing process, the groups identified the likes and dislikes on a site walking tour. Community mapping is effective and applicable despite illiteracy. It is a simple tool to generate a better understanding about the community perception of immediate issues.

The rapid assessment methodology that was employed required a solid team dynamic and a well-mapped timeline. While having a 9-day schedule provided for good structure for time management throughout the project, it is important to note that the team held frequent group check-ins to allow for flexibility. The schedule was adapted on a daily basis to accommodate the “snowball” effect that naturally took place throughout the project. It is also important to note that the team prepared by reviewing established best practices for rapid assessment methods, and reflected on daily experiential learning to improve research within the specific context.

Overall, 14 interviews were conducted, making this the predominate method of data collection. Most of those interviews were formally structured
Figure 2.4-5:
Mapping Activities with Tharu Community
Source: Gloria Gaviria (2012)
and conducted with one local official. Others were conducted formally but with several individuals (e.g., ward, informal settlement, political leaders and Chambers of Commerce interviews), or informally (e.g., hermeneutic interviews with local businesspersons). Additional methods were employed including focus groups, secondary data collection, community mapping, direct observation and questionnaire surveying. In addition to the outcomes developed directly from the rapid assessment, there were several secondary outcomes of the methodology worth mentioning. Firstly, the rapid assessment process provided a means to indirectly relay information between local agency representatives. It was noted that several agencies did not have information-sharing processes in place, thus the interviews provided an opportunity to deliver information across agencies. Additionally, in the case of focus groups and multi-person interviews, the group setting created a platform for stakeholders to express their varying perspectives of the municipality’s vision and issues increasing, or at least reinforcing, awareness and discourse on matters relevant to planning.

2.4 Analysis

2.4.1 Stakeholder Analysis

Public:
Key Stakeholders
A key public stakeholder in Kohalpur’s transition on the district level is the DDC. It will continue being the representative body of Kohalpur on the national level; moreover it will have to coordinate its own activities, such as taxation and budget allocation for the new municipality.

Ward Citizen Forum (WCF) is the representative body of the community on the local level, granting a level of citizen participation in the current VDC and also in the case of a new municipality. Depending on the distribution of the wards, these organizations will have to be restructured. Projects developed within the wards involving CBOs will continue until and after the transition, therefore they are key actors.

Town Development Committee (TDC) is also a key stakeholder on the local level due to its responsibility in urban physical planning. Currently, its jurisdiction is limited to the planned area of Kohalpur, and not to the entire VDC, which leaves great parts of Kohalpur without required interventions.

Primary Stakeholders
Transportation Management Office (TMO) is a primary actor at the district level for the transition due to the strategic location of Kohalpur at the junction of the main highways, which gives transportation a primary position in urban and economic development. Investment in road infrastructure is expected from the new municipality’s tax revenues from transportation. Structural changes within the institution might be needed for it to be capable of meeting new challenges that might arrive with the municipality status.

In Between Stakeholders
Kohalpur’s VDC together with Rajhena’s VDC should be collaborating and coordinating for the transition; this involves the fusion of both administrative, political and physical bodies.

Kohalpur’s VDC is between the key and the primary stakeholders because, although it will disappear as an administrative body, it will have to be involved in the process of the fusion with Rajhena’s VDC. In the case of the latter, it is located between the primary and secondary actors because it does not match Kohalpur’s importance on the district level and it is institutionally weaker.

Secondary Stakeholders
Education Community (EC) from the public sector is an important secondary actor because education is one of the activities that supports and is used to foster development. The EC is included as
a valuable and respectable member in Kohalpur’s community projects and in the society overall.

*Nepalgunj* is a Municipality in the Banke District. It is aware of Kohalpur’s strategic location and potential for economic development. With the status change, collaboration with Kohalpur municipality is possible, or there may be competition for funds for development between them within the district.

**Private**

**Key Stakeholders**

*The Medical College* is one of the major sources of development for Kohalpur and will continue to be one of its main attractions with future expansion in the planned area. It expects better infrastructure from the investment of the new municipality tax revenues.

Projects such as private hotels are being developed by private investors in Kohalpur; land costs are currently high, but are expected to stabilize at some point. Potential investors are waiting for favorable land prices and are also aware of the potential ecotourism development of the area.

**Primary Stakeholders**

Although *Kohalpur’s Chamber of Commerce (KCC)* is not ascribed to the District Chamber of Commerce, it represents local entrepreneurs, some of whom are affiliated with the DCC; therefore, the two chambers cooperate with each other on small scale social projects.

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5 The definition ‘Education Community’ includes all stakeholders involved with or issues around education in Kohalpur
When the municipality becomes official, the District Chamber of Commerce (DCC) will have to cooperate with KCC to legalize its status.

Secondary Stakeholders

Education Community (EC) from the private sector is a secondary actor as mentioned before in the public case, because of the importance of education in Kohalpur’s society.

Civil Society

Key Stakeholders

The community currently plays a key role in Kohalpur’s local development despite inadequate government support. With the transition, the community will have the possibility to reinforce participation through the election of its government representatives. In addition, they can take part in political parties and participate directly in decision-making processes or get involved by working for official institutions.
Primary Stakeholders
Bilateral Implementing agencies such as the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) are involved in the transition, mainly through providing academic and technical support between civil society and the public sector.

Secondary Stakeholders
NGOs and technicians/experts are developing projects that involve the VDC and the community to help them address some of the urban development issues in the future municipality.
2.4.2 SWOT Analysis

Based on available data collections and findings from field research, a thematic SWOT analysis was used as the main tool to organize and prioritize critical urban issues according to four main categories: spatial, financial, social and institutional. After recapping and prioritizing each part, the following steps were to overlay, organize, and prioritize the conclusions into one SWOT. This analysis served as a basis for developing strategies and actions for planning the future municipality of Kohalpur.

**Strengths**
Kohalpur expects to develop as a local hub in the Mid-West Region of Nepal with its unique geographical location serving as the highway junction along the east-west and north-south axis. Kohalpur is connected not only to Nepalgunj, a neighboring city 16 kilometers to the south, and the Indian border, which is 6 kilometers further south, but also to Kathmandu and other parts of the country by flights from Nepalgunj Airport. In addition, it has abundant land resources and a good environmental situation in terms of surrounding nature preserves (e.g. Bardia National Park), as well as climate conditions which are good for agriculture and alternative energy resources.
The geographical and environmental conditions affect population growth related to migration from various regions. There is a flourishing labor market based on diverse human resources. Formal and informal economic development are thriving based on unique markets such as healthcare via the Medical College and related hospital facilities, agriculture, transportation, and tourism. In particular, the Medical College and hospital could be an economic engine to provide job opportunities and a social welfare institution to provide better medical service.

In expectation of the future municipality status, there is a commitment for development from various stakeholders, including local government institutions, active chambers of commerce, third parties, and community members. Additionally, the VDC of Kohalpur compiled the Profile of Kohalpur VDC 2010 and the TDC already planned one part of the VDC area.

**Weaknesses**

Although plans for development were made, implementing and monitoring the plans has been insufficient, not only due to long-term political instability, but also due to deficiencies in financial resources and allocation strategies. Inflated land prices are one of the difficulties for the proper implementation of the plan. In addition, for private commercial investors access to land is limited, because most of the land is owned by the government. Therefore, the local government does not have enough financial resources to carry out actions due to the difficulties of selling land or finding investors with high land prices. It could be a limitation to private investors.

Informal settlements are one of the key urban issues in Kohalpur. Informal dwelling areas have increased due to migration from both the inner- and outer-regions. Although land-pooling schemes have been implemented by local
communities and NGOs to improve living conditions, there are inadequate capacities for implementing such programs widely due to lacking financial and technical support, and time.

A lack of basic infrastructure creates serious urban problems: limited tap water service coverage, limited electricity supply, insufficient irrigation/drainage and poor solid waste management. In particular, the research team regarded solid waste management as the most significant issue, due to a lack of facilities, services, education and habits. It is worth noting that despite the frequent mention of drainage/irrigation as a priority by locals, the research team prioritized solid waste management since it is a precursor to other urban issues like poor drainage. It negatively influences environmental conditions related to sanitation which entails health issues, especially during monsoon flooding. Furthermore, most dwellers of informal settlements, particularly women and children, have suffered from conditions of vulnerability such as: inadequate shelter, deficient water, poor sanitation, flooding and unhealthy conditions.

Social services such as education and health care are very limited. According to the Profile of Kohalpur VDC 2010, the illiteracy rate of Kohalpur is 79.21%. Moreover, the presence of child labor in both the formal and informal sectors limits the opportunity for proper education.

**Opportunities**

If Kohalpur is officially recognized as a municipality, its new status is expected to provide many advantages for urban development. Financial resources are expected to increase from both national allocations and local taxes. The range of municipal authority should be extended to stimulate planning and implementation of projects. Also, with the expectation of growth, cooperation between all agencies could be improved to link urban growth expansion with economic development and human capital. In addition, the
municipality could encourage investment from the private sector in various fields: housing, industry and ecotourism.

Failures in the implementation of the existing plans for urban development is understood as an opportunity rather than a threat, in terms that it is an opportunity to upgrade land use plans and infrastructure as the new municipality emerges. Based on the community’s commitment to development, participatory planning processes could be expected from the early stages of decision-making through to the implementation phase. In addition, collaboration with Nepalgunj and the surrounding area could function as a good opportunity to develop the region.

**Threats**

The uncertain municipality status, which is due to unstable political conditions, represents a significant threat to Kohalpur’s urban development, as it is difficult for the various political parties to reach an agreement. Lack of further investment action as well as logistics and compensation for managing informal dwellers could impact negatively on developing plans.

Increasing municipal taxation without proportionate government investment could be an obstacle for achieving a consensus between community members, and could also adversely affect economic growth and urban development. In addition, potential for growing competition with the neighboring municipality, Nepalgunj, should be taken into consideration when developing a vision and objectives for Kohalpur.

Environmental issues such as deforestation and climate change have arisen, as well as haphazard development related to rapid growth. The deforestation area in 2010 counted for 16.20 ha, and the landslide areas were 134 units (small: 42 units, big: 92 units) (VDC 2010). Deforestation negatively affects not only the natural environment, but also

![Figure 2.14: Community Participation](Source: Jieun Lee (2012))

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the quality of urban life, in terms of air and water quality, disease outbreaks, food deficiency, and waste generation. Natural disasters, like flooding, could threaten living conditions as well.

Issues of social differences related to gender, caste, culture and religion could hamper consensus for agreement on the participatory process to plan and implement development.

SWOT-Table

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Geographical location and highway junction</td>
<td>• Deficiency in implementing the plan and monitoring the regulation due to long-term political instability</td>
</tr>
<tr>
<td>• Diverse human resources and labor market</td>
<td>• Deficiency in financial resources and allocation strategy</td>
</tr>
<tr>
<td>• Formal and informal economic development</td>
<td>• Inflated land prices due to land speculation</td>
</tr>
<tr>
<td>(medical college, agriculture, transport, tourism)</td>
<td>• limited land access for private investors</td>
</tr>
<tr>
<td>• Land resources (availability and fertility)</td>
<td>• Key environmental issues including monsoon, flooding, and drainage</td>
</tr>
<tr>
<td>and environmental condition (national park and climate)</td>
<td>• Informal settlements</td>
</tr>
<tr>
<td>• Access to hospital</td>
<td>• Social issues: health care issues (sanitation, diseases, etc.): lack of education, training, skills; child labor; and security issues</td>
</tr>
<tr>
<td>• Compilation of data (the Profile of Kohalpur VDC 2010)</td>
<td>• Municipality status with its financial advantages</td>
</tr>
<tr>
<td>• Planning for development and its implementation</td>
<td>• Potential to improve cooperation between all agencies</td>
</tr>
<tr>
<td>(urban planned area of the TDC)</td>
<td>• Urban growth expansion, with the economic development and human capital (example: ecotourism)</td>
</tr>
<tr>
<td>• Expressed commitment from various stakeholders for development (TDC, the chambers of commerce, 3rd party: NGO, INGO)</td>
<td>• Land use plan and infrastructure plan</td>
</tr>
<tr>
<td></td>
<td>• Participatory plan</td>
</tr>
<tr>
<td></td>
<td>• Collaboration with Nepalgunj and surrounding area</td>
</tr>
<tr>
<td></td>
<td>• Opportunities</td>
</tr>
<tr>
<td></td>
<td>• Threats</td>
</tr>
</tbody>
</table>

The gathering of a relatively large amount of data in a short period of time required effective analysis to make meaningful recommendations and conclusions. The triangulation of interview data provided added clarification, especially in light of language/translation challenges; additionally, it helped to identify the most prevalent issues across the spectrum of different actors and sparked discourse among the researchers that would serve as the foundation for developing strategies, recommendations, and actions for projects.
2.5 Strategies

The strategies of urban development for the potential future municipality of Kohalpur were generated in several steps. The results of SWOT analysis served as a basis for brainstorming ideas and generating strategies within the four main categories: spatial, social, financial and institutional. The next step was to re-categorize and integrate each of the strategies and sub-strategies into the planning topics. To finalize the strategies, a prioritization of the strategies was made and each strategy was designated a particular timeline period.

2.5.1 Institutional Strategy

The main strategy for the institutional category is the improvement of good local governance for the future municipality. Taking into account the recent capacity of the government agencies, the uncertain formalization of the municipality status, and the cooperation among stakeholders in Kohalpur, the main strategy was developed further into four sub-strategies:

1. Elaborate Consensus Around Common Objective, Vision, and Mission of Future Municipality

The formal agencies in Kohalpur, such as VDC of Kohalpur and Rajhena, TDC, Chamber of Commerce and even the WCF, expressed real sentiment, commitment and vision in relation to their authorities and work. Subsequently, in the face of the future municipality status, the main actors of Kohalpur should hold serial discussions and build consensus among themselves to achieve a common or general understanding about the objectives, vision and mission of Kohalpur as a municipality. With this strategy, the main actors of Kohalpur could work more collaboratively with similar goals and a more comprehensive understanding. Taking into account the urgency of the strategy, it should be developed and realized in the short-term.

2. Develop Contingency Plan Regarding Further Delay in Ratifying Constitution (Achieving Municipality Status) including the Initiation of the Preparatory Phase of Periodic Planning

The uncertain municipality status should not keep the formal actors of Kohalpur from pushing development forward. Regarding this situation, the strategy recommends that a contingency plan be developed. This includes starting the preparation phase of a periodical plan, a mandatory process for an established municipality. By starting the preparation phase, it shows Kohalpur’s readiness to become a municipality.

3. Enhance Local Institutional Capacity (Physical, Administrative and Human)

The existing capacity of local institutions was a concern for the development of Kohalpur. As the formal engine for urban development, the local institutional capacity should fulfill the requirements of local good governance such as transparency, accountability and participation. Within the local institutional capacity, the physical buildings, administrative tasks and human capacity are the main focus for enhancement. According to the process of capacity upgrading, this is recommended for mid- and long-term implementation.

4. Organize a Strategic Periodical Study of Certain Issues (Solid Waste Management, Sanitation, Transportation, etc.)

Alongside the issues analyzed earlier in this chapter, certain important issues such as solid waste management, transportation and sanitation need to be thoroughly considered. The strategy is to make a periodic study according to significant priority issues in Kohalpur. The periodic study itself considers the present status and assessment, analysis, strategies and actions to manage the issues. To set up a periodic study, the local government could use networks with universities and the private sector for research-and-development, and the promotion of corporate social responsibility. This strategy could be implemented in the mid- and long-term.
2.5.2 Financial Strategy

Within the financial recommendations, the main strategy of promoting local economic development in Kohalpur was developed according to several potentials, issues and analyzes. Kohalpur’s geographical advantage and its prominence at the junction of the highway offer special benefits for selling products and recycling material. Along the highway both formal and informal markets have already been established. The ecotourism potential in relation to the national park was also considered when developing further sub-strategies to support the main strategies, which are:

1. **Identify and Coordinate Ripe Markets, which Include Agriculture, Health Service, and Industry (i.e. Packaged Food) with the Support of Sector Experts**

To support local economic development, Kohalpur should first recognize and identify its potential ripe markets. During the nine days of the study, some of the ripe markets identified were agriculture, health service and certain industries. Afterwards, the strategy is to manage and coordinate them within a better market system in the mid- and long-term.

2. **Plan and Manage Ecotourism as the New Tourism Strategy**

The national park located on the northern side of Kohalpur was identified as one of the areas of particular potential as part of the new ecotourism strategy. With Nepali experience in managing ecotourism in many areas\(^6\), the strategy of planning and managing the national park for economic development will be a combined effort with conserving the natural environment and developing local finance. The implementation of an ecotourism strategy will need three years of preparation that is considered as mid- and long-term planning.

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\(^6\) See also chapter 4, page 110 ff.
3. Coordinate Economic Development Strategies with Nepalgunj, India and the Mid-West Region Ecotourism Cluster
Regional coordination and collaboration with the strategic surrounding area of Kohalpur needs to be considered as one of the sub-strategies in order to strengthen local economic development. The phase of implementing this strategy will commence in the mid- to long-term period, i.e. in the next three to five years.

4. Develop Partnership and Collaboration between Public and Private Sectors
Partnership and collaboration will be developed between the internal actors of Kohalpur. The public private partnership scheme can be used as a strategy to strengthen the financial and economic development in Kohalpur.

5. Manage Local Informal Economy for Sustainable Economic Development
The further development of the existing local informal economy in Kohalpur needs to be considered as one of the potential financial strategy sectors. The informal growth along the highway needs to be managed and systematized in order to reduce healthcare risk and vulnerability towards natural disasters. Included in this strategy is how to connect the informal with the formal economy, how to enhance the informal workers’ skills and capacities, and also how to manage microfinance as a means for informal financial support.

<table>
<thead>
<tr>
<th>Promote Local Economic Development</th>
<th>Level</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National</td>
<td>District</td>
</tr>
<tr>
<td>1. Identify and coordinate ripe markets, which include agriculture, health service, and industry (i.e. packaged food) with the support of sector experts</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>2. Plan and manage ecotourism as the new tourism strategy</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3. Coordinate economic development strategies with Nepalgunj, India and the Mid-West Region ecotourism cluster</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4. Develop partnership and collaboration between public and private sectors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Manage local informal economy for sustainable economic development</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.5.3 Spatial/Environmental Strategy

Based on the analysis of urban issues in Kohalpur, the main strategy for the spatial category is to plan sustainable and efficient physical and environmental development with five sub-strategies:

1. Develop Sustainable Infrastructure
The most significant sub-strategy is to develop the following sustainable infrastructure: 1. solid waste management, 2. irrigation and drainage, 3. water supply and 4. other basic infrastructure including land use plan, land-pooling, building code, sanitation and alternative energy sources. Solid waste management is recognized as the most urgent problem because it has serious impacts on health and hygiene issues such as disease, as well as on environmental conditions.

In order to sustainably improve the condition of infrastructure, a collaboration between various stakeholders, including the VDCs of Kohalpur and Rajhena (suggested municipality), community members and NGOs, is required with an understanding of long-term objectives. The concept elaboration should be started, and it should be continuously implemented.

2. Develop Public Space Master Plan
In order to develop Kohalpur sustainably and efficiently, a public space master plan, including a transportation plan should be designed with long-term vision. The municipality should prepare the plans and guidelines in advance to control informal physical development, as well as to encourage sustainable development. It should be considered both for the inner-city and for the surroundings such as neighboring cities and the national park. It should be based on commitment from the community, and participation in the planning process should be integral throughout, from decision-making to implementation.

3. Develop Efficient Municipal Transportation System Regarding Strategic Geographical Location
Kohalpur has great potential in terms of geographical location, which includes the highway junction between the east-west and north-south regions. It could expand its connections to Nepalgunj, other cities of Nepal, especially Kathmandu, and India. Regarding this strategic geographical location, Kohalpur expects to develop as a major hub in the Mid-West Region of Nepal.

In this respect, an efficient transportation system should be developed strategically. The plan should be developed by the national government and district institutions based on agreements for development. In addition, connecting national and regional transport links with the inner-city transportation system should be considered. In terms of process, this strategy is recommended for initiation in the mid-term, and to be continued throughout.

4. Conserve and Plan Natural Environment (i.e. Forest and River Areas)
Kohalpur has very good natural environmental resources, such as forest and river areas. In order to protect forest areas, Kohalpur VDC designed a green belt. However, most of the river and green areas in the inner-city are contaminated by polluted water and waste. Therefore, plans and regulations for revitalization and preservation should be considered in advance, and a long-term plan should be implemented and maintained in a sustainable way.

5. Develop Collaboration and Networking with Academic Sectors for Research Regarding Physical and Environmental Development
Collaboration and networking for research are crucial elements in physical and environmental development. Municipal institutions and academic sectors should invest and cooperate with a long-term perspective. This partnership will help to establish technical support and best practices for sustainable development.
Table 2.4: Spatial/Environmental Strategy

<table>
<thead>
<tr>
<th>Plan Sustainable and Efficient Physical and Environmental Development</th>
<th>Level</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop sustainable infrastructure, including solid waste management, irrigation and drainage, water supply and other basic infrastructures (i.e. land development plan, land-pooling, building code, sanitation, and alternative energy sources)</td>
<td>National</td>
<td>District</td>
</tr>
<tr>
<td>2. Develop public space master plan</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3. Develop efficient municipal transportation system regarding strategic geographical location (i.e. junction of highways)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4. Conserve and plan natural environment (i.e. forest and river areas)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>5. Develop collaboration and networking with academic sectors for research regarding physical and environmental development</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.5.4 Social Strategy

Poverty reduction and social services are crucial issues in Kohalpur, as they are nationwide. From observations during research, the level of household income appears low and the amount of people living in informal settlements is high. Education quality is very limited, and the illiteracy rate is high in Kohalpur (79.21%, VDC 2010). Therefore, the main social strategy is to alleviate poverty and enhance the quality of education as the basic human capital in order to improve the social status of Kohalpur. The main strategy was developed into three sub-strategies:

1. Strengthen Human Capital with Training Programs for Capacity Building Focused on the Poor

Considering the low level of human capital including education level and illiteracy rate, the first sub-strategy identified is to strengthen human capital with training programs for capacity building focused on the poor. In order to improve human resources of community members for development, the future municipality should initiate detailed programs and actions for this strategy. It is suggested this strategy should be implemented immediately, with continuation in the mid-term regarding basic needs for development.
2. Improve Primary Education by increasing attendance and attracting and retaining quality teachers. Primary education is the first step to enhance basic human capital. In order to improve primary education, Kohalpur should make a particular effort to increase school attendance, as well as to attract and retain quality teachers. This strategy should be initiated in advance with long-term vision and objectives.

3. Design Financial Support Systems Accessible to the Poor

Financial support systems are a prerequisite to alleviating poverty. NGO microfinance programs to support informal settlements were discovered through observations and interviews during field research. However, Kohalpur’s VDC should identify the current situation of poverty and design support systems that are especially accessible to the poor. Regarding the process, this strategy is recommended as mid to long-term.

### Table 2.5: Social Strategy

<table>
<thead>
<tr>
<th>Alleviate Poverty and Enhance the Quality of Education as the Basic Human Capital</th>
<th>Level</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National</td>
<td>Short</td>
</tr>
<tr>
<td>1. Strengthen human capital with training programs for capacity building focused on the poor</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2. Improve primary education by increasing attendance and attracting and retaining quality teachers</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3. Design financial support systems accessible to the poor</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

2.6 Ward-Level Actions – 4Rs

According to the strategies proposed for the suggested municipality of Kohalpur, in the four main categories (spatial, social, financial and institutional) clear actions at the Ward level are proposed under the label of ‘4Rs’ (Recycle, Reuse, Reduce, and Revenue) in order to 1. develop sustainable infrastructure with regard to solid waste management (Recycle and Reuse), 2. reduce poverty and strengthen human capital (Reduce), 3. promote economic development (Revenue), and 4. organize a strategic periodical study regarding solid waste management.

Lessons learnt from the main issues at the ward level have also served as the basis for proposing some recommendations through ward-level project actions for environmental sustainability, and for solving the main health problems through a sustainable Integrated Solid Waste Management System (ISWM). The main efforts are focused on reducing solid waste, preventing illnesses, promoting community welfare, capacity building and economic productivity at the ward level.
Some efforts are being made at national level to tackle solid waste problems throughout the country, but there are still major gaps to be filled in this matter. At a municipal level, some programs have recognized waste management as a tool for enhancing sustainability. Community ward initiatives have developed in response to the lack of a systematic and organized approach to sustainable waste management systems, weak policies and regulations and the lack of proper waste collection service which increase sanitary problems, including health conditions. This is especially the case when solid waste is dumped on rivers banks, in drainage systems, streets and open land areas, creating an environmental and health risk for the ward community.

The ward area that was studied has a particular advantage in terms of geographical location (east-west and north-south junction), but also has further advantages as it includes the planned area, has high participation in education, and there is awareness of NGOs and important human capital, among others. In fact, these potentials have been taken into account in order to formulate the key sub-strategies according to the main categories. The main purpose is service delivery by raising community awareness, coordinating and developing community participation and enhancing sustainability.

In formulating the ISWM, the actions were organized into four main categories: financial, institutional, spatial/environmental and social. The actions were categorized as short-term (1 year), mid-term (3 years) and long-term (5 years).

### 2.6.1 Institutional Actions

In order to strengthen the partnership and sponsorship to access technical and financial support and to establish a model of ward-level ISWM for municipal- and potentially national-level implementation, some short-term, mid-term, and long-term actions were developed in the institutional category. The first short-term action will be to prepare an initial assessment report of the state of solid waste management at the ward level and to provide the report to the municipal level. ISWM implemented in Ward Three needs to be installed following an initial assessment report of the state of solid waste management. The report itself must

<table>
<thead>
<tr>
<th>Financial</th>
<th>Institutional</th>
<th>Social</th>
<th>Spacial/Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use waste material (reuse) to generate revenue for the ward</td>
<td>• Foster partnership and sponsorship to access technical and financial support to establish ISWM program</td>
<td>• Use education and training programs (primary and community-based) to establish foundation for environmental awareness and preservation</td>
<td>• Improve environmental issues through coordinated ISWM</td>
</tr>
<tr>
<td></td>
<td>• Establish model of ward-level ISWM for municipal- and potentially national-level implementation</td>
<td>• Create job opportunities through ISWM to reduce unemployment</td>
<td>• Promote the community recycling centers as a model of environmental sustainability</td>
</tr>
</tbody>
</table>

Table 2.6: Sub-Strategies
also be submitted to the municipal level government and published and made available to the community to establish transparency and accountability as well as lessons learnt for the other wards in Kohalpur.

The second action is to seek institutional 'buy-in'/recognition to establish recognized support from local government and aid agencies, to keep them informed, and to promote partnership/cooperation. Furthermore, the next action is to seek technical support and guidance at the local and global level; potentially seek accreditation for nationally- and globally-recognized standard. The strategy of ISWM which is proposed for Ward Three is already well-known in other places, both in Nepal and internationally. Examples of technical support, guidance, and standards are needed in order to guarantee appropriate solutions for the local context. ISWM projects in several cities in Nepal and Bangladesh have been identified as two models that could be used as technical support and guidance (see table 2.7 and table 2.8).

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Waste Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established/ launched</td>
<td>• 1995</td>
</tr>
<tr>
<td>Location</td>
<td>• Bangladesh</td>
</tr>
</tbody>
</table>
| Aim of Program | • Improve the environment by promoting waste recycling activities in the country  
• Conduct research and experiments regarding solid waste management, recycling, clinical and hazardous waste management, waste water treatment, as well as organic farming  
• Develop community-private sector-municipal partnerships towards the improvement of the urban environment  
• Create job opportunities by promoting the recycling of waste |
<p>| Achievements | • Waste Concern is the pioneer of SWM in Bangladesh. They had the first Clean Development Mechanism (CDM) on SWM registered by UNFCCC. Their work has already gained several credits from UNDP, Schwab Foundation, and Tech Museum Award |
| Lessons Learned | • With the motto &quot;Waste is a Resource&quot;, Waste Concern Group was formed to achieve a common vision to contribute towards waste recycling, environmental improvement, renewable energy, poverty reduction through job creation, and sustainable development. Waste Concern Group is a Social Business Enterprise (SBE) comprising both “For Profit” and “Not-for Profit” enterprises |
| Website | <a href="http://www.wasteconcern.org">http://www.wasteconcern.org</a> |</p>
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Waste Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established/ launched</td>
<td>• 2002 (Hetauda) and 2005 (Bhaktapur)</td>
</tr>
<tr>
<td>Location</td>
<td>• Hetauda and Bhaktapur, Nepal</td>
</tr>
</tbody>
</table>
| Aim of Program | • Reduce the generation of plastic waste at household level  
• Increase the participation of women during the implementation of waste management program |
| Achievements | • By involving women, the program has not only had a beneficial impact on the environment but has also developed skills and confidence in women, enabling them to speak in front of large groups to share their knowledge and feelings |
| Lessons Learned | • This is a process for reducing and recycling plastic waste. This movement concentrates on recovering plastic waste and earns a considerable income by selling it for recycling. Furthermore, it is also creating jobs for five persons and improving the urban environment |
| Website | practicalaction.org/docs/region_nepal/solid-waste-management-best-practices-nepal.pdf |

The fourth action will be to create program documentation, including vision/objective, fiscal forecast, stakeholders, actions and timeline. The documentation of the program needs to be established either by using hard copy or internet-based information. Some documentation such as vision/objective, fiscal forecast, stakeholders, actions and timeline, and other important documents must be organized and systematized.

Following that, the next action is to conduct a campaign to promote ISWM via radio programs, message boards and regular exhibitions. The campaign of ISWM strategy should be promoted periodically via community radio programs, message boards, regular exhibition, bulletins or any other media that are already popular in Ward Three. The idea behind the campaign is to keep the spirit and knowledge of ISWM in the community so that more people become aware and supportive of the importance of ISWM.

The sixth action is to establish ward-level authority for ISWM. The authority of ISWM is one of the basic requirements of implementing ISWM at the ward level. The authority of ISWM, under the Ward Citizen Forum, will include the creation of a Planning Ward Committee (PWC), an Environmental Ward Committee (EWC), an Environmental Awareness Unit (EAU), and a Ward Community Representative (WCR) who will be in charge of all the activities in the implementation of ISWM. Finally, the last action for the first year is to develop an efficient strategic plan for waste collection system. The ISWM strategy requires a strategic plan especially for its waste collection system that includes: scheduled ward clean up events (public space and puddles), scheduled collection, route planning, collection mechanism in communal containers, and labor force. The strategic plan could use the best practices and lesson learns from other successful models, while maintaining local context and local wisdom.
Table 2.9: Institutional Actions

<table>
<thead>
<tr>
<th>Period</th>
<th>Institutional Actions</th>
<th>Stakeholders</th>
</tr>
</thead>
</table>
| **Short-term** | • Prepare initial assessment report on the state of solid waste management at the ward level. Provide report to the municipal level  
• Seek institutional ‘buy-in’/ recognition to establish recognized support from local government and aid agencies, to keep them informed, and to promote partnership/ cooperation  
• Seek technical support and guidance at the local and global level; potentially seek accreditation for nationally- and globally-recognized standard  
• Create program document, including vision/objective, fiscal forecast, stakeholders, actions and time line  
• Campaign to promote ISWM via radio programs, message boards and regular exhibitions  
• Establish ward-level authority for ISWM  
• Develop an efficient strategic plan for Waste Collection System that includes: scheduled ward clean up events (public space and puddles), schedule for collection, route planning, collection mechanism in communal containers, and labor force | Municipality, TDC, WCF, PWC, EWC, EAU, WCR |
| **Mid-term** | • Assess and report program status and development to all stakeholders  
• Conduct stakeholder analysis and develop strategies to solidify partnership and increase cooperation | Municipality, TDC, WCF, PWC, EWC, EAU, WCR, Ward Community, Private Sector, Universities |

**Notes:**

- **TDC:** Town Development Committee
- **WCF:** Ward Citizen Forum
- **PWC:** Planning Ward Committee
- **EWC:** Environmental Ward Committee
- **EAU:** Environmental Awareness Unit
- **WCR:** Ward Community Representative

**Periods:**

- **Short-term:** 0-6 months
- **Mid-term:** 6-24 months

**Stakeholders:**

- Municipality
- TDC
- WCF
- PWC
- EWC
- EAU
- WCR
### Period | Institutional Actions | Stakeholders
--- | --- | ---
**Long-term** | • Initiate assistance to adjacent wards to start up similar programs  
• Seek municipal/ national/ global recognition and promotion  
• Establish flagship project as a best practice: local initiative with extensive participation of ward members, NGO and PS to address the problem of SWM  
• Use ward-level ISWM program as bottom-up mechanism to improve policies and regulations | Municipality, TDC, WCF, PWC, EWC, EAU, WCR, Ward Community  
Municipality, TDC, WCF, PWC, EWC, EAU, WCR, Ward Community  
Municipality, TDC, WCF, PWC, EWC, EAU, WCR, Ward Community  
National government, Municipality, TDC, WCF, PWC, EWC, EAU, WCR, Ward Community |

The details of the mid-term and short-term actions in the institutional category are provided in table 2.9.

#### 2.6.2 Financial Actions

Financial action of the ISWM strategy in Ward Three will be focused on how to develop transparent accounting and a financing system to support the ISWM program. Starting with the short-term 1 year period, the first action proposed is to **define ward-level financial managers for the project**. The ward-level financial manager will be responsible for all actions, projects and programs in Ward Three including the ISWM action. Note that the manager should also be elected from one of the WCFs that are already established. The idea behind this is to have a person that is responsible for managing the financial component of the project, including transparency as well as accountability.

The second action will be to **identify financial sponsorship (with NGO)** which may be government, NGO, private sponsor/investor, or microfinance. In order to make a collaboration and partnership, Ward Three should identify who can be approached as the sponsor. In the existing conditions, there are already certain NGOs and bilateral projects at work in Ward Three, such as Lumanti and the Japan International Cooperation Agency (JICA). Furthermore, the potential sponsor could be from the local, regional or even national government, NGOs, or private sectors. Following the second action, the third action is to **make a formal proposal to potential financial sponsors**. After identifying the potential financial sponsors, it should be followed up by making a formal proposal to the potential financial sponsors.

The fourth action will be to **research the market value for composted/recycled materials**. With the main strategy of ISWM and the implementation of the 4R action (Reduce, Recycle, Reuse, Revenue), there will be a market demand for composted and recycled materials. By researching its market value, hopefully when the 4R action is implemented, all of the support tools will also be ready for use. The next action is to **identify potential buyers/ traders for raw recycling materials**. In line with the previous action, the research will include who can be identified as the potential buyers and traders for raw recycling materials. Both buyers and traders should
fulfill the Ward Three’s commitment to sustainable development. The sixth action will be to research start-up and operational costs for ISWM system. The main strategy of ISWM needs a feasibility study in terms of finances or research on the start-up and operational costs. The aim is that the research can point to and recommend the best financial structure for implementing the ISWM system. Following the research above, it is also important to develop the cost and revenue analysis of ISWM system for the first and fifth financial years in Ward Three.

Mid-term actions, which will be implemented for one to three years, are the continuing actions based on the short-term actions that have been executed already. There are six suggested financial mid-term actions regarding the ISWM strategy i.e.

1. establish quarterly, annual fiscal management system (accounting, money handling),
2. establish good accounting practices (including transparency and third-party auditing),
3. research market growth potential (business expansion, including branding/marketing development),
4. implement cost-reduction and revenue-increasing strategies,
5. monitor and improve incentive system, and
6. initiate process for loan pay-back (if necessary), or profit reinvestment.

In the final long-term phase (5 years), it is proposed to conduct a 5-year fiscal review. The evaluation could be done by an external examiner which would ensure the neutrality of the report.

<table>
<thead>
<tr>
<th>Period</th>
<th>Financial Actions</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-term</strong></td>
<td>• Define ward-level financial managers for project</td>
<td>WCF,PWC, EWC, EAU, WCR, Ward Community</td>
</tr>
<tr>
<td></td>
<td>• Identify financial sponsorship (with NGO). Possibly government, NGO, private</td>
<td>Municipality, TDC, WCF,PWC, EWC, EAU, WCR, Ward Community</td>
</tr>
<tr>
<td></td>
<td>sponsor/investor, or microfinance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Research market value for composted/recycled materials</td>
<td>WCF, PWC, EWC, EAU, WCR</td>
</tr>
<tr>
<td></td>
<td>• Identify potential buyers/traders for raw recycling materials</td>
<td>WCF, PWC, EWC, EAU, WCR</td>
</tr>
<tr>
<td></td>
<td>• Research start-up and operational costs for ISWM system</td>
<td>Municipality, TDC, WCF,PWC, EWC, EAU, WCR, Ward Community, Private Sector,</td>
</tr>
<tr>
<td></td>
<td>• Develop cost/revenue analysis (1-, 5-yr)</td>
<td>Universities WCF, PWC, EWC, EAU, WCR</td>
</tr>
<tr>
<td></td>
<td>• Make formal proposal to potential financial sponsors</td>
<td>WCF, PWC, EWC, EAU, WCR</td>
</tr>
<tr>
<td><strong>Mid-term</strong></td>
<td>• Establish quarterly, annual fiscal management system (accounting, money handling)</td>
<td>WCF, PWC, EWC, EAU, WCR</td>
</tr>
</tbody>
</table>
**2.6.3 Spatial/Environmental Actions**

Through the formulation of a strategic spatial plan for ISWM, community members will strengthen their capacity to manage solid waste as a valuable resource for economic development. In fact, the plan will include the main community action centers for recycling\(^7\), manufacturing and selling new products. There are three major physical components: 1. community recycling center: waste separation treatment and storage, 2. handicraft center: creation of new products based on raw material and 3. biogas plant: recovery of energy from organic waste.

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\(^7\) Recycling - is the process of collecting and preparing recyclable materials and reusing the materials in their original form or using them in manufacturing processes that do not cause the destruction of recyclable materials in a manner that precludes further use. Yard waste composting can also be added to the above definition.

Regarding the main actions in the spatial/environmental category, there are three short-term actions. First of all, the environmental condition should be evaluated as part of an initial assessment and report. Secondly, the proposed Ward Planning Committee will be in charge of formulating a strategic spatial plan for ISWM. Finally, a composting program as an effective approach of managing and treating organic waste will be initiated.

The mid-term actions are related to the construction of the community recycling and handicraft centers. Regarding composting, the main idea is to maximize composting facilities in order to ensure appropriate procedures for the next stage, which is the biogas plant and its market product (fertilizer).
Finally, the main long-term action will be to construct biogas plants in each section of the ward to generate electricity for dwellings, reduce costs and empower capacity building at the community level.

2.6.4 Social Actions

The ward structure will be coordinated by a ward unit with some special committees, strategic alliances with local NGOs and private sector for technical assistance, investment support and permanent assessment. Community members will work in the 4R Program: Reduction, Recycling, Reuse and Revenue alternatives for community investment. The main ideas are to focus on environmental awareness, waste reduction, education campaigns, training programs and capacity building activities.

The main actions in the social category are well defined according to the timeline. There are three main short-term actions. The first actions are based on the need to set up a waste management unit with a planning and environment committee (see figure 2.17). The former will be responsible for developing the strategic plan while the latter
<table>
<thead>
<tr>
<th>Period</th>
<th>Spatial/Environmental Actions</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term</td>
<td>• Survey environmental conditions (to be included in initial assessment report and annual reporting)</td>
<td>EWC, ER</td>
</tr>
<tr>
<td></td>
<td>• Formulate strategic spatial plan for ISWM, i.e. ward sections, designated sites for biogas plant and composting collection sites, recycling center(s), etc., which considers ease of access and environmental impacts</td>
<td>WCF, PWC</td>
</tr>
<tr>
<td></td>
<td>• Initiate stage one for household composting, which establishes collection and natural processing of composting material in each section of the ward</td>
<td>EWC, ER, NGOs, Community members</td>
</tr>
<tr>
<td>Mid-term</td>
<td>• Build community recycling center(s), which will collect waste in recyclable containers (exchange for incentive), classify, clean, sell/trade, package and distribute raw material</td>
<td>PWC, EWC, ER, NGOs, PS, Community members</td>
</tr>
<tr>
<td></td>
<td>• Maximize composting facilities (fertilizer); monitor the composting process (i.e. ensuring adequate aeration)</td>
<td>EWC, ER, NGOs, Community members</td>
</tr>
<tr>
<td></td>
<td>• Build a community center for handicrafts</td>
<td>PWC, EWC, ER, NGOs, PS, Community members</td>
</tr>
<tr>
<td>Long-term</td>
<td>• Initiate stage two for composting, which focuses on building biogas plants/infrastructure and providing self-generated energy in each section of the ward</td>
<td>EWC, ER, NGOs, PS, Community members</td>
</tr>
</tbody>
</table>
will be in charge of training, technical assistance and support for effective management and monitoring. The active involvement of the Environmental Awareness Unit and the environmental representative for each ISWM will play an important role in community awareness and permanent technical support. Secondly, education and solid waste management training is crucial. Community members will learn the major premise that waste is a valuable resource for environmental sustainability and economic development. They will receive guidance in the 4R program, establishing environmentally active clubs as well as the implementation of service based on a penalty system. Finally, the two first stages of the 4R program i.e. Reducing and Recycling will be implemented as sustainable waste management.

The mid-term actions are mainly focused on implementing the recycling program. This program is a system of waste disposal that includes separating materials according to type: organic material, plastic, glass, paper and others. Sub-ward level communities will recycle their own waste in their own areas. The awareness building around waste should be conducted in the two final stages of the 4R program: Reuse and Revenue. The new products will be created by the community in the handicraft center according to the raw material collected in the recycling process.

Finally, the long-term action will be geared towards potential markets that can purchase these typical products in order to generate some revenues for community investment. Community members will have the opportunity to build their own projects with proper technical assistance and using economic resources earned through sales.
Figure 2.17: Proposed Administration Unit
Source: Own design

WASTE MANAGEMENT UNIT

Ward Citizen Forum

Planning Ward Committee

Environmental Ward Committee

Environmental Awareness Unit

Ward Community Representative

Ward Community

NGO
Technical and Financial Support

PRIVATE SECTOR

To create and design strategic Urban development plan for ISWM, i.e. ward sections, designated sites for biogas plant and composting collection sites, recycling center(s), etc., which considers ease of access and environmental impacts.

To lead community groups to raise awareness and provide training and support for effective management and monitoring.

Which oversees community participation, training and technical assistance and environmental technologies.

Link between the Environmental Ward Representative and their section.

Human Resources in charge of recovering and reusing recycle materials in order to increase environmental benefits, reduce health issues and get resources for community investment, among others.
Table 2.12: Social Actions

<table>
<thead>
<tr>
<th>Period</th>
<th>Actions</th>
<th>Stakeholders</th>
</tr>
</thead>
</table>
| **Short-term** | • Ward Citizen Forum to set up a Planning Ward Committee (PWC) to create and design strategic urban development plan for ISWM  
• Ward Citizen Forum to set up an Environment Ward Committee (EWC) to lead community groups to raise awareness and provide training and support for effective management, accountability and monitoring  
• Under the EWC, create Environmental Awareness Unit (EAU), which oversees community participation, training and technical assistance; demonstrate environmental technologies (composting biogas plant, bins and vermicomposting)  
• Designate an environmental representative (ER) for each ISWM section (who work as a link between the EWC and their section)  
• Initiate Reduce, Recycle, Reuse, and Revenue (4R) educational program at primary school and community level; establishing environment clubs (organizing activities within ward)  
• Implement and enforce an educational or service-based penalty system  
• Improve capacity of EWC for promoting environmental sustainability  
• Organize and implement stage one of the 4R educational program, which focuses on reducing and recycling | WCF, PWC, NGOs, Private Sector (PS)  
WCF, EWC, Community members  
WCF, EWC, EAU, ER, Community members  
EWC, ER, Community members  
Public and private education community, NGOs, Community members  
EWC, Community members  
WCF, EWC, NGOs, community members  
WCF, EWC, NGOs, community members  
WCF, EWC, EAU, ER, NGOs, PS, Community members |
| **Mid-term** | • Launch recycling program divided | WCF, EWC, EAU, ER, NGOs, PS, Community members |
### 2.6.5 Benefits

Setting expected results for the project will help to gauge the effective achievement and initiate a more formal outcome assessment of the action plan. Benefits are expected to bring a reasonable profit from the implementation of ISWM in Ward Three. Furthermore, in order to have clear and detailed benefits that are in line with the actions, the benefits are divided into the four categories of social, spatial, financial and institutional, as well as short-term, mid-term and long-term time periods.

#### Financial Benefit

During the short-term first year period, the benefit is having a comprehensive fiscal plan and forecast for ISWM, which will serve as a basic foundation for several financial actions before continuing into the mid-term actions. Subsequently, the mid-term or three year implementation benefits are to secure accounting and money management, assess expansion of ISWM, reduce municipal tax expenditure on waste collection, as well as reduce expenses on services such as electricity and gas due to self-generated energy from the biogas plant. In long-term, it is expected that the repayment plan will be established, as well as a broader strategic economic development plan to expand recycling sales and niche products.

#### Institutional Benefit

In the institutional category, the short-term benefit will be to have an effective collaboration with sponsors and supporting agencies. It is also important to promote mutual understanding and collaboration with supporting agencies to develop and work together in managing ISWM. Furthermore, in the mid-term, clear indicators and measures for assessing ISWM efficiency are to be established as a tool for managing the ISWM. During this time period, it is also expected that the regulated assessment and reporting process for ISWM will be conducted. Moving forward to the long-term period, it is expected that the ISWM program will...

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<table>
<thead>
<tr>
<th>Period</th>
<th>Actions</th>
<th>Stakeholders</th>
</tr>
</thead>
</table>
| Long-term | into 5 categories: 1. organic: compost fertilizer, biogas plant; 2. paper: handicraft; 3. plastic (Suiro – a metal hook for collecting plastic) and glass: exchange and sell; 4. used items: process, resell; 5. other: final disposal: landfill  
- Organize and implement stage two of the 4R educational and training program, which focuses on reusing and revenue  
- Set up communal handicraft centers  
- Promote local sale of niche products (i.e. handicrafts), especially in the strategic ecotourism cluster area | EWC, EAU, ER, NGOs, PS, Public and private education community, Community members  
WCF, EWC, ER, NGOs, PS, community members  
WCF, market businessmen, chamber of commerce Kohalpur, PS, ER, EWC, Community members |
provide outreach to neighboring wards. The influence of a successful ISWM program at ward level is expected to help advocate for improvements in policy locally and nationally.

**Social Benefit**

In the social category, an educational curriculum that promotes personal habits as well as reflects environmental awareness and preservation is set as the benefit for short-term period. The consideration is that education will serve as the basic human capital which can only be achieved by promoting ISWM awareness through an educational curriculum not only for primary school but also community education. During the mid-term period, the benefit will be the 50% reduction of littering and solid waste- and hygiene-related health issues, as well as the change in consumption patterns and the perception of waste as a valuable resource. Finally, in the long-term, an additional 50% reduction in both littering and solid waste- and hygiene-related health issues could be implemented.

**Spatial Benefit**

The spatial benefits during the short-term period include an established community recycling center; distributed household collection bins; and coordinated sustainable pick-up, collection, and processing. It is expected that benefits will result in 50% collection of solid waste, 50% reduction in solid waste in public space and 50% reduction in drain blockage. In the long-term, the benefit is an additional 50% reduction in collection, public space waste and drain blockages.

**2.7 Conclusions**

Recurring themes became apparent throughout the data collection. The most significant issues identified were: 1. solid waste management; 2. irrigation/drainage issues due to flooding especially during monsoon season; 3. stalled development at the institutional level (due to delays in drafting a national constitution, having un-elected appointed authorities with limited technical capacity, inadequate funding, inefficient collaboration across local agencies and general political discord); 4. higher than market value on land (due to speculative investment); and 5. lacking policy to upgrade informal dwellings, especially those occupied by migrants. In the case of solid waste, there was a clear lack of planning and service, which was manifested in the reporting of unhygienic practices and the accumulation of solid waste in public space. The focus was placed on the issue of solid waste management for ward-level action because of its implication in social issues and health matters.

The greatest potentials for the potential municipality include its diverse human capital (for both market labor and community-based projects); economic development in the transportation/transit, ecotourism sectors and other identified key markets; geophysical assets, including soil and climate conducive for agriculture, ease of access to good water supply; and, finally, the suggested transition from VDCs to a municipality, which will grant greater financial support and administrative autonomy. These potentials work off of the strength of the VDCs’ geo-location, especially the proximity to the Indian border, Nepalgunj (an established municipality in the Banke District), and to other ecotourism destinations within the region. Due to Kohalpur’s geographical advantage, it was selected as the main junction for the two-highway system that runs longitudinally across the Mid-West Region, and latitudinally as the best road access to the remainder of the country. Kohalpur’s role, by hosting the main junction, contributes significantly to its growth and its broader impact on the entire region. Presently, these potentials are not being maximized toward the development of the VDC.
2.7.1 Reflections on the Strategies

Based on the rapid survey of the suggested municipality, a significant number of sub-strategies and recommended actions were developed for municipal level implementation. These were organized into four main categorical areas of development: institutional, financial, spatial and social, and further distilled into the following 4 overarching strategies:

1. Good Local Governance Measures for Effective Administration of Planning Policy
2. Ecotourism Development to Promote Economic Development and Environmental Sustainability
3. Comprehensive, Strategic Planning for Developing Land, Public Space, Infrastructure and Transportation and Preserving Environment in a Sustainable Manner
4. Education Quality to Enhance Basic Human Capital

Since Kohalpur has not yet officially gained its new status (due to the withdrawn cabinet decision), one of the most important recommendations involves initiating the periodic planning process for the future municipality. Preparatory steps can now be taken to establish a foundation for the process that is adapted to the local context. Steps that are no- or low-cost initiatives are readily implementable, such as setting up institutional arrangements, and garnering broad participation to assess the local situation and formulate preliminary plans. It is important to highlight the value of purpose-driven planning. This calls on the future municipality to start by establishing consensus from all stakeholders around a municipality-wide vision and clear objectives. Kohalpur’s vision should be based on the strategic use of its distinctive characteristics and potentials toward measurable outcomes that are readily achievable within a defined timeline.

**SAMPLE of Objective, Vision, Mission for Future Municipality Kohalpur**

**Objective:**
Maximize the natural and geophysical assets of Kohalpur to establish a diverse, sustainable, and thriving municipality that serves as a major development hub for the Mid-West and West regions of Nepal and embodies the fulfillment of national objectives.

**Vision:**
Establish Kohalpur as a municipality with specific markets in agriculture, transport, education, and industry through strategic periodic planning with representative participation.

**Mission:**
• Establish strategic plan for VDC transition to municipality
• Build consensus around established vision for new municipality
• Raise commitment to good governance for Kohalpur
• Establish strategic periodic planning for future municipality, including pre-preparation stage action and short-term planning tied to long-term vision
• Prioritize quality of life and well being, economic development, and integrated social identity from the broader NPC objectives
• Uphold accountability and implementation despite pending status of municipality and political instability
• Capitalize on potential for boom
• Maintain forward outlook and strategic planning
To maximize planning efforts, it was important to consider the role of community-based projects and their relation to municipality-wide development. The research team conducted a ward-level assessment as a precursor for developing a model of a focused ward-level project regarding an urgent development issue. Based on analysis of data at both the VDC- and ward-level, solid waste management was identified as the predominating issue. With human capital and inter-regional highway access as strong advantages, the research team proceeded to develop a community-based project. The concept was to develop a ward-level project that can maximize the capabilities of ward members to capitalize on the economic and environmental development potential of their own ward. The previously outlined ward-level project actions draw on successful models of Integrated Solid Waste Management (ISWM) that converts waste materials into useful fertilizers, secondary use products, and energy, and has the additional benefit of sparing landfill.

The implementation of strategic ISWM and the harvesting of reusable materials provides an opportunity for wards to improve their environments, create new jobs to help alleviate unemployment, and to generate much needed income for their communities. The defined actions take careful consideration of broader development objectives and implementation realities. To implement ISWM, specific actions have been designated to particular stakeholders and an articulated timeline was established to coordinate the multiple phases of the project. The project provides multifaceted benefits, including health improvements, environmental preservation, economic development, spatial improvement and sustainable living. Beyond the benefits to the ward itself, the project roadmap incorporates steps for expanding the system to other wards and establishing a basis to advocate for improved local and national government support.
2.7.2 Summary
The declaration of Kohalpur’s future status as a municipality presents many development opportunities for the current VDCs and surrounding area. The transition phase is a critical period for catalyzing this development. Priority should be given to strategic planning that best ensures the VDC’s shift to a municipality that possesses a healthy community and a thriving economy. Although achieving municipal status has been hindered by the stalled ratification of the national constitution, several key steps, which include developing a vision for the municipality; initiating the preparatory stage for periodic planning and developing ward-level projects that tie into municipal-wide objectives may be undertaken to ensure an effective transition.

Summary of Key Recommendations for Kohalpur’s Anticipated Transition from VDC to Municipality

Part I - Visioning
• Establish, through consensus, a common vision for Kohalpur based on the strategic use of its distinctive social, economic, and environmental characteristics and potentials that are readily achievable and feasible for implementation

Part II - Overcome Political “Standstill”
• Address the delay in acquiring municipal status and governance and financial advantages therein
• Use the expressed commitment and common will from a spectrum of authorities (and political representatives) as a synergistic catalyst to move development in the future municipality forward despite broader political standstill

Part III - Planning
• Develop municipality-wide periodic planning as well as ward-level community-initiated projects that are strategically coordinated to achieve specific objectives that support the vision of the municipality
• Municipal level strategies
  • Initiate periodic planning preparatory (suggested) and preparatory (formal) phases (without waiting for municipal status)
  • Develop a new CBD that is strategically offset from the highway (where current unregulated development is rapidly taking place) to establish a planned foundation for continuing urban growth
  • Foster investment in a new business district in a manner that avoids land price inflation due to speculation
  • Foster private investment by revaluing land to fair market price and making commercial land available to developers
• Ward level projects
  Rationale:
  • Allocate autonomy (decentralized authority)
  • Promote self-management (empowering ward communities) to implement development at the ward level
  • Utilize community human capital in strategic consideration of ward-specific, and municipal-level potentials (i.e. highway access, environmental/geophysical assets, etc.)
  • Strategically coordinate ward level projects with greater municipal development plans
3 Panchkhal
Panchkhal is located in the northwest of Nepal in the Bagmati zone, in the Kavre district. The Arniko highway directly connects it to Kathmandu, Lalitpur and Bhaktapur to the west and to China to the north. Its strategic location in the mid hills region of Nepal has lead to a high development pressure. Panchkhal is located at an altitude of 937 to 1219 meters above sea level. Its terrain is composed of 896.23 ha of flatlands and approximately 893.06 ha of slope area. Panchkhal has a total of 12,967 inhabitants in approximately 2474 households, with the average household size being 5.45 persons in 2010 (VDC 2011). Panchkhal is one of the 41 VDCs that was proposed as a municipality. However, Panchkhal’s municipality status, which would include 5 other VDCs, has not yet been confirmed by the national government. Nevertheless, the transition from VDC to municipality is taken into account in the proposals presented here. In the following, a brief overview of some of the characteristics of Panchkhal is given, in order to visualize the ambivalent duality between urban and rural development in this region.

The main economic occupation in the region is agriculture, which supplies more than 60% of Kathmandu’s markets with vegetables. The main crops are rice, potatoes, wheat, maize and lentils. In addition, animal husbandry has become a supplementary economic occupation for most households. The characteristics of a typical Nepalese farming system are as follows: a) Mixed farming consisting of crops and livestock; b) Subsistence farming characterized by small holdings and low productivity; c) Agricultural production dominated by cereal crops for food security; d) Mostly rain fed
Map 3.2:
Context of Panchkhal
Source: Based on Panchkhal Valley Administrative Boundaries Map, DUDBC (2011)

Figure 3.2:
Panchkhal Valley
Source: Carolina Hernández (2012)
farming; e) Labour-intensive farming; f) Agriculture not providing full time employment to the people thus paving way for seasonal migration in search of employment; g) Lack of institutional credit and organized market in the rural areas; h) Lack of network of roads in the rural areas. (Lal Shrestha/ Neupane 2002: 5) The majority of animals raised by the farmers are cattle, buffalo, goat, sheep, pigs and poultry. Cattle are raised for milk and draught power, buffaloes for milk and meat, and poultry birds for meat and eggs. Milk production is being promoted by the District Agricultural Office in this area in order to diversify from the vegetable farming practice.

The rural area represents a source of income and employment. Like in other countries, in Nepal the price of land is defined by its quality and its accessibility (location). In the case of Panchkhal the areas located in the valley and along the highway have more value than those on the hill slopes as agricultural productivity is higher and access to services such as transportation, market and health, is closer and better.

One major challenge that farmers face in the valley of Panchkhal, is that they hold very little land resources, which does not allow them to attain food self sufficiency through food grain production – they have to depend on the market for food (USAID 2008). In contrast, farmers who intensively cultivate vegetables in the area of Kavrepalanchok can support their household with only a tenth of a hectare of land (Greenslade 2008). Because of the agriculture based economy, the strengthening of agricultural activity has become one of the main aspects of development in this area (as in many other areas of the country).

Another important aspect is the use of fertilizers and pesticides in agriculture. During the last years in Panchkhal more commercial crops have been produced, which, with an overuse of pesticides, has increased household incomes. The other reasons for high use of pesticides are their low price and very low share in the total cost of production of the crops. “Panchkhal is the living example with the consequences of mishandling and overuse of chemical pesticides where the people are suffering from skin irritation, headache, nausea, and the cases of skin cancer are also been identified at an alarming rate.” (Dahal 2010).

In terms of urban development, it is important to point out that both Panchkhal’s population and urban areas are growing. Recently Panchkhal has fulfilled the requirements of achieving municipality status because of the population and infrastructure (at least 10,000 inhabitants for hilly regions and a semi-urban area with electricity, roads, drinking water, communication and similar other basic facilities). Urban development and agricultural processes are both competing land uses in Panchkhal. Therefore the aim is to develop strategies and actions that address these two thematic areas in order to ensure their sustainable development.

### 3.1 Objective

By applying Rapid Assessment Techniques and working with the resources available as well as recognizing the potentials of the area, the objective of the study in Panchkhal is to develop strategies and projects for the sustainable development
Figure 3.4: Methodology
Source: Own design

Getting to know the local context of Panchkhal

- Setting goals
- Understanding its location
- Secondary information: VDC Profile and long Term Plan for Panchkhal Valley
- Interview with experts from GIZ and DUDBC.
- Introductory Meeting with stakeholders
- Identification of stakeholders

Data Collection

- Definitions of methods:
  - Semi structure interviews
  - Focus groups
  - Informal talks
  - Observation
- Categories:
  - Gender and Intergenerational Perspective
  - Resource and social map

Strategies and Projects

- Data Analysis
- Data Processing:
  - Identification of crosscutting issues based on the goal
  - Definition of main strategies (4)
  - Definition of sub strategies per area
  - Classification of level and timeframe of intervention
  - Definition and prioritization of actions

Definitions of methods:
- Setting goals
- Understanding its location
- Secondary information: VDC Profile and long Term Plan for Panchkhal Valley
- Interview with experts from GIZ and DUDBC.
- Introductory Meeting with stakeholders
- Identification of stakeholders

Figure 3.5: Participatory Data Collection
Source: Josefine Fokdal (2012)
of agriculture and urban growth. It is important to mention that the objective was revised throughout the process and shared with all the stakeholders involved in the process.

3.2 Methodology

After an initial phase of familiarization with the main elements of Rapid Assessment Technique, a general schedule was developed by defining the main research activities. This included the initial reconnaissance of the local area, the data collection including consideration of different data collection methods, data processing and analysis, the results of which led to the formulation of proposals. This process was very important to provide a general overview of what needed to be done throughout the research, to be aware of the time management and to optimize the team personnel. Four main methods for collection of qualitative data were applied: semi-structured interviews, observation, focus groups and informal talks with the community. Several interviews, both formal and informal, were carried out for the collection of quantitative data. A list of the interviews conducted is summarized in on page 201.

Additionally, two tools were applied: 1) a resources map to understand the natural resources found in the community and how they are used and 2) a social map to have an overview of the social structures and institutions found in the area. This tool was also used to learn about social and economic differences between the households (Sontheimer et al. 1999).

In order to developed the visioning further, a gender and intergenerational framework was developed to better understand the cross gender and cross generational opinions of the inhabitants. The same questions were asked to children, youth, women and elderly to analyze the main issues in Panchkhal with different perspectives. A gender perspective in the data collection is recommended as usually both sexes have different opinions about their needs and resources. Therefore this perspective was included in the research. Moreover, an intergenerational perspective in the research provides an overview of the relationships between each of the generations and their specific opinion about the development of Panchkhal. It is important to understand how the elderly mentioned the youth and the women, for example, and the specific context in which they relate to it. This has a base in the communications between one and others. For example, the opinions of the elderly are usually perceived as negative by the youth, or the elderly have a specific opinion on what the youth should do. Therefore the research needs to open the spectrum related to these kind of questions and search for a common opinion on the development of Panchkhal. (Williams 1996). Following the analysis of the data collected, the main issues were identified and specific strategies for Panchkhal valley and proposals for Wards Five and Six were developed.

The methodological approach adopted can be summarized as a cyclical process as represented in figure 3.4.
3.3 Analysis

In order to understand the context of Panchkhal and to be able to define initial strategies and actions, several tools were applied for the analysis. These included a stakeholder mapping to understand the stakeholders and their level of involvement in decision-making under the two thematic areas (agriculture and urban growth) as well as a flow chart diagram in order to analyze the key potentials/challenges and issues as defined by the stakeholders. The flow chart was used in order to show the causes and effects of the issues, and the relationships between the different issues.

3.3.1 Stakeholder Mapping

The stakeholder mapping tool was used in identifying the primary stakeholders involved in agriculture and urban development and their decision-making power. The stakeholders are divided into the following categories: private, public and civil society. The primary stakeholders in the public sector in the case of Panchkhal are the Village Development Committee (VDC) and the District Development Committee. However, as Panchkhal is transitioning towards municipality status, it can be expected that the local government will have more authority in planning and decision-making.

Figure 3.6: Stakeholder Mapping in Panchkhal
Source: Own design
when the transition is complete. The new constitution focuses on decentralization through strengthening of local governments. Therefore the role of local authorities in decision-making, planning and resource allocation is critical. The national government is still in control of central functions related to land use planning and manages the agricultural sector, primarily through district offices.

The community of Panchkhal is already organized in several CBOs that engage in a myriad of activities. It was noted that the high social capital of the community is a great potential that could be harnessed for Panchkhal’s improved development. The participation of the community in decision-making is heavily dependent on their literacy levels. The capacity building programs undertaken by the CBOs and NGOs have greatly improved the capacity of the community to participate. The private developers, including landowners and private investors, are critical decision makers. Through the decentralization processes, the government has been brought closer to the people, therefore encouraging partnerships and participation.

Figure 3.7: Resource and Social Mapping of Panchkhal
Source: Based on observation and DUDBC (2011)
3.3.2 Social Mapping/ Resource Mapping

The resource mapping was undertaken for the specific case study area of Wards Five and Six. These two wards were selected due to their location within the Panchkhal valley, which includes the most intensive commercial activities undertaken, especially along the main highway. The aim of the resource mapping was to make a detailed map of the resources available and to identify the interactions that people have with the urban space through observation. The resource and social mapping tool was used to supplement the stakeholder map.

Through the resource and social mapping exercise coupled with focus group discussions, various observations were made: 1. The youth group is in charge of managing the road reserve and provision of other services including waste management and protection of the water well that serves the study area. This indicates a trust of the community in the youth through their funding of their activities, and also the mobilization capacity of the youth, which should be encouraged. 2. It was also noted that several wood processing industries have mushroomed into the area. In the interviews it was mentioned that the wood factory workers do not actually live in Panchkhal and hence account for a floating population which should be considered in future planning. 3. Elements like the temples and communal water points form central places for the street, where people meet and interact, and therefore should be protected and enhanced. 4. The market area attracts small scale trade which is mostly undertaken by the youth, as the youth prefer business to agricultural practices. These observations further informed the definition of strategies for the study area and for Panchkhal.

3.3.3 Generational and Gender Visioning

This tool was applied in order to identify the visions for Panchkhal across generation and gender. It was evident that all generations are involved in agriculture as the dominant economic mainstay. Nevertheless, the youth prefer small businesses. It was observed that there is heavy out migration of the youth outside Panchkhal in search of work.

Figure 3.8: Inter-Generational and Inter-Gender Visioning of Panchkhal
Source: Own design
Therefore there is a need to develop alternative economic activities e.g. agro industry and services in order to maintain the youth.

The women in the community noted that there has been great improvement in gender equality and the sharing of roles between genders. Nevertheless sanitation was still a priority issue. The elder generation cited a concern ofimpeding future food insecurity with the increasing loss of agricultural land and the decreasing interest of the youth in this sector.

3.3.4 Situational Analysis/Problem Analysis

The use of the analysis flow chart as illustrated in figure 3.10 enabled the definition of primary issues, the effects, and relationships between the issues. The flow chart also allows for the identification of the potentials that are existing in order to address the specific problems. It is important to note that the analysis flow chart was developed primarily from the stakeholders’ responses.

The primary issues that were identified were:

1. The loss of agricultural land mainly due to conversion of agricultural land to real estate development is a primary problem. The rapid encroachment of real estate onto agricultural land is mainly because the community feels that agriculture does not bring as big returns as the inputs or effort put into it, and real estate development presents better market prices. It was also cited that increased subdivision of agricultural land was due to the culture of inheritance, therefore breaking agricultural land into uneconomical units. The lack of land use planning to protect agricultural land has also contributed to the haphazard urban development and loss of the agricultural land. The recently enacted National Land Use Policy and the Panchkhal Valley Long Term Physical Development
Plan can be seen as crucial instruments that seek to protect agricultural lands but encourage urban growth.

2. Due to reduced land holdings and the increased need for farmers to maximize yields from the land, overuse of fertilizers and pesticides on agricultural land has been cited as a primary issue. The overuse of pesticides and fertilizers and the overcropping results in the reduced productivity of the land, therefore posing a risk for loss of livelihoods and food insecurity. The ineffective supply chain from production to sale of agricultural products is affected by ineffective and non-functioning cooperatives, high input prices, lack of regulation on agricultural produce and exploitation of the farmers by the middlemen. This further necessitates the farmer to apply more intensive methods in order to produce more.

3. Lack of sufficient water, both potable water and for agricultural use was cited. The department of water and sanitation cited that the greatest challenge in the provision of water are conflicts around access to water. The water conflicts can be seen as a result of ineffective regulation in ensuring that waterfronts and the management of the water bodies belong to the state. Therefore several communities claim ownership of water sources (rivers) that hinders the use of that source to serve other communities. The overuse of fertilizers and pesticides coupled with the unregulated irrigation practices and the increase in deforestation practices on water catchment zones raises great concern among the people. The independent management of administrative units in the protection of water sources and water catchment further exacerbates the water provision efforts.

4. Panchkhal has a huge economic potential. Its geographical location on flat terrain, neighboring the capital Kathmandu to the west and China to the northeast as well as its location on the Arniko highway and proximity to the delineated Special Economic Zone for the district, allows for great potential for economic development. Since the population is dependant on agriculture, the profits from which have been dwindling in recent years, there is a great need for the residents to increase and to diversify their incomes. This need coupled with the locational advantage of Panchkhal provide for an opportunity for faster and more efficient economic growth.

Table 3.1 shows a summary of the main findings regarding the two main issues, agriculture and urban development, which were fundamental for the proposed strategies and actions on the ward, municipal and national levels. They were separated according to the operational areas of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), namely: Spatial, Social, Financial, Institutional. An additional category was added to the existing GIZ focus areas: Environmental.
Figure 3.10: Situational Analysis Flow Chart

Source: Own design
Table 3.1: Main Findings

<table>
<thead>
<tr>
<th>Spatial</th>
<th>Agriculture</th>
<th>Urban Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Land uses are changing in Panchkhal. On one side, there is a need for better land management and on the other side, there is a big potential due to its location</td>
<td>• Uncontrolled building is taking place while the town grows and becomes more urbanized</td>
</tr>
<tr>
<td>Social</td>
<td>• The community initiatives found are assets for Panchkhal. There is a need to improve the community access to economic growth, specifically related with farming</td>
<td>• There are community based organizations working for better urban spaces, like the market which is a center of economic growth</td>
</tr>
<tr>
<td>Financial</td>
<td>• The existing incentives from the government for this activity are not enough</td>
<td>• Taxation is an opportunity for the upcoming municipality</td>
</tr>
<tr>
<td>Institutional</td>
<td>• The existing government institutions at the local level are a strength</td>
<td>• It is a challenge to develop planned urban areas without specific institutions at the local level, even though at the national level there is a clear emphasis on urban development</td>
</tr>
<tr>
<td>Environmental</td>
<td>• There is a need to improve the water and land management to have sustainable development between agriculture and urban growth</td>
<td></td>
</tr>
</tbody>
</table>

3.4 Strategies

3.4.1 Description of Strategies and Actions

Based on the analysis of the data collected in relation to the two focus areas of the investigation (i.e. urban development and agriculture) four main strategies were formulated. The central objective of the study was to develop strategies and projects for the sustainable development of agriculture and urban development in Panchkhal. In line with this objective, strategies were developed for Spatial, Social, Financial, Institutional as well as for Environmental interventions.

3.4.2 Definition of the Four Main Strategies

The following four key strategies were formulated to achieve the main objective:

1. To Promote Economic Growth: A healthy economy is crucial to the sustainable development of Panchkhal. As Panchkhal has been proposed as a future municipality, there is a need to promote and control economic growth. Panchkhal has various potentials such as its geographic location at the center of the north-south highway allowing for connectivity to surrounding regions within Nepal and a connection to China. In addition, the available social infrastructure should be seen as a potential and can be optimized to improve the economy of Panchkhal along with the previously
mentioned potentials. To achieve this, some interventions must be made on the national level in terms of regulations and incentives.

2. **To Improve Land Management:** There is a need to improve land management in Panchkhal in order to preserve agricultural activity and manage urban growth in a sustainable manner.

3. **To Improve Water and Sanitation Management:** There is a need to manage the water resources and improve sanitation for sustainable development. This offers a wide range of benefits such as improved health, economic growth, improved land productivity and food security.

4. **To Strengthen Local Actions:** In Panchkhal several existing associations have been identified, however there is a need to strengthen these associations in order to reap the benefits of collective actions which are necessary for Panchkhal’s sustainable development.

In the following, the strategies are classified according to the decision-making processes at different levels (e.g. national, municipal and ward level) needed to implement the specific proposals.

**3.4.3 Classification of the Level and the Time-frame of the Proposed Interventions**

**Interventions at National Level**

From the analysis and within the key strategies framework, the following national level interventions were formulated:

1. For the strategy targeting the *Promotion of Economic Growth*, the interventions are categorized into two components:
   - To promote an industry-fostering policy of incentives for the creation of new industries and home based industries. The proposed action is a long-term program under the responsibility of the national government.
   - To increase work opportunities and income the introduction of price regulation on agro-products is proposed. This was identified as a short-term intervention that would have a positive impact on the local economy in Panchkhal.

2. To improve *Land Management*
   - To control the use of land. In order to control the use of land it is proposed, as a medium term solution, to strengthen the institutional framework capable of preparing, implementing and monitoring planning and implementation of plans. It was noted that the institutional capacity needs to be improved.

3. To improve *Water and Sanitation Management.*
   - To protect the water resource.
     a. Under the protection of water resources the revision of existing regulations related to water rights is lacking; therefore, as a long-term solution to protect water resources, a basis for guiding the drafting of guidelines for Sustainable Water Resource Conservation should be established.
     b. Build capacities of both private and government institutions in water resource management as a long-term solution to water resource management.
   - Establishing rights related to water is an important component of the strategy aimed at improving the existing water and sanitation situation in Panchkhal. In order to achieve this, there is a need to revise the existing legal framework regarding water sharing. In the long-term this will ensure the sustainable access of water to the residents of Panchkhal.

**Interventions at Municipal Level**

1. To Promote Economic Growth
   In formulating the strategy of improving economic growth in Panchkhal the intervention is categorized into four components:
• Promote industry especially adding value to agricultural products.
• Strengthen the market.
• Increase work opportunities and income.
• Promote the development of tourism.

There is potential for sustainable economic development in Panchkhal, owing to its location along the Arniko highway that provides a connection to existing markets in Kathmandu and potential markets in China. The proposed Special Economic Zone (SEZ) offers a potential for stimulating the growth of industries such as agro-industries, capitalizing on the existing agricultural (horticulture and animal husbandry) activities in Panchkhal. The inadequate infrastructure in Panchkhal is a barrier to economic development. Therefore, there is a need for infrastructure development and upgrading of infrastructure.

2. Improved Land Management
In formulating the strategy of improving land management, the intervention is categorized into three components:

• To control the use of land;
• To encourage land management techniques;
• Harmonization with other plans at national level.

There is a need to improve land management in Panchkhal. With the pressure of urban development, Panchkhal is losing valuable agricultural land to urban development and there is a lack of institutional framework to monitor land use changes. One of the potentials is that there is a National Land Use policy (national level) that has been formulated to guide development. The proposed intervention seeks to develop actions that would ensure sustainable land management in Panchkhal. It is proposed that plans and regulations should be developed at the municipal level; however, these should be in line with the national plans, guidelines and policy.

3. To Improve Water and Sanitation Management
In formulating the strategy of improved water and sanitation, the intervention is categorized into four main components:

• To protect water resources;
• To explore alternative water sources;
• Establishing rights related to water;
• To improve sanitation and to control pollution.

Panchkhal is facing the challenge of having insufficient water supply and poor waste management. The intervention proposes actions that seek to protect the existing water sources and to explore alternative water sources, other than the conventional piped water system. In improving the water supply and sanitation, actions that seek to regulate the use and rights to water, to ensure that all the inhabitants have access to water, are proposed. The proposal further addresses the need to improve sanitation conditions and also seeks to control the pollution of the resources through waste management and control.

4. To Strengthen Local Actions
In formulating the strategy of strengthening the community local actions, the intervention is categorized into two components:

• To strengthen cooperative movements;
• To strengthen local community initiatives.

In order to reap the benefits of collective action, a number of actions that encourage the formulation of cooperatives and the consolidation and strengthening of community actions are proposed, so as to ensure the livelihoods of the inhabitants of Panchkhal for the sustainable development of Panchkhal.
<table>
<thead>
<tr>
<th>Panchkhal Municipal Level</th>
<th>Substrategy</th>
<th>Timeframe</th>
<th>GIZ Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To promote economic growth</td>
<td>• To promote industry</td>
<td>x</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• To strengthen the market</td>
<td></td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• To promote the development of tourism</td>
<td>x</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• To increase work opportunities and income</td>
<td>x</td>
<td>Social</td>
</tr>
<tr>
<td>2. To improve land management</td>
<td>• To control the use of land</td>
<td>x</td>
<td>Spacial</td>
</tr>
<tr>
<td></td>
<td>• To encourage land management techniques</td>
<td>x</td>
<td>Institutional</td>
</tr>
<tr>
<td></td>
<td>• Harmonization with other plans at the national level</td>
<td>x</td>
<td>Institutional</td>
</tr>
<tr>
<td>3. To improve water and sanitation management</td>
<td>• To protect the water resource</td>
<td>x</td>
<td>Environmental</td>
</tr>
<tr>
<td></td>
<td>• To explore alternative water sources</td>
<td>x</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• Establishing rights related to water</td>
<td>x</td>
<td>Social &amp; Institutional</td>
</tr>
<tr>
<td></td>
<td>• To improve sanitation and to control pollution</td>
<td>x</td>
<td>Social &amp; Environmental</td>
</tr>
<tr>
<td>4. To strengthen local actions</td>
<td>• To strengthen cooperative movements</td>
<td>x</td>
<td>Institutional &amp; Social</td>
</tr>
<tr>
<td></td>
<td>• To strengthen community local initiatives</td>
<td>x</td>
<td>Social</td>
</tr>
</tbody>
</table>
The Specific Actions at Ward Level

From the interventions that are suggested at the proposed municipal level or existing VDC level, specific actions for Wards Five and Six were formulated. Wards Five and Six were prioritized by the members of the VDC for possible intervention because the area contains the market and is the area where agricultural land is under threat due to rapid urban development. There is an urgent need to manage urban growth and to protect the agricultural land as well as to manage the resources in a sustainable manner.

In order to achieve the overall objective, local initiatives/programs were included in the actions which could be strengthened in order to achieve sustainable development in the areas of agriculture and urban growth. The table below lists the actions under each intervention, including the proposed timeframe and the possible stakeholders. The idea is to begin with Wards Five and Six and then to upscale all interventions to the rest of Panchkhal.

<table>
<thead>
<tr>
<th>Substrategy</th>
<th>Actions</th>
<th>Timeframe</th>
<th>Stakeholder</th>
<th>GIZ Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>To promote industry</td>
<td>• Clustering of skilled related individuals</td>
<td>x</td>
<td>VDC/ Entrepreneurs</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• Development of agro-industry</td>
<td>x</td>
<td>Ministry of Finances, VDC, Ministry of Commerce and Supplies</td>
<td>Social &amp; Financial &amp; Social</td>
</tr>
<tr>
<td>To strengthen the market</td>
<td>• Creation and establishment of an official association that fosters sustainable growth and stability of the market</td>
<td>x</td>
<td>VDC/Entrepreneurs of the market (shops) CBOs working in the market such as the Youth Club.</td>
<td>Institutional &amp; Social</td>
</tr>
<tr>
<td>To promote the development of tourism</td>
<td>• Development of a 1-day trip: trekking route</td>
<td>x</td>
<td>Inhabitants of Panchkhal, VDC, Tourist agents in Dulinkhel and Kathmandu</td>
<td>Social &amp; Spatial</td>
</tr>
<tr>
<td></td>
<td>• Development of agro-tourism</td>
<td>x</td>
<td>Inhabitants of Panchkhal, VDC, Tourist agents in Dulinkhel and Kathmandu, Nepal Tourism Board</td>
<td>Financial &amp; Social</td>
</tr>
<tr>
<td>Substrategy</td>
<td>Actions</td>
<td>Timeframe</td>
<td>Stakeholder</td>
<td>GIZ Sector</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>To increase work opportunities and income</td>
<td>• Promotion of cluster agro-production</td>
<td>x</td>
<td>VDC, Entrepreneurs, Farmers, Cooperatives</td>
<td>Social</td>
</tr>
<tr>
<td>To control the use of land</td>
<td>• Development of a proper land use system</td>
<td>x</td>
<td>Ministry of Physical Planning and Construction, DUDBC, VDC, CBOs, Land owners</td>
<td>Institutional &amp; Spatial</td>
</tr>
<tr>
<td></td>
<td>• Categorization of land based on soil quality</td>
<td>x</td>
<td>VDC, CBOs, Land owners</td>
<td>Environmental &amp; Spatial Social</td>
</tr>
<tr>
<td></td>
<td>• Promotion community planning initiatives</td>
<td>x</td>
<td>Ministry of Physical Planning and Works, DUDBC, VDC, CBOs, Land owners</td>
<td>Social &amp; Institutional</td>
</tr>
<tr>
<td>To encourage land management techniques</td>
<td>• Promotion of land-pooling programs as a tool to face the pressure of urban growth in Panchkhal</td>
<td>x</td>
<td>Irrigation Office, CBO (Irrigation Water User Association), Farmers Association</td>
<td>Institutional</td>
</tr>
<tr>
<td>To protect the water resource</td>
<td>• Repair and maintenance of canals</td>
<td>x</td>
<td>VDC, NGOs, Education Establishments, Municipality, CBOs</td>
<td>Social &amp; Environmental</td>
</tr>
<tr>
<td></td>
<td>• Environmental awareness</td>
<td>x</td>
<td>VDC, NGOs, Education Establishments, CBOs, Farmers Association</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• Tree planting</td>
<td>x</td>
<td>VDC, NGOs, Education Establishments, CBOs, Farmers Association</td>
<td>Social</td>
</tr>
<tr>
<td>To explore alternative water sources.</td>
<td>• Rain water harvesting</td>
<td>x</td>
<td>Ministry of Physical Planning &amp; Works, VDC, Inhabitants of Panchkhal, NGOs (Love green Nepal), Department of water supply and sewage, DUDBC</td>
<td>Social, Environmental &amp; Institutional</td>
</tr>
<tr>
<td>Substrategy</td>
<td>Actions</td>
<td>Timeframe</td>
<td>Stakeholder</td>
<td>GIZ Sector</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-----------</td>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>To increase work opportunities and income</td>
<td>• Promotion of cluster agro-production</td>
<td>S M L</td>
<td>VDC, Entrepreneurs, Farmers, Cooperatives</td>
<td>Social</td>
</tr>
<tr>
<td>To control the use of land</td>
<td>• Development of a proper land use system</td>
<td>x</td>
<td>Ministry of Physical Planning and Construction, DUDBC, VDC, CBOs, Land owners</td>
<td>Institutional &amp; Spatial Environmental &amp; Spatial</td>
</tr>
<tr>
<td></td>
<td>• Categorization of land based on soil quality</td>
<td>x</td>
<td>VDC, CBOs, Land owners</td>
<td>Social</td>
</tr>
<tr>
<td>To encourage land management techniques</td>
<td>• Promotion community planning initiatives</td>
<td>x</td>
<td>Ministry of Physical Planning and Works, DUDBC, VDC, CBOs, Land owners</td>
<td>Social &amp; Institutional Environmental &amp; Spatial</td>
</tr>
<tr>
<td>To protect the water resource</td>
<td>• Repair and maintenance of canals</td>
<td>x</td>
<td>Irrigation Office,CBO (Irrigation Water User Association), Farmers Association</td>
<td>Social &amp; Institutional Environmental &amp; Spatial</td>
</tr>
<tr>
<td></td>
<td>• Control of irrigation systems</td>
<td>x</td>
<td>Irrigation Office,CBO (Irrigation Water User Association), Farmers Association</td>
<td>Institutional Environmental &amp; Spatial</td>
</tr>
<tr>
<td></td>
<td>• Environmental awareness</td>
<td>x</td>
<td>VDC, NGOs, Education Establishments, Municipality, CBOs</td>
<td>Social &amp; Environmental Social</td>
</tr>
<tr>
<td>To explore alternative water sources</td>
<td>• Tree planting</td>
<td>x</td>
<td>VDC, NGOs, Education Establishments, CBOs, Farmers Association</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• Rain water harvesting</td>
<td>x</td>
<td>Ministry of Physical Planning &amp; Works, VDC, Inhabitants of Panchkhal, NGOs( Love green Nepal),</td>
<td>Social &amp; Environmental &amp; Institutional</td>
</tr>
<tr>
<td>Substrategy</td>
<td>Actions</td>
<td>Timeframe</td>
<td>Stakeholder</td>
<td>GIZ Sector</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-----------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Establishing rights related with water</td>
<td>• Training of leaders in conflict resolution</td>
<td></td>
<td>VDC, NGOs, Department of Water Supply and Sewerage, Ministry of Law &amp; Justice</td>
<td>Institutional</td>
</tr>
<tr>
<td></td>
<td>• Water sharing is caring</td>
<td></td>
<td>Department of Water Supply and Sewerage, NGOs, Municipality, DUDBC, Ministry of Law &amp; Justice</td>
<td>Institutional</td>
</tr>
<tr>
<td>To improve sanitation and to control pollution</td>
<td>• Solid waste management at household level</td>
<td></td>
<td>VDC, NGOs, CBO</td>
<td>Environmental</td>
</tr>
<tr>
<td></td>
<td>• Public health awareness</td>
<td></td>
<td>VDC, NGOs, CBOs, Department of water supply &amp; sewerage.</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• Implementation of one toilet per house program</td>
<td></td>
<td>Department of water supply and Sewerage, Municipality, NGOs</td>
<td>Environmental &amp; Social</td>
</tr>
<tr>
<td>To strengthen cooperative movements</td>
<td>• Regulations strengthen cooperatives’ role</td>
<td></td>
<td>Government-Ministry of Agriculture and Cooperative Development, Existing Cooperatives, Private Sector, Community, Local Government</td>
<td>Institutional</td>
</tr>
<tr>
<td>To strengthen community and local initiatives</td>
<td>• Awareness and education on importance of cooperative development</td>
<td></td>
<td>Collaboration of the government and civil society</td>
<td>Social</td>
</tr>
<tr>
<td></td>
<td>• Formation of cooperative companies/regional networks, land pooling, negotiations on pricing, farmers advice, channel for subsidy from the government</td>
<td></td>
<td>Existing Cooperatives, Private Sector, Community, Local Government</td>
<td>Social &amp; Institutional</td>
</tr>
</tbody>
</table>
3.5 Actions/ Proposals

In the following, the actions proposed at the ward level are described in detail. Five actions under the key areas for intervention were prioritized. The criteria used in the selection of the projects were: 1. The actions could be implemented in the shortest possible time and 2. the projects had also been identified and prioritized by the community.

3.5.1 Strategy: To Promote Economic Growth

**Action: Creation of an Official Shop Owners Association that Fosters the Sustainable Growth and Stability of the Market.**

The proposed association will be in charge of administrating the market in partnership with other existing initiatives within the community. The members will be the owners of the shops or the managers of the small businesses located in the area. Table 18 below presents the main functions that the association should cover in the short and middle term.

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**Table 3.4:**
Functions of the Association in Short and Mid-term

<table>
<thead>
<tr>
<th>Short-term (1 year)</th>
<th>Mid-term (up to 5 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To develop agreements among the members, allowing better inter-company cooperation</td>
<td>• To optimize the production chain within the market promoting complementarity and synergies within the different businesses in the market</td>
</tr>
</tbody>
</table>
Short-term (1 year)

- To develop a collective vision of the market. As a prerequisite, an improvement has already taken place. According to our Interview with Youth Club President, street lighting has been introduced and the space along the highway has been extended.

- To maintain a communicative relationship with the municipality to agree on policies and regulations and to promote urban rural linkages.

- To organize the cleaning and general maintenance of the market.

- To promote partnerships with other organizations working in the area, and to specifically support the project lead by the Youth Club, which enhances the maintenance of the area along the highway as a way to preserve the corridor market.

Mid-term (up to 5 years)

- To be recognized nationally by implementing marketing strategies of the area taking advantage of the connectivity with Kathmandu and China and with the future Special Economic Zone (See diagram).

- To develop specific partnerships to provide loans to the community that wants to improve and diversify its business.

- Provide training of the members, especially in legal and accounting aspects.

- To set the framework in partnership with the VDC and other actors to be the “provider” of goods and services of the future Special Economic Zone.

It is proposed that the future municipality should facilitate the creation process of this association. This could be done in partnership with the existing CBOs. Therefore, the first step to implement this action would be to convince the shop owners and managers to become part of the new association, sharing the main benefits and the specific processes. Also, it is necessary to define an initial governing board with at least a coordinator, a treasurer and a minute taker. All members of the association should pay a fee, which will be the main financial component to finance this project; initially there is no need for a public budget investment.

Once the association is formalized, it should initially start working with the recommended functions in order to develop a strong growing market, which will contribute to the economic growth of Panchkhal. Some more specific benefits of this initiative will be the creation of a common identity of the market, and a vision that indicates where, how and why to grow. This will also encourage a more effective production of goods and services and potentialize the existing resources within the local market.

Best practice: To develop agreements between shops and the future municipality in order to strengthen rural urban linkages linked with PNUD program: Implementation Management Committee that is confirmed by VDC Chairperson, VDC Secretary and Market Center Facilitator (see www.rupp.org.np/activities2.asp).
Action: Definition of the Trekking Route in Panchkhal to Develop a 1-day Trip.

In Nepal the development of tourism has been a priority because the country is home to some of world’s most appealing natural attractions. Therefore, the national government through the Nepal Tourism Board has developed the vision of making Nepal the number one mountain tourism destination in the world and maximizing the tourism benefits. This is to achieved by developing Nepal as a premier holiday destination, following the spirit of “inclusiveness” and sustainable tourism for greater harmony and equitable distribution of income (Nepal Tourism Board 2008). In summary, it is important to highlight strengths in relation to location to understand the reasons behind the specific intervention proposed (Bindloss et al. 2009).
• Panchkhal is located one and a half hours away from Kathmandu.
• It is on the road that descends into Panchkhal Valley, where there is a famously beautiful black stone image of the goddess Bhagwati.
• The road access to the Helambu region is located 5 minutes from Panchkhal.
• Panchkhal is located 30 minutes away from Dhulinkhel, which is popular as a Himalayan viewpoint. It is a real Newari town and not only a tourist resort, which makes it an attractive spot and a good center for short day treks – many visitors come here to stretch their legs before setting off on longer treks.

Understanding this potential and taking into account that to develop adequate touristic infrastructure in Panchkhal will require a big financial investment, the intervention recommended in this proposal is to define trekking routes and to promote the packet of one day trekking in cooperation with the tourist agencies in Dhulinkhel. This will provide an additional alternative to the tourists and will be a means for economic growth for the inhabitants in Panchkhal.

This proposal is a first step to be developed in the short-term. The investment needed will be the responsibility of the private sector. A long-term intervention will be to develop agro-tourism, which could be lead by a cooperative of farmers.

3.5.2 Strategy: Improve Land Management

Action: Promote Land-Pooling Programs as a Tool to Face the Pressure of Urban Growth in Panchkhal

Background
• The urban growth in Nepal is taking place in a fast and uncontrolled manner.
• Uncontrolled conversion of fertile agricultural land and poor building conditions.
• Houses are being built with no proper provision of infrastructure facilities such as roads, water supply, drainage, electricity and telephone. Providing the essential infrastructure in an unplanned built up area is difficult and expensive, often even impossible.
• Land-pooling in Nepal has recently been used as the most appropriate scheme to sort out and bring infrastructure and services to the unplanned plots. It brings benefits not only to the organization of the land but also to the owners.

Prioritization According to Given Urban Trends
As part of the sub-strategies proposed under the improvement of land management, it is important to categorize the land according to the quality of the soil, thus fertile agricultural land can be protected and unfertile land suitable for development can be made available to the land-pooling projects.

Land-pooling is used to organize and provide services and infrastructure in plots that are gradually converted or already determined as land for development. The legislation Urban Development Act 2045, Para 12 (2) defines land-pooling and the procedures connected to it (Oli 2010). The Land Pooling Manual 2061, published by the DUDBC, is guiding the land-pooling/readjustment programs for urban development in Nepal (Oli 2010). The users committee and project management committee will provide guidance for running land-pooling projects.

In order to provide an organized development and response to the pressure of urban development brought by the different forces that are threatened by the urban growth of Panchkhal, the proposal of implementation of land-pooling projects can be developed in the short-term, enabling that the town grows in a more organized way, regardless of the absence of a strong planning and regulating body.
Steps
Community awareness
As land-pooling is a tool that mainly works with the willingness of the community, it is necessary to have strong and well-informed communities that are aware of both the benefits and risks of participating in land-pooling projects.

Encouragement of Public and Private Partnership
The success of land-pooling is dependent on the willingness of stakeholders to participate. Land-pooling schemes should be attractive to encourage the participation of the private sector and should also offer sufficient benefits to the stakeholders so that they are willing to actively participate. Incentives should be created and offered.

Figure 3.17: Land Pooling Area
Source: Based on Panchkhal Valley Administrative Boundaries Map, DUDBC (2011)
Selection of the Area
In the Panchkhal Valley Long Term Development Plan, the urbanization trend map shows a strong tendency of development along the Aniko highway. Given these trends, land-pooling is proposed within this zone, which meets the criteria selection for land-pooling projects described in the Land-Pooling Manual and is suitable for its implementation. The selection of this zone for land-pooling can reinforce the belief that, “The most valuable plots will be those along the main roads, in particular at junctions, as these are perceived as having commercial values” (Iwin 1998: 24). However, the quality of the soil should be tested and documented before converting agricultural land into construction land. This measurement will help avoid a decrease of very fertile land.

Conducting Procedural Steps
According to Oli (2006) the process of land-pooling can be summarized in the following steps. These have to be met in order to ensure good preparation and efficient implementation:
• Decision/selection of the area
• Survey and mapping
• Infrastructure/road planning
• Contribution ratio calculation
• Preparation of Land records
• Approval of Land-pooling
• Field layout and new parcels
• Sale of serviced Plots and construction

Timeframe
According to the Land Pooling Manual, the program for the planning of one unit, which is composed of 100 to 150 plots, normally take a minimum of 2 years (Iwin 1998).

Benefits for Panchkhal
• Land-pooling will organize the plots along the highway, which will also be connected to strengthen the market area.
• In the categorization of the functions that have to be set up in the land-pooling plots allocated along the highway the commercial goal of strengthening the market be achieved.
• It will control the rapid and unplanned urban growth regardless of the lack of a regulatory body.

Figure 3.18: Timeframe for the Process of Land Pooling
Source: Based on Oli (2006)
Figure 3.19: Drainage Patterns of Panchkhal
Source: Adapted From Panchkhal Valley Hydrographical Map, DUDBC (2011)
3.5.3 Strategy: To Improve Water and Sanitation Management.

**Action: To Develop Rainwater Harvesting Techniques as a Possible Solution to the Water Shortage in Panchkhal.**

Panchkhal is faced with a problem of insufficient water supply. Panchkhal has a monsoon climate with a dry season from October to May. Although Panchkhal receives a considerable amount of rainfall, the rainfall trend in the Panchkhal Valley is decreasing and farmers have been facing drought in the area for a long time (Small Earth Nepal 2011).

The proposed action reflects the pressing need to address the challenge of sustainable water supply for both domestic and agricultural usage. Perhaps a more sustainable solution would be to obtain the water from any one of the three river water sources in surrounding region of Lamatar (See figure 29 above), but conflicts over the rights to water resources within the regions are a threat to achieving this. Therefore, there is a need to explore alternative water sources as part of a solution to the ‘water’ challenge.

Sustainable water management is important for economic growth and development. A strength is that at the national level the government of Nepal has prepared a policy on rainwater harvesting to promote sustainable developments in rainwater harvesting for human consumption and domestic use. Furthermore, rainwater harvesting is already being promoted in the Panchkhal valley for agricultural purposes by the NGO Love Green Nepal which has implemented some small scale rainwater harvesting demonstration projects. Moreover, rainfall water is an available resource that is free and Panchkhal receives a considerable amount of rainfall that makes rainfall harvesting a viable solution (Small Earth Nepal 2011:10)

**Definition of Rainwater Harvesting**

Rainwater Harvesting (RWH) refers to all technologies where rainwater is collected to make it available for agricultural production or domestic purposes. A RWH system usually consists of three components:

- A *catchment / collection area* which produces runoff because the surface is impermeable or infiltration is low;
- A *conveyance system through which the runoff is directed* e.g. by bunds, ditches, channels (though not always necessary);
- A *storage system (target area)* where water is accumulated or held for use - in the soil, in pits, containers, tanks or dams.

**Implementation Strategy and Stakeholders**

The proposal for RWH methods in Panchkhal can be classified into two broad categories: land-based and roof-based (See figure 30).
The rainwater harvesting project for Panchkhal could be implemented in the following phases:

1. **Awareness and Capacity Building Issues:**
   - The first phase would be to build institutional capacity within the municipality and to draft the municipal guidelines on RWH in relation to the national policy and guidelines.
   - The second phase should consist of raising awareness on the benefits of RWH techniques. This will be spearheaded by the municipality in collaboration with civil society (Love Green Nepal) and educational institutions.

2. **Technical Issues:** Training for the farmers on methods of RWH and training of households in RWH techniques. This can be coordinated by the municipality in collaboration with civil society (Love Green Nepal), educational institutions and departments such as the Department of Water Supply and Sanitation.

3. **Financial Issues:** The next phase would be to source funding for the project. A key issue is to develop mechanisms to make it possible for the community to pay for the program. Here it is proposed that there should be policy incentives that address the issue of land tenancy which has a wide impact on the individual’s motivation to engage in conservation practices. It is proposed that the inhabitants can contribute to the project costs through the sale of their farm produce. If there is a guaranteed market for their produce, the farmers can be encouraged to get loans for use in RWH projects as the payments may be offset by the sale of produce. For this to be achievable there is a need for formation of cooperative associations. The stakeholders would include farmers associations, individual households, private sector (lenders), the municipality and the national government of Nepal.

**Benefits of RWH Panchkhal**
- RWH is beneficial due to increased water availability
- Enhanced crop and livestock productivity
- Improved water use efficiency, access to water (for drinking and irrigation)
- Reduced erosion
- Improved surface and groundwater recharge
- Improved rainwater management contributes to food security and health through households having access to sufficient, safe supplies of water for domestic use

3.5.4 **Strategy: To Promote Local Actions**

**Action: Encourage the Development of Agriculture Cooperative Companies**

A co-operative is an association of persons united to meet their common economic, social and cultural needs and aspirations through an autonomous and jointly owned enterprise organized and operated on co-operative principles. In Nepal the cooperative movement is based on the principles of Open and Voluntary Membership; Democratic Control by Members; Members Economic Participation; Autonomy and Independence; Cooperative Education Training and information; Cooperation among Cooperatives and Concern for Community.

A cooperative company refers to a company owned, controlled, and operated by a group of users for their own benefit. Each member contributes equity capital, and shares in the control of the firm on the basis of one-member, one-vote principle. Cooperative Companies take the cooperative movement towards Agricultural Business and Entrepreneurship.

The study area contains two Agricultural Cooperatives mainly concerned with the distribution of subsidized fertilizers. From an interview with the District Agricultural Officer it was noted that these cooperatives are not fully functioning, with only one of the cooperatives being operational. The importance of agricultural cooperatives is significant in terms of job creation, mobilizing resources,
generating investment as well as their contribution to the economy. In their various forms, agricultural cooperatives promote the fullest participation in the economy and social development of all people.

Therefore the first step is to create awareness/education to the farmers on the importance of collective action and the formation of Agricultural Cooperatives. This awareness would be generated by the District Agricultural Office through the existing community groups. This awareness could also be improved by exchange visits of cooperative companies from other regions, thereby educating Panchkal’s farmers. The formation of cooperative companies is encouraged as the farmers would be able to own shares in the company, be able to transact with the market directly and hence avoid the middlemen, save and be able to borrow at affordable rates. Cooperative companies are more stable than cooperative societies, as the mandate for the running and operations is left to the shareholders, who seek to benefit directly. The national government could support these cooperative companies by, for example, offering technical expertise and subsidies on farm inputs (e.g. fertilizer or chemicals).

The Cooperative Companies Would:
1. Improve the Bargaining Power of Members
As seen in the case of Panchkhal, individual farmers cannot consistently and reliably control the prices that they receive for their agricultural products or the prices they pay for the inputs required to produce these goods. Cooperatives offer a vehicle for the farmers to enhance their economic market power. Combining the production volume of several members improves their position when dealing with other businesses.

2. Obtaining Market Access or Broadening Market Opportunities
Value Addition: Value is added to products by processing or offering larger quantities of an assured type and quality to attract more buyers. This may involve cottage industries, or the development of agro-industries.

Agricultural Land Consolidation: Where the farmers within the company are able to combine their small farm holdings, and are therefore able to adopt mechanized agricultural practice or organic farming techniques, in essence increasing their outputs while sharing their input costs.

Identification of alternative markets and diversification of products e.g. Milk Processing are two further benefits for the farmers of Panchkhal.

3. Local Collection, Distribution and Marketing of Agricultural Products
Farmer Management Centers: A center for the collection and distribution of services to the farmer - a so called ‘one stop shop’. The center would offer farm guidance services, distribution of farm inputs, technical and financial advice, and information on farming methods. This can be developed by the cooperative with the assistance of the municipality.

Farmers Markets: these are seasonal markets that may be developed by the cooperative, where the farmers are able to sell directly to the consumers, avoiding the middlemen. These could be open air fresh fruit and vegetable markets held in strategic locations within the community. Direct marketing reduces distribution costs, which are a major factor in raising the retail price of agricultural products.

Localization of Farm inputs: Production of quality seeds, manure within the cooperative.

4. Savings and Credit with the Cooperatives
Members are encouraged to deposit their savings with their cooperatives. This helps capital formation thus overcoming the shortage of funds. Provision of short and medium term credit to farmers protects them from exploitation by the private sector.
**5. Amalgamation of Local Cooperative Companies** within the Panchkhal Valley and in the Region. The network would encourage knowledge exchange, sharing of best practices and pooling of technical and financial resources.

<table>
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<tr>
<th>Best Practices</th>
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<tr>
<td><strong>Project Name</strong></td>
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<td><strong>Established/ launched</strong></td>
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<td><strong>Aim of Program</strong></td>
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<td><strong>Achievements</strong></td>
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<td><strong>Lessons Learned</strong></td>
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<td>Lessons Learned</td>
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<thead>
<tr>
<th>Project Name</th>
<th>Panchakanya Agriculture Cooperative limited.</th>
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</thead>
<tbody>
<tr>
<td>Established/ launched</td>
<td>• 2001: Local agriculture group; 2004: Women’s agriculture cooperative</td>
</tr>
<tr>
<td>Location</td>
<td>• Sub-Saharan Africa (Burundi, Burkina Faso, Chad, Gambia, Guinea, Kenya, Mali, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Tanzania, Zimbabwe)</td>
</tr>
<tr>
<td>Aim of Program</td>
<td>• The niche of the cooperative is in organic production, aggregation and collective marketing of products, local production and sale of inputs, technical assistance with production</td>
</tr>
<tr>
<td>Achievements</td>
<td>• Empowerment of women members, reduction in the use of pesticides, agricultural land-pooling mechanisms in order to increase farming land</td>
</tr>
<tr>
<td>Lessons Learned</td>
<td>• Organic farming is possible but needs the commitment of members and a ready market</td>
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3.6 Conclusions and Recommendations

This research was set out to provide an understanding of the local context of Panchkhal and, based on the findings, to propose specific strategies and actions for development of the proposed future municipality or alternatively for the existing VDC. The scope was determined by two prioritized themes: Agriculture and Urban Development. The conclusions made here are separated into two main topics regarding the reflections on the change of status from a VDC to a municipality and the findings and recommendations of the research.

Municipality status means having more autonomy from the district level in the decision-making process and the management of finances. These two areas provide a branch of opportunities for the municipality to enhance bigger projects and better administrative independence. In addition, capacity building in terms of the administration structure is necessary, as there will be more officers involved and a need to prioritize within the different areas, rendering old structures and priorities redundant. This means that there will be a need for empower the upcoming municipality. Therefore, it is necessary that strategic planning takes place, in order to have a common vision and goal-oriented actions.

As observed, the most significant findings are related with the need to promote economic growth. Although the land and water management is not effective, there is a huge potential within the already existing community organizations. Therefore, these topics constituted the four main strategies of interventions proposed. It is worthwhile mentioning that the biggest shortcoming faced was the insufficient depth in the financial areas, as it was difficult to gather enough information due to time constraints.

Within the two priority areas, the following cross cutting issues were identified and taken into account in order to describe the strategies, sub-strategies and actions at the national, regional and local level:

- Capacity building referring to the need to organize training and gaining of expertise. For several inhabitants, specific training and social awareness play a fundamental role in the development of the proposed actions
- Regulations are lacking and, when they exist, there are problems with enforcement
- Evaluation is a must within the public administration to ensure accountability in its actions and ability to deliver goods and services more effectively
- Economic growth is a constant in the needs of the inhabitants
- Collaboration between CBOs and municipalities should be promoted. Also, there is evidence that the community is able to organize itself

Finally, two important conclusions should be highlighted: First, in order to implement the proposed actions there is a need to create incentives and second, the local water conflict should be resolved. The latter will be possible if water management is improved and rights established.

The current findings add to a growing body of information regarding planning and urban issues in Nepal and specifically in Panchkhal and the here proposed interventions should be seen as inspiration for further development.
Lekhnath Introduction
Located in the western development of the Kaski district, Lekhnath is just 10 km from Pokhara - one of the most visited cities in Nepal and the nearest airport connection for the area - on the main Prithvi Highway from Kathmandu. Lekhnath Municipality\textsuperscript{8} was created by merging four Village Development Committees (VDCs) in 1997 in order to increase administrative efficiency. The Municipality consists of 15 wards, with the fastest rates of urban growth found in the wards located along the Prithvi Highway and the main road which leads to Begnas lake. Lekhnath is one of the largest municipalities in Nepal, with an area of approximately 80 km\textsuperscript{2}. The majority of Lekhnath is located in a valley with an altitude varying from 490 meters to 1217 meters above sea level.

The population is estimated to be 60,000 which means the average population density is relatively low, at 7.5 persons per hectare. Lekhnath is a multi-ethnic municipality, with more than 50 ethnic groups living in the area at the time of the 2001 census (CBS 2001). Due to the political instability over the last decade, there has been considerable in-migration from rural areas, resulting in an annual population growth of 3.5%. Lekhnath is expected to have around 200,000 inhabitants by 2030 (GHK 2010: 8).

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\textsuperscript{8} The municipality is named after the Nepali poet, Lekh Nath Paudyal.
Map 4.2: Overview of Wards in Lekhnath Municipality
Source: Based on GHK (2010: 7)
There is a particularly high literacy rate of 80% and nearly 100% among the youth. Pokhara University is located within the municipality and serves as a resource for building local capacity and has the potential to develop Lekhnath as a center for higher education. In addition, the wide range of natural attractions such as lakes, paddy fields and views of the Himalaya Mountain Range position Lekhnath as a tourist destination. While Pokhara has been a well-established tourist destination for the last 15 years, Lekhnath is relatively undeveloped and retains many of the natural features which have been spoiled in Pokhara by mass-tourism. Around 20% of tourists who visit Pokhara also visit Lekhnath, but the majority only spend a day in the municipality and return to Pokhara for the night (GHK 2010: 20). The rich biodiversity and the local economy are highly dependent on its fertile soil.

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Alltogether, Lekhnath municipality is undergoing significant changes due to an accelerated urbanisation process. It is facing a rapidly growing population, which increases pressure on the limited land resources. This has led to practices of sub-dividing land for housing and commercial use, resulting in the haphazard plotting of land and an absence of basic minimum infrastructure. The municipality will experience (further) unmanageable sprawl if the urbanization process is not appropriately managed.

The following two projects relate to the future challenges as well as the potentials of the municipality: First the development of eco-trails in the municipality and second suggestions how to conceive a city center for Lekhnath.
4 Lekhnath Eco-Trails
Lekhnath is dominated by the two lakes of Begnas and Rupa, forests and hillsides including magnificent views of the Annapurna mountain range. Apart from these two larger lakes, the other lakes are relatively unknown. However, the Lekhnath Municipality predicts that tourism development, particularly around the lakes, has the potential to boost the local economy while at the same time providing opportunities for nature conservation and development. It is estimated that 42% of the total population would benefit directly from increased tourism in the area (interview with Alexander Jachnow April 2012).

Given the potential for tourism development, the Lekhnath Lakes and Wetlands Conservation and Development Project was conceived with the support of the GIZ Urban Governance and Decentralisation Programme’s (UGDP) Regular Track Projects. The municipality has since proposed the development of the seven lakes with respective themes as a Regular Track Sub-project under the UGDP. This concept would essentially ascribe each lake its own specific theme, such as “honeymoon” lake, “water-sports” lake, “natural therapy” lake as well as various fishing and bird-watching lakes.

In theory these ideas are quite unique and offer some potential for future tourism, such as the possibility to appeal to niche market tourist groups. However, there are a number of more pressing challenges which affect the implementation of these ideas and the municipality’s ability to develop the location. Priorities such as conservation of the five smaller lakes, wetlands and surrounding forests need to be addressed before any tourism potential around these areas can be explored. As of yet, some of the lakes have not been demarcated and officials claim that there have been some encroachments around the wetlands. Therefore, a comprehensive social and environmental assessment needs to be conducted prior to the implementation of the tourism project.

4.1 Assignment

The assignment provided upon arrival in Nepal was to assist Lekhnath Municipality with the development of visions and strategies for planned tourism development in the area. The municipality already had specific ideas about how to promote Lekhnath as an attractive tourist destination, such as allocating themes to each lake, and developing an eco-trail which connected the lakes. The assignment was to assess the viability of the existing ideas while generating new ones, and incorporate them into a realistic and easily implementable action plan.

4.2 Methodology

The research process involved a variety of methods, which were conducted during the field visit to Lekhnath Municipality. As the assignment was clear, the following data collection served at gaining a better understanding of the area and scope of the project.

Introduction to Context

In Lekhnath municipality a vision for development had already been established, however in order to understand the context and the reasons behind the vision, meetings with the Municipal Council, among others, were held. Furthermore, meetings with actors from civil society, political party representatives and private sector representatives were scheduled to learn about their ideas concerning the future development in Lekhnath.

Data Collection

Site visit

Site visits at the main project areas was the starting point for the data collection process.

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9 The vision of “Lekhnath, the garden city of seven lakes” was defined while formulating the municipal periodic plan.
The main goals of the site visits were to:

1. Assess the local situation
2. Observe the main sights and existing tourism activities in and around the seven lakes.
3. Observe the area and map the extent of existing trails

*Stakeholder Interviews and Workshops*

To gain an understanding of the current tourism situation in Lekhnath, and the visions and attitudes towards ecotourism development both in the municipality, among main economic stakeholders and the local communities, interviews and workshops were conducted. The informants were chosen both by their political position and position in the tourism industry.

A random selection of community members and visiting tourists were also interviewed. In selecting interviewees, a concerted effort was made to interview community representatives from as many of the seven lakes as possible, as it is these farmers and villagers who would be directly affected by any future development of the area. In total, community groups closely associated with five of the seven lakes were interviewed. Data were collected by means of structured and semi-structured interview as well as by informal interviews with community members. Furthermore, workshops within the communities were held and social mapping was conducted (see an anonymous list of interviewees in the annex page 202).
Figure 4.4: Presentation of the Municipal Strategy of ‘the Garden City of Seven Lakes’
Source: Gesa Schöneberg (2012)

Figure 4.5: Data Collection
Source: Gesa Schöneberg (2012)
Figure 4.6: Interview with the Municipality
Source: Laura Bright-Davies (2012)

Figure 4.7: Community Consultation
Source: Laura Bright-Davies (2012)
Figure 4.8: Interview with a Local Community Based Organization
Source: Laura Bright-Davies (2012)

Figure 4.9: Community Workshops
Source: Laura Bright-Davies (2012)
Review and Analysis of Secondary Literature

A significant amount of relevant research and suggestions have already been conducted and developed in Lekhnath municipality. This material was only obtained upon arrival in Lekhnath and therefore it became a high priority during the field visit to achieve a thorough understanding of the existing literature. The outcomes from the data collection and analysis provided a basis for the concept development, which was presented to the Municipality and key stakeholders upon completion of the fieldwork in Lekhnath. This final stage of the research and development process was concluded with a focus group discussion and ‘in field’ feedback session.

4.3 Analysis

This section is a review of the main findings derived from our fieldwork and from secondary literature, upon which the concept is developed.

4.3.1 Community Participation

All groups and individuals interviewed were positive about increased tourism in Lekhnath and saw the industry as a resource and an income potential for the future. Education, training, information on how to treat tourists and benefits of tourism for people not employed in the industry was thought of as beneficial by informants. No tourism fatigue or negative experiences were detected in this fieldwork, but it was expressed that Lekhnath should not become like Pokhara with unplanned and unattractive development that degrades the natural environment, especially the lakes.

4.3.2 On-going Tourism Activities and Potentials

Ongoing tourism activities in Lekhnath are boat rental, hotels and resorts and homestays. There is training opportunities for households wanting to start with homestays. For individuals not able
or willing to have their own homestays community informants suggested developing supporting activities such as handicraft and food production. In addition, a number of existing activities and places of interest were identified in the areas surrounding the lakes, which were considered to have strong tourism potential. These include viewpoints of the Annapurna mountain range at Rupakot, Thulakot and Kotbari as well as possibilities for fishing, bird watching and water sports.

4.3.3 Existing Visions Presented by the Municipality

Lekhnath Municipality has previously developed and considered a number of visions for developing tourism activities in the area. With the prediction that 20% of visitors to Pokhara currently make a day trip to Lekhnath, one goal put forward was to encourage tourists from Pokhara to increase their stay in Lekhnath to a minimum of one night, preferably longer. Another suggestion is the development of themes for each of the seven lakes to capitalize on their potentiality. The vision for the themed lakes builds on Lekhnath’s motto: ‘Garden City of Seven Lakes’. The suggested themes of the seven lakes are as follows: Rupa – Kayaking and fishing, Begnas – Water gliding and fishing, Khaste – Bird watching, Neureni – Bird watching, Dipang - Honeymoon Lake, Maidi - Natural therapy, Gunde – Fishing. In addition, the municipality would like to develop linkages between the lakes, especially via trails as well as via cycling paths or even pony trails.
Based on the principles established by the municipality, as stated by the Periodic Plan (PP), there is a prerequisite for all future development that it conserves forests, lakes, wetlands, and cultural and religious sites by implementing land use planning and infrastructure development policies. There are currently an unknown number of CBOs and NGOs that have and are working to conserve the forests and fishing harvests in Lekhnath. Activities known to be successful have been reforestation activities.

4.3.4 State of the Ecosystem and the Seven Lakes

Through interviews, site visits and from secondary literature it was clear that Lekhnath was suffering from degradation of its ecosystem. Several studies have been conducted in Lekhnath by the International Union for Conservation of Nature (IUCN) (Oli 1997, 2000) describing problems and solutions for the environment in the municipality. According to the IUCN (Oli 1997, 2000) reports, the reasons for degradation are man-made both from local conditions and from national and upstream sources. The main threat to the water quality is degradation of the lakes through use of fertilizers and some pesticides and siltation (Oli 1997). Siltation, among other things, is caused by deforestation. Also, encroachment from farming and water used by irrigation are the main factors for the shrinking of the five smaller lakes. Both Begnas and Rupa are large lakes suited for further tourism development. Some development measures have already taken place with one resort in place, one hotel and several small restaurants, homestays and guesthouses. There is already a boating business in place where the actors cooperate and have a fixed price system.

When visiting the smaller lakes, it was evident that they were at serious risk of disappearing within the near future due to encroachment and/or siltation. Therefore the conservation of these areas was identified as a prime concern, more so than their potential as tourism destinations.
Map 5.1: Overview of the Lakes in Lekhnath Municipality.
Source: Based on GHK (2010)
### SWOT-of Existing Conditions

#### Strengths

- Beauty of the landscape, especially Begnas & Rupa lakes and view of the Himalayas
- Proximity to Pokhara and other existing tourist attractions
- Several CBOs have a long history of working with the municipality
- High number of reports and analysis already developed
- Community understanding of the importance of lake conservation
- Fruit production: mangos, papayas, raspberries, bananas, oranges
- Some fully operational organic farming initiatives, equipped with local, sustainable food and renewable energy supply; organic production includes coffee, honey, fish, milk, and green vegetables.
- Still rich flora and fauna (birds, monkeys, butterflies, rare wild orchids etc.)
- Strong desire to protect biodiversity
- Cultural heritage and religious points of interests, including annual spiritual and cultural festivals and events
- Current successful homestay operation that attracts international tourists
- Ayurvedic gardens exist in the municipality
- Some existing walking trails
- Reforestation activities in the past.

#### Weaknesses

- Losing wetlands due to siltation
- Loss of the 5 smaller lakes due to urban encroachment and siltation
- Unplanned, unattractive development.
- Proximity to Pokhara and other popular tourist attractions
- Lack of adequate sanitation
- Inadequate water supply to hilly areas
- Poor solid waste management
- Poor service delivery in restaurants and low-quality food for tourists
- Lack of Security
- No clear chain of command for security and civic disputes
- Lack of enforcement of planning code
- Challenge with long-term enforcement

#### Opportunities

- Starting point for Annapurna trekkers and Summit lookout points with Annapurna views
- Organic farms and products
- Potential site for tourists interested in local agricultural practices; Homestay experience for tourists
- Eco-trail for cycling, hiking, pony riding
- Boating, fishing, kayaking and other non-motorized water sports.
- Paragliding
- Bird watching
- Yoga, Ayurvedic medicine and other alternative features of interest for tourists
- Municipality is pro-tourism and pro-environmental protection

#### Threats

- Opportunity to plan before the destination becomes too popular
- Basic channels of communication for advertising Lekhnath are relatively untapped
- High level of literacy compared to other parts of Nepal
- The largest and most interesting lakes, Begnas and Rupa, are near to each other and therefore concentration of investment can take place there
- Possible access to World Bank funding
- Expansion of the local availability of produce and products
- Increased production of local handicrafts

- Corruption and legal enforcement
- Proximity to Pokhara and other existing tourist attractions
- Further unplanned development
- Further loss of wetland areas from siltation
- Food quality and food safety for tourists
- Water quality for consumption
- Water quality for agricultural activities
- International prices of fossil fuel and transportation costs
- Increase in encroachment as the expansion and connection of trails take place
- Lack of job transfer and tourism education opportunities for the general public
- Tourists unaware of environmental risks
- Environmental impacts from increased tourism
4.3.5 Stakeholder Analysis

The following stakeholder analysis lists who needs to be consulted during the decision-making process:

- Municipal staff (and mayor after election).
- Community (advisory and not an official vote).
- Ministry of tourism (both central government and local government).
- Nepal Tourism Board.
- Lekhnath Chamber of Commerce.
- Hotel Association (including Pokhara Valley).
- Trekking agencies.
- Restaurants.

Figure 4.16: Stakeholder Analysis for Lekhnath Municipality Concerning the Development of Eco-Trails
Source: Own design
Emerging Towns and Municipalities in Nepal: Rapid Development Concepts

4.3.6 Summary of Findings

When analysing the findings the suggested concept and actions are based on the following conclusions.
1. The findings suggest that most people are positive towards further tourism development and welcome it as a source of social and economic development as well as for nature conservation efforts. This is important as negative experiences from tourism and tourism fatigue could mean that tourism has disturbed social cohesion in the community or has affected the community without bringing sufficient benefits. From our findings, this is not (yet) the case in Lekhnath.
2. Lekhnath municipality has specified that the area should be developed as an ecotourism destination. This indicates that social, economic, and ecological sustainability has been taken into account, and will form the foundation for future tourism development.
3. There are many well functioning activities related to tourism already going on in Lekhnath. These activities need to be strengthened, coordinated and promoted.
4. An eco-trail should be developed to connect all the existing activities to main tourist highlights.
5. A plan to conserve and maintain lakes need to be implemented. The five smallest lakes must be conserved and restored before larger tourism development efforts are implemented.

The vision for each of the lakes to be developed with its own individual theme is not viable during these initial development steps. Lake conservation plans should be thoroughly implemented to ensure their continued existence before any resources are spent on developing them for tourism purposes.

4.4 Concept

The assignment was to assist Lekhnath Municipality in developing visions and strategies for the planned development of an “eco-trail”, by connecting the lakes and developing the surrounding areas as attractive tourist destinations.

Based on the key findings, the following concept was developed:

Goal: The concept of ecotourism intends to strengthen the local economy, while at the same time providing opportunities for environmental conservation, improving the standard of living for the local community and achieving long-term regional sustainability.

Vision: Lekhnath is a popular tourist destination with unique natural attractions, leading organic farming, community environmental education programs and sustainable ecotourism activities.

Concept: To develop Lekhnath Municipality as an ecotourism destination, through the incremental development of eco-trails and promotion of tourism related activities.

Objectives: To achieve this concept, the following strategies have been developed within the categories of spatial, social, economic, environmental and institutional development, and are explained further in the action plan:

1. Environment: To restore and conserve the natural environment for sustainable development in Lekhnath
2. Social & Economic: To integrate the local community into the activities of tourism
3. Institutional: To strengthen the institutional capacity of tourism within the municipality
4. Spatial: To develop eco-trails and necessary tourism infrastructure

A main priority of the concept is to co-ordinate and strengthen the existing areas and activities that already possess high tourism potential - starting with the areas around Begnas and Rupa Lakes, which are most suitable for receiving immediate tourism. There are a number of successful initiatives that already exist within Lekhnath, both at the
municipal level and within the community. Several best practice activities from within the municipality and partnering experts must be acknowledged, combined with fresh ideas and prioritized. The aim of this concept is to strengthen and promote existing successes, help provide models from within the community and develop programs were gaps exist. At the same time, conservation efforts must be focused towards the other five lakes, which are at serious threat of extinction. The parallel execution of these two priorities of ecotourism and environmental conservation will help achieve a future goal of tourism across the whole of Lekhnath, including all of the seven lakes. The action plan will highlight key attractions and strengthen existing well-functioning activities that are appropriate for immediate tourism. Low-cost and no-cost activities will be suggested for immediate implementation. The following section gives a detailed description of what ecotourism means both in general and specifically for Lekhnath, and how it can be achieved.

4.4.1 Ecotourism

The concept of ecotourism has not yet been properly defined. However, most definitions focus on community development, ecological conservation and economic development. According to The International Ecotourism Society (TIES) ecotourism is defined as “responsible travel to natural areas that conserves the environment and improves the well-being of local people.” (TIES, 1990). If Lekhnath is to be a sustainable ecotourism destination the following aspects must be addressed.

**Environmental Aspects**

As the name suggests, ecotourism is the responsible travel to natural areas and incorporates principles of environmental sustainability. Ecotourism is meant to be a win-win situation for both nature and the local population. It should provide revenue from ecosystem protection instead of extraction, and in the process it should return direct income to conservation efforts.

For Lekhnath, tourism gives incentives to protect the forests and keep the lakes in a healthy state. In addition to conservation efforts, ecotourism calls for a sustainable use of resources. When planning for an influx of tourists, great considerations should be made for catering for visitors e.g. filtered water should be offered instead of plastic bottles, water-saving devices installed for taps and showers, food made from locally sourced and seasonal produce, lodges constructed of local material etc.

Tourism in Lekhnath should strive to achieve a minimal carbon footprint, with tourist packages being advertised as “carbon-neutral” to encourage responsible tourism and promote awareness about the reduced environmental impact of their visit.

**Social Aspects**

From the planning stage through to implementation and operationalisation, ecotourism should involve and benefit the community. For tourism to be of a scale and type that can be sustained and enjoyed by the affected communities they need to be included in decision-making from the planning stage. This should be complemented by educational and capacity building schemes. Through education, community members can learn skills and create businesses that can cater to and benefit from tourism. Ecotourism should provide positive experiences both for hosts and visitors. The local community should take part in making guidelines for tourist behaviour when visiting. Tourists should also be given guidelines on how not to disturb the local eco-system.

**Economic Aspects**

Increased tourism in a planned and sustainable way will provide long-term economic benefits for Lekhnath Municipality. The focus needs to be on giving as many people as possible the opportunity to have an income from the tourism industry, in order to ensure revenue to the municipality. In
addition, there should be direct income for conservation efforts through direct fees to walk the eco-trail or indirect income through taxation or other measures.

**Institutional Aspects**

A well functioning national and municipal government is necessary to implement and enforce a legal framework for ecotourism. Without this it is likely that investors will either not invest or make investments that are unsustainable for Lekhnath in the long-term. It is also likely that tourism development in terms of activities, constructions and amount and types of tourists is done in an unsustainable non-ecotourism way.

**Spatial Aspects**

Spatial aspects of the concept include the development of tourist (eco) trails and necessary tourism infrastructure in phases which are realistically achievable and conducive to the existing spatial conditions. The first phase will focus on developing those locations, which already offer the most immediate potential for tourism such as the areas around Begnas Lake, Pachabaiya, and Rupa Lake. The areas surrounding the other five lakes will be designated as conservation areas, in order to maintain the important ecology and water resources, which the local population depends upon. The trails are made to have visitors concentrated on one track. This minimizes their environmental impact, as they are not trampling the surrounding forest and also limiting the spreading of potential diseases such as fungus through physical contact with the vegetation.

### 4.5 Action Plan

#### 4.5.1 Introduction and Prerequisite for Development

This section presents the actions that are recommended to develop ecotourism in Lekhnath. The actions include the activities required in all areas in order to quickly start developing a sustainable tourism industry. The actions are first presented within a logical framework, with more detailed descriptions found further below.

It is important to note that certain preconditions must be established before these steps can be put into action. First and foremost, funding must be secured. Secondly, the institutional framework must be improved by allocating specific people responsibility for initiating, coordinating and monitoring the implementation of these actions. This will be dealt with in the first section. Before any major activities can be initiated it is of essential importance that an Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) be performed and the findings adhered to.

The action plan of the project consists of three components: Eco-trail Project Logical Framework, Planned Activities Description and a Timeline.

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<tr>
<th>Action Plan</th>
<th>Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.Logical Framework (Table 4.2)</td>
<td>Goal, Objectives, Planned Activities, Actions, Expected Outcome, Indicators, Assumption/Risks</td>
</tr>
<tr>
<td>V2. Planned Activities Description</td>
<td>The justification and scope of the planned activities</td>
</tr>
<tr>
<td>V3. Timeline</td>
<td>The activities, steps and timeline</td>
</tr>
</tbody>
</table>
4.5.2 Eco-Trail Development Project Logical Framework (V.1.)

**Goals:** The Development of Eco-trails to create tourism activities in Leknath municipality which protect the natural environment while improving the well being of local people

### Category 1: Spacial Development
**Objective:** To develop eco-trails and necessary tourism infrastructure

<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Eco-trail development &amp; supporting infrastructure</strong></td>
<td>• Identify existing walking trails</td>
</tr>
<tr>
<td></td>
<td>• Establish new connections between trails, lakes, mountain views, homestays and organic farms</td>
</tr>
<tr>
<td></td>
<td>• Provide Signage along trails</td>
</tr>
<tr>
<td></td>
<td>• Provide a Tourist information center at Begnas Tal</td>
</tr>
<tr>
<td></td>
<td>• Eco-trail Project proposal development</td>
</tr>
<tr>
<td></td>
<td>• Provide direct tourist transport links</td>
</tr>
<tr>
<td><strong>2. Eco-trail marketing development</strong></td>
<td>• Website creation</td>
</tr>
<tr>
<td></td>
<td>• Networking, connections to greater tourism network (e.g. Agencies in Pokhara and Kathmandu)</td>
</tr>
<tr>
<td></td>
<td>• Offer incentives for local journalists to visit Lekhnath &amp; write reviews</td>
</tr>
</tbody>
</table>

### Category 2: Social and Economic Development
**Objective:** To integrate the local community into the activities of tourism

<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Strengthening Homestay Organisation</strong></td>
<td>• Increase organisation membership, network promotion capacity, greater influence in decision-making</td>
</tr>
<tr>
<td></td>
<td>• Homestay community training on cooking, hygiene, housing and toilet cleanliness, biogas, hospitality</td>
</tr>
</tbody>
</table>
### Expected Outcomes

- Tourists can enjoy the lakes, the biodiversity, the mountain view and village activities through eco-trail
- The eco-trail is very informative and accessible
- Increased number of visitors to Lekhnath, and an increased length of overnight stays

### Indicators

- Eco-trail constructed based on eco-friendly rules
- Tourist information center is developed
- Maps and signage of eco-trail are developed
- Picnic areas, bird watching areas, view point areas are constructed
- Regular bus from Pokhara to Lekhnath is available
- Number of visitors
- Website establishment
- Online exposure
- Number of partnerships with tourism actors
- International recognition
- Reviews in international travel guides

### Assumptions/Risks

- Disturbance to natural habitat
- Walking trail turns into vehicular road
- Inappropriate location of the information center
- Outdated information
- One bad review in travel guide or online tourism forum
- Mass tourism
- Uncontrollable increase in tourism

---

### Expected Outcomes

- The Homestay organisation has potential of income generation which boosts the local economy, skills, education and capacity building

### Indicators

- The Homestay Organisation has a representative at council level

### Assumptions/Risks

- Competition from external actors (e.g. foreign investors)
  Lack of government support and funding
<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Homestay Community transfer of knowledge by sharing of best practices among villages</td>
<td></td>
</tr>
<tr>
<td>• Provide training for sustainable house design</td>
<td></td>
</tr>
<tr>
<td>2. Sustainable housing construction - skills training</td>
<td>• Sustainable house design is implemented in the community</td>
</tr>
<tr>
<td>3. Village development plan</td>
<td>• Provide villages with a spatial land use plan</td>
</tr>
<tr>
<td>4. Water management</td>
<td>• The community has water filtration system</td>
</tr>
<tr>
<td></td>
<td>• Homestays and lodges use technology for low water use in showers, toilets etc</td>
</tr>
<tr>
<td></td>
<td>• Fast and low cost action to give water access to hill areas (see best practice)</td>
</tr>
</tbody>
</table>

### Category 3: Environmental Development

**Objective:** To restore and conserve the natural environment for sustainable development in Lekhnath

<table>
<thead>
<tr>
<th>Planned Activities</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lake Conservation:</strong></td>
<td>• Tree planting in buffer zone</td>
</tr>
<tr>
<td>1. Begnas and Rupa Lakes Conservation (See separate table on lake conservation)</td>
<td>• Eco-zoning of shoreline</td>
</tr>
<tr>
<td></td>
<td>• Biodiversity conservation</td>
</tr>
<tr>
<td></td>
<td>• Upstream activity mapping and controlling</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Indicators</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• Improved income security</td>
<td>• The host family capacity in term of tourism service is improved</td>
</tr>
<tr>
<td>Improved education and opportunities</td>
<td>• Training is conducted by successful homestay organisations in other villages</td>
</tr>
<tr>
<td>• Improved standard of living</td>
<td>• Sustainable house design training is conducted and house design is constructed</td>
</tr>
<tr>
<td>• Reduced level of urban poverty</td>
<td>• Village land use plan is established</td>
</tr>
<tr>
<td>• Many villages have capacity as a host for family homestay</td>
<td>• The number of water filtration constructed.</td>
</tr>
<tr>
<td>• Hosting community has low energy consumption and comfortable homestays</td>
<td>• Number of lodgings with low water technology.</td>
</tr>
<tr>
<td>• The environment is protected from scattered housing development</td>
<td></td>
</tr>
<tr>
<td>• Less use of plastic bottles. Sustainable use of water resources</td>
<td></td>
</tr>
<tr>
<td>• Less water borne diseases.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Indicators</td>
</tr>
<tr>
<td>• The lakes used and maintained in a sustainable manner</td>
<td>• Amount of forest coverage surrounding lakes</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the following, each of the suggested actions will be elaborated on in detail according to the previously mentioned main objectives.

4.5.3 Planned Activities Description (V.2.)

OBJECTIVE 1: To Develop Eco-trails and Necessary Tourism Infrastructure

1. Eco-trail Development

*Justification:* To increase the influx of tourists with a focus on environmental conservation, cultural and social awareness. The eco-trails proposed throughout the Lekhnath region will offer a unique opportunity for ‘responsible tourism’. The idea is to combine the experience of hiking through Nepalese landscapes and villages with the possibility for tourists to learn about various local activities such as organic honey farming, Ayurvedic medicine and healing techniques, meditation and low-impact organic lifestyles.

Hikers will adhere to ‘Leave No Trace’ and green-hiker principles already implemented throughout other areas in Nepal. Hikers will have the chance to engage directly with the local communities and physically experience the concept of homestay accommodation and village life. Additionally, the aim is to bring shorter-term trekkers from Pokhara (2 – 3 days) who are seeking an alternative to the longer, more strenuous hikes offered in the Annapurna region.

*Scope:* The following six eco-trails provide an idea of prospective walking routes and their respective tourism activities and highlights. Each scenario incorporates a part of the trail that already has trail connections and tourism infrastructure (starting at Begnas Tal through to Sandari Danda), with the intention that this part of the trail could be implemented in the very near future. The first three suggestions are the most likely trails for immediate implementation.
Expected Outcomes | Indicators | Assumptions/Risks
--- | --- | ---
- Lakes restored to sustainable size with well-functioning ecosystem | - The embankments and retention wall is constructed | - Insufficient co-ordination and finance
- Objection from landowners whose land may be flooded

**Expected Outcomes**
- The municipality has project management scheme

**Indicators**
- Organization structure is established

**Assumptions/Risks**
- The organization structure should involved multi stakeholders as Project Management Committee (PMC). The involvement of PMC will create lack of transparency

---

**Responsible Agency / Actors:** Lekhnath Municipality, Tour operators, Professional Tour Guides, Hotel and Restaurant Association (includes homestays), Community Based Tourism (CBT) groups.

**2. Eco-trail Supported Infrastructure Development**

*Justification:* The eco-trail pathways need to be supported by necessary infrastructure to make it accessible and enjoyable.

*Scope:* Construction of a Tourist Information Center, pathway signage, trail maps, souvenir shop, toilets, water-refill stations, picnic areas, viewpoints, rest area, bird-watching tower, biodiversity signage and cultural explanations along trails.

*Responsible Agency / Actors:* Municipality, private sectors

---

**3. Eco-trail Marketing Development**

*Justification:* Eco-trail marketing development is necessary to promote the area as an ecotourism destination, and to increase domestic and international tourist awareness of the eco-trails.

*Scope:* To create a brand image, development of an eco-trail brochure, Lekhnath tourist map with eco-trails, Manufacturing of souvenirs/ branding of local organic products to promote activities along the trails, post cards, strategic advertisement in Pokhara and Kathmandu, online website development, enrol in the International Homestay Association and other relevant organisations, partner with ecotourism operators, attend tourism fairs and conventions, expand tourist transport between Lekhnath and Pokhara, networking to tourism agency. *Responsible Agency / Actors:* Municipality (Tourism department)
Emerging Towns and Municipalities in Nepal: Rapid Development Concepts

Figure 4.23 a-f:
Overview of the Six Proposed Eco-Trails
Source: Own design
Figure 4.26: Eco-Trail (B)
Source: Laura Bright-Davies (2012)

Figure 4.27: One of the Seven Lakes in Lekhnath
Source: Laura Bright-Davies (2012)
### Development of 6 Types of Eco-Trails

#### A - Lakes view “organic” eco-trail
- 1-2 days (trekking + organic farming experience)
- Activities:
  - Eco-trail
  - Trekking
  - Village culture
  - Ayurvedic farm
  - Organic coffee/honey farming
  - Forest exploring (orchids)
  - Bird-watching

#### B - Lakes view “two-in-one” eco-trail
- 1-3 days (trekking + boating over Begnas Lake)
- Activities:
  - Eco-trail
  - Boating
  - Fishing
  - Swimming
  - Trekking
  - Village culture
  - Ayurvedic farm
  - Organic coffee/honey farming
  - Forest exploring (orchids)
  - Bird-watching

#### C - Lakes view “three-in-one” eco-trail
- 2-4 days (trekking + boating + trekking)
- Activities:
  - Eco-trail
  - Boating
  - Trekking
  - Village culture
  - Ayurvedic farm
  - Organic coffee/honey farming
  - Forest exploring
  - Bird-watching
  - Fishing
  - Swimming

#### D - Lakes and summit view eco-trail
- 2-4 days (trekking)
- Activities:
  - Eco-trail
  - Mountain trekking *with option to continue onto
    - Annapurna or Sikles
  - Village culture
  - Organic coffee/honey farming
  - Forest exploring (orchids)
  - Bird-watching
  - Fishing

#### E - Lakes view & landscape eco-trail (Passing all seven lakes)
- 2-4 days (trekking)
- Activities:
  - Eco-trail
  - Lake & landscape views
  - Village culture
  - Ayurvedic farm
  - Organic coffee/honey farming
  - Forest exploring (orchids)
  - Bird-watching
  - Fishing

#### F - Lakes view eco-trail and “Royal Trek”
- 1-3 days, with option to continue onto Annapurna (trekking)
- Activities:
  - Eco-trail
  - Mountain trekking *with option to continue onto
    - Annapurna
    - Village culture
    - Organic coffee/honey farming
    - Forest exploring (orchids)
    - Bird-watching
4. Initial Feasibility Study for Lekhnath Eco-Trail Development

The model provided aims to do an initial estimation of the payback for the construction of a 27 km eco-trail in the municipality of Lekhanth. The information of the number of trekkers in Pokhara Region, where Lekhnath is located, was not available. The initial step was to estimate this number with data provided in the Nepal Tourism Statistics of 2010. The fields in yellow can be switched in order to provide new possible outcomes. The steps of calculation are explained below and demonstrated after.

Potential number of trekkers in Pokhara.
Estimated by the multiplication of the number of visitors to Pokhara Region and the percentage of people who declared trekking as reason of visit to Nepal.

Lekhnath trekkers attraction
The percentage attraction for Lekhnath trails (new visitors) is an open parameter; however the estimated goal would be if Lekhnath attract 10% of the potential trekkers in Pokhara, 2070 trekkers would visit the municipality. This parameter was simulated with different values, in order to provide a sensitivity analysis.

The following is an estimation of average income by visitor by day in US$ based on the Nepal Tourism Statistics. Accordingly, it is estimated that US$ 42/day is the average income provided by tourism in Nepal (NTS 2010).

If 2070 visitors stay an average of 2 days in the city, which is a very conservative estimation for international tourists (local tourists in fact spend fewer days), the annual revenue generated would be almost US$ 174,000.

The payback period, in this simulation, is within how many years the investment equals the income generated through the years in which the trail is operational. The implementation (investment) cost of the trail was estimated based information from the site walkinginfo.org, and focused on trail segments. With 27 km, the total cost would be around US$ 680,000. However, this cost estimation must be reviewed to better reflect local labor costs. Still, as it stands it provides a reference for high standard trail construction cost and a reference for the Lekhnath project. If the scenario described above was realized, the project would pay for itself in less than four years.
### Estimated with Nepal Tourism Statistics 2010 (NTS 2010)

**open parameters - simulation**

#### A) Pokhara trekkers estimation

<table>
<thead>
<tr>
<th>Pokhara Visitors per year (excl. Indians)</th>
<th>178,500 visitors/year - NTS2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of trekkers to Nepal</td>
<td>11.6%</td>
</tr>
<tr>
<td></td>
<td>% of people who visit Nepal for trekking - NTS2010</td>
</tr>
<tr>
<td></td>
<td>20,706 trekkers per year potential</td>
</tr>
<tr>
<td></td>
<td>56.73 trekkers per day</td>
</tr>
</tbody>
</table>

#### B) Lekhnath trekkers attraction

<table>
<thead>
<tr>
<th>% attraction for Lekhnath trails (new visitors)</th>
<th>10.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of trekkers (potential attraction for Lekhnath)</td>
<td>2,070.60</td>
</tr>
<tr>
<td>trekkers per day</td>
<td>5.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US$ - Average income by visitor by day (NTS2010)</th>
<th>US$ 86,965</th>
</tr>
</thead>
<tbody>
<tr>
<td>US$/tourist (average income for additional tourist in Lekhnath)</td>
<td>US$ 86,965</td>
</tr>
<tr>
<td>2 average days of Stay</td>
<td>27 km of trails</td>
</tr>
<tr>
<td>Income provided by tourism</td>
<td>173,930 per year</td>
</tr>
<tr>
<td></td>
<td>27 km of trails</td>
</tr>
<tr>
<td>B.1) Revenue Generation</td>
<td></td>
</tr>
<tr>
<td>B.1) Payback</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>estimated implementation cost</th>
<th>US$ 675,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAYBACK PERIOD</td>
<td>3.9 years</td>
</tr>
</tbody>
</table>

**Figure 4.28:**
Potential for Lekhnath Eco-Trails Calculator
Source: Based on numbers from NTS 2010.
Sensitivity Analysis
The sensitivity analysis provides an estimation varying specific parameters in the model. These are the percent attraction for Lekhnath trails (new visitors) and the average days of stay by trekkers. For example, if all the other conditions are kept, the percentage of attraction is 10%, and the average days of stay is 2, than the project has a 3.9 year payback period, as shown in the base model (model initially calculated).

In another example, if the average days of stay is 4, than the payback period would be 1.9 years. This model, as stated, can be detailed if necessary to provide more accuracy. Nevertheless, it provides an initial estimation of the feasibility of the eco-trail and a guide to direct efforts in promotion.

<table>
<thead>
<tr>
<th>% Attraction for Lekhnath trails (new visitors)</th>
<th>0.5</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 %</td>
<td>62.1</td>
<td>31.0</td>
<td>15.5</td>
<td>10.3</td>
</tr>
<tr>
<td>5 %</td>
<td>29.3</td>
<td>14.6</td>
<td>7.3</td>
<td>4.9</td>
</tr>
<tr>
<td>10%</td>
<td>15.5</td>
<td>7.8</td>
<td>3.9</td>
<td>2.6</td>
</tr>
<tr>
<td>15%</td>
<td>10.3</td>
<td>5.2</td>
<td>2.6</td>
<td>1.7</td>
</tr>
<tr>
<td>20%</td>
<td>7.8</td>
<td>3.9</td>
<td>1.9</td>
<td>1.3</td>
</tr>
<tr>
<td>50%</td>
<td>3.1</td>
<td>1.6</td>
<td>0.8</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Table 4.3: Sensitivity Analysis

OBJECTIVE 2: To Integrate the Local Community Into the Activities of Tourism

1. Strengthening Homestay Organisations
Justification: Some of the villages visited, such as Panchbhaiya and Chaur, already have established community based homestay organisations. Strengthening these organisations will increase their capacity to manage their members and also to have greater influence in decision-making. Homestay is an efficient initiative to create income for the local population. It is an incentive to participate in capacity building and learn new skills from the hosting of tourists. When tourists come and stay it can be a positive experience where both guest and host learn about each other’s cultures. There are also some concerns that need to be addressed when a community must adapt to the tourism industry.

The aim of expanding the homestay operation in Lekhnath is to integrate the local community into the activities of tourism, while offering tourists a high quality of service as well as the unique opportunity to experience Nepali life and culture. This action aims to:

1. Generate income for the local population.
2. Increase standards for expanding the tourist population.
3. Preserve the natural aesthetic, rather than destroying it with hotel and resort development, as seen in Pokhara.

**Scope:** Identification of homestay organisations, establishment of homestay organisation association, conduct need-analysis of homestay organisations, create long-term course development at the neighbouring educational institution for tourism, capacity building.

**Responsible Agency / Actors:** Homestay Organisations and the Municipality of Lekhnath.

There are two costs associated with the implementation of the homestay program. The first is related to the cost of instruction. Assuming that an instructor worked part-time as a teacher in a 50 person (each representing a household) Education and Infrastructure-Upgrading Program, the cost for instruction would be approximately 1800 US$/year. If 200 US$ were spent on individual infrastructure improvements, the total cost would be 10,000 US$. Therefore the estimated payback period for a 50 person Homestay Education and Infrastructure Improvement Program would be one year.

---

**Table 4.4:**

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>50 Person Homestay Education Program (Assuming 5% Increase in Tourism)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Attraction for Lekhnath trails (new visitors)</td>
<td>1,097</td>
</tr>
<tr>
<td>Price of homestay per night in Lekhnath (US$)</td>
<td>US$ 13,164</td>
</tr>
<tr>
<td>Average days of stay in homestay</td>
<td>2</td>
</tr>
<tr>
<td>Cost of infrastructure upgrading</td>
<td>US$ 10,000</td>
</tr>
<tr>
<td>PAYBACK PERIOD</td>
<td>0.90</td>
</tr>
</tbody>
</table>

**Economic Analysis**

The Homestay program would require two sources of revenue. If the tourist industry in Lekhnath increased to 5% of Pokhara’s in terms of tourists per year (NTS 2010), there would be 1097 people annually (3 additional people per day). Assuming that each new visitor finds accommodation at a homestay and pays about 6 US$ per night and stays 2 nights, the increased annual income within the community would be 13,164 US$. 


2. Sustainable Housing Construction Skills

Justification: The existing conditions of venacular houses indicate excessive energy consumption especially through electric fans and electric lights because of a lack of knowledge on appropriate house design especially in terms of air circulation. The training on sustainable housing construction skills aims at giving knowledge to the community about appropriate housing design by using local materials appropriate to the climate so the interior climate becomes more comfortable due to better air circulation and a reduction in electric energy use.

Scope: Homestay Organisation selection, problem mapping on existing housing conditions, construction training, and housing construction implementation supervision

Responsible Agencies / Actors: University, NGOs, Municipality

3. Village Development Plan

Justification: The housing development in Lekhnath is scattered haphazardly throughout the municipality without spatial land use planning. Some of the houses are built close to the lakes, some of them are scattered in the hills. In this way the beautiful landscape is disrupted in some places by the scattered housing construction. The village development plan is to make a spatial land use plan within the village. The aim is to guide the physical development within the village, with a particular focus on housing so that housing construction and location is carefully considered. Moreover, the aim is to maintain the landscape, which is attractive for tourists.

Scope: Community meetings, participatory spatial mapping, village development plan design, community agreement

Responsible Agency / Actors: Municipality, village leaders, CBOs

4. Water Management

Justification: Water is one of the most important resources. As it is already scarce, it will be vulnerable when there is an increase of visitors and also likely migration. Planning of water resource management is essential in ecotourism.

Scope: Implement fast action to give water access to hilly areas (see best practice). There will be water filtration instead of bottled water to reduce waste. In households, homestays and other accommodations there will be technological devices that reduce the amount of water used for showering, toilets etc.

Responsible Agency / Actors: CBOs, local and regional government.

OBJECTIVE 3: To Restore and Conserve the Natural Environment for Sustainable Development in Lekhnath

1. Lake Conservation

Justification: The lakes provide water and produce to the inhabitants of Lekhnath. The lakes are also a tourist attraction. The aim of lake conservation is to restore the size and quality of the lakes, securing their future. In addition, the introduction of a sustainable management plan will ensure that the condition of the lakes continue to bring long-term benefits to Lekhnath.

Scope: Begnas and Rupa lakes need a program to maintain their biological diversity and increase the water quality. Dipang, Khaste, Gunde, Neureni and Maidi need extensive conservation programs to improve and secure their existence and quality before they are developed for tourism purposes. Extensive research assessment has been done on these lakes, and comprehensive strategies have been developed. What has been lacking is the implementation of these strategies. IUCN has published two reports on wetland management in Lekhnath municipality, and the concerns and recommendations will be mentioned here (Oli 1997, 2000). For any tourism investments to be done on these lakes, conservation efforts must be implemented for the investment to be worthwhile.

Responsible Agency / Actors: Ministry of Environment, Lekhnath Municipality
**Lakes**

<table>
<thead>
<tr>
<th>Lakes</th>
<th>Concerns</th>
<th>Conservation Efforts Needed</th>
<th>Institutional Efforts Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Strengthen institutional management. Control water pollution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Monitor water quality. Launch awareness campaigns.</td>
</tr>
</tbody>
</table>

**OBJECTIVE 4: To Strengthen the Institutional Capacity of Tourism within the Municipality**

1. **Organisation of a Project Management Committee within Lekhnath Municipality**

*Justification:* The development of the eco-trail needs a project management effort to create the efficient work structure and project results based on the ecotourism concept. The municipality needs to establish organisational structures to manage the project. There should be a Project Management Committee (PMC) in the structure.

The PMC consists of representative stakeholders as a collective leadership to guide the project manager based on the ecotourism considerations (community development and environmental protection).

*Scope:* Project Organisation structure establishment, Job description establishment, PMC establishment, Eco-trail Project Proposal development.

*Responsible Agency / Actors:* Municipality, stakeholders
Figure 4.29: The Members of a Possible Project Management Committee
Source: Own design

Figure 4.30: Proposed Eco-Trail Project Organisation Structure
Source: Own design
### 4.5.4 Timeline (V.3.)

<table>
<thead>
<tr>
<th>OBJECTIVES, PLANNED ACTIVITIES &amp; STEPS</th>
<th>TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE 1</strong> To develop eco-trails and necessary tourism infrastructure</td>
<td>Short Term</td>
</tr>
<tr>
<td>Action 1: Eco-trail development &amp; necessary tourism infrastructure</td>
<td></td>
</tr>
<tr>
<td>Steps:</td>
<td></td>
</tr>
<tr>
<td>a. Identify existing walking trails</td>
<td></td>
</tr>
<tr>
<td>b. Establish new connections between trails, lakes, mountain views, homestays and organic farms</td>
<td></td>
</tr>
<tr>
<td>c. Provide signage along trails</td>
<td></td>
</tr>
<tr>
<td>d. Tourist information center is provided at Begnas Tal</td>
<td></td>
</tr>
<tr>
<td>e. Eco-trail Project proposal development</td>
<td></td>
</tr>
<tr>
<td>f. Provide direct tourist transport links</td>
<td></td>
</tr>
<tr>
<td>Action 2: Eco-trail marketing development</td>
<td></td>
</tr>
<tr>
<td>Steps:</td>
<td></td>
</tr>
<tr>
<td>a. Website creation</td>
<td></td>
</tr>
<tr>
<td>b. Networking, connections to greater tourism network (E.g. Agencies in Pokhara and Kathmandu)</td>
<td></td>
</tr>
<tr>
<td>c. Offer incentives for local journalists to visit Lekhnath &amp; write reviews</td>
<td></td>
</tr>
<tr>
<td><strong>OBJECTIVE 2</strong> To integrate the local community into the activities of tourism</td>
<td>Short Term</td>
</tr>
<tr>
<td>Action 1: Strengthening homestay organisation</td>
<td></td>
</tr>
<tr>
<td>Steps:</td>
<td></td>
</tr>
<tr>
<td>a. Increase organisation membership, network promotion capacity, greater influence in decision-making</td>
<td></td>
</tr>
<tr>
<td>b. Homestay community training on cooking, hygiene,</td>
<td></td>
</tr>
</tbody>
</table>
### Emerging Towns and Municipalities in Nepal: Rapid Development Concepts

<table>
<thead>
<tr>
<th>Action 2:</th>
<th><strong>Sustainable housing construction skills training.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steps:</td>
<td>a. Provide training for sustainable house design</td>
</tr>
<tr>
<td></td>
<td>b. Sustainable house design is implemented in the community</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action 3:</th>
<th><strong>Village development plan.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Provide villages with a spatial land use plan.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action 4:</th>
<th><strong>Water management</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>The community has water supply and treatment</td>
</tr>
<tr>
<td>b.</td>
<td>Homestay and lodges use technology for low water use in showers, toilets, etc.</td>
</tr>
<tr>
<td>c.</td>
<td>Fast and low cost action to give water access to hill areas.</td>
</tr>
</tbody>
</table>

### Objective 3: To Restore and Conserve the Natural Environment for Sustainable Development

<table>
<thead>
<tr>
<th>Action 1:</th>
<th><strong>Begnas and Rupa Lakes Conservation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steps:</td>
<td>a. Tree planting in buffer zone</td>
</tr>
<tr>
<td></td>
<td>b. Eco-zoning of shoreline</td>
</tr>
<tr>
<td></td>
<td>c. Biodiversity conservation</td>
</tr>
<tr>
<td></td>
<td>d. Upstream activity mapping &amp; controlling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action 2:</th>
<th><strong>Dipang, Khaste, Gunde, Neureni and Maidi Lakes restoration and conservation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steps:</td>
<td>a. Demarcation of lake border</td>
</tr>
<tr>
<td></td>
<td>b. Construction of embankments and retention walls</td>
</tr>
<tr>
<td></td>
<td>c. Tree planting in buffer zone</td>
</tr>
<tr>
<td></td>
<td>d. Eco-zoning of shoreline</td>
</tr>
<tr>
<td></td>
<td>e. Biodiversity conservation</td>
</tr>
<tr>
<td></td>
<td>f. Upstream activity mapping</td>
</tr>
</tbody>
</table>
Concessions for Tourism Services in Costa Rica

- Established/ launched: 1990
- Location: Irazu and Poas National Parks, Costa Rica
- Aim of Program: In the early 1990s the Costa Rican National Park System established a tourism concession program in the Irazu and Poas National Parks. Concessions for tourism-related services such as entrance fee collection, tour guides, groundskeepers, security guards, food and beverage, and souvenir stands are competitively auctioned to local small businesses and residents living in the buffer zones of these parks. These concessions are a real and effective way in which communities can participate and benefit from protecting a natural area. In addition all concessionaires pay a percentage of their gross profits to a fund that finances capital improvements for the parks and training and equipment for staff. Currently there are more than 80 concessionaires working in the two parks.
- Achievements: The income has greatly improved the facilities and services provided in the national parks and have contributed to their financial sustainability. Most importantly, surrounding communities have formed a strong alliance with the park service in protecting the biological resources of the national parks, which provide many of them with an alternative source of income. From 1995-2000, the concession mechanism generated more than $250,000, which has been reinvested in the management and operations of the two parks.
- Lessons Learned: Concessions can produce steady revenue
- Website: http://www.fundecortechnology.org/fundecor/Inicio.html
### Project Name: Tanzania’s Green Tourism Projects

<table>
<thead>
<tr>
<th>Established/launched</th>
<th>• 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>• Tanzania</td>
</tr>
<tr>
<td><strong>Aim of Program</strong></td>
<td>• Working with locals, employ and train local people, preserve the environment and support local communities; Independent lodge, involving local communities; long-term training, secure employment and monitoring</td>
</tr>
<tr>
<td><strong>Achievements</strong></td>
<td>• Provides training in the following disciplines: bringing agricultural knowledge, marine understanding, training and education, and most importantly a sense of inclusion for the elders and villagers</td>
</tr>
<tr>
<td><strong>Lessons Learned</strong></td>
<td>• The project was established with the primary objective of working on a small scale and training locals instead of building huge resorts</td>
</tr>
</tbody>
</table>
| **Website**          | http://www.theecologist.org  
|                      | www.tropicaltrails.com |

### Project Name: Rupa View Homestay

<table>
<thead>
<tr>
<th>Established/launched</th>
<th>• 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>• Pachabhaiya, Nepal</td>
</tr>
<tr>
<td><strong>Aim of Program</strong></td>
<td>• The project was established to provide tourists with the opportunity to experience the Nepali way of life. This example of homestay is unique in its aim to provide a higher standard of accommodation and family experience, while presenting a model example to homestay operators in surrounding areas</td>
</tr>
</tbody>
</table>
| **Achievements**     | • After 9 years this homestay built 3 more rooms in order to give more and better service to their clients. All energy is sourced from solar panels on the roof, food is prepared using organically farmed produce from the homestay garden, and waste is converted into biogas, which is then used for cooking.  
|                      | • These ecotourism aspects attract a certain type of tourist, and in higher frequency than alternative homestays in the area. Therefore, the other homestay operators are interested to learn about sustainability, in order to boost the number of visitors |
| Lessons Learned | • The homestay operator gives training sessions to community groups, to help guide them in a similar successful direction and to boost tourism in the area as a whole  

• Tourists are willing to pay more for a higher standard of accommodation and a smoother experience. This lodging charges 400 Rupees per night, as opposed to 200 Rupees at other guesthouses. The importance of sharing knowledge and best practices within the homestay community |
| Website | https://sites.google.com/site/rupaview/ |

| Project Name | Nepalese Women Skill Development Project |
| Established/ launched | • 2010 |
| Location | • Nepal |
| Aim of Program | • Increase income and job opportunities for women in selected rural areas by improving their financial situation and make them financially independent |
| Achievements | • Provides training in the following disciplines: material cutting, sewing, weaving, dying, business management and various other skills related to handicraft production. There have also been some classes in health awareness and English language, all freely provided by local and foreign volunteers |
| Lessons Learned | • The project was established with the primary objective of helping needy women as well as providing economic support to Rainbow Children Home-Nepal |
| Website | http://www.nepalesewomenskill.com/index.php |
4.6 Conclusions

Lekhnath municipality has extensive potential to increase tourism. It is also in the fortunate situation that the tourism sector is in its infancy, and therefore can (still) be well planned and developed in a way that is sustainable ecologically, socially and economically. The attitude among decision makers and relevant stakeholders is found to be positive, and there seems to be an agreement that conservation of natural resources should be at the forefront of the development as it is also the main attraction of the area.

Several proposals for the tourism development have been made:

1. Tourism development efforts should only be made after following certain prerequisites such as conducting an Environmental Impact Assessment, community information and consultation.

2. Development efforts should be made in stages, where the first is to develop an eco-trail in the most developed/popular area to start generating revenue for the municipality.

3. Many well functioning tourist-related activities already take place in Lekhnath; these should be coordinated, supported and strengthened in the first stage.

4. Khaste, Dipang, Gunde, Maidi and Dipang lakes should first be restored and conserved before further development efforts are made as they are in danger of being extinct.

5. All development efforts should be done with community participation and development in mind, thus extensive education and training programs should be initiated to increase the capacity and ability of community members to take part if they wish.

6. Infrastructure and resource managing efforts should first focus on water management, sewage and waste management.

The outlined activities as mentioned in this report are considered to be the ‘low-hanging fruit’ of actions Lekhnath can implement. Certain areas of partnerships must be made to obtain the experience from around Nepal and around the world.
5 Lekhnath City Center
Within the context of Lekhnath, a second focus was on the strategic development of a city center. For an overview of the general characteristics of Lekhnath, see the common introduction on page 106-109.

A long-term vision of Lekhnath as ‘The Garden City of Seven Lakes’ was developed in the Periodic Plan of Lekhnath Municipality (2006-07 to 2011/12) prepared by the Department of Urban Development and Building Construction (DUDBC 2006). The priority development areas are infrastructure, natural resources management, environmental protection, economic and employment issues as well as the development of the tourism sector. As mentioned in the Municipality Profile the following planning guidelines were developed in the Periodic Plan of Lekhnath Municipality (GHK 2010):

1. Encourage compact settlement to make investment, operation and maintenance of the infrastructure effective;
2. Conserve forests, lakes, wetlands, cultural and religious sites and biodiversity through the effective implementation of a land use policy;
3. Promote cultural and ecotourism development by the appropriate development of infrastructure including amenities, activities and accommodation;
4. Promote agriculture: Preserve fertile agricultural land and promote commercial agriculture and livestock farming;
5. Improve urban services, particularly relating to accessibility and public parking, water supply and sanitation, drainage & wastewater management, solid waste management, market development, and squatter area management.

As Lekhnath was formed through the agglomeration of four VDCs, each with its small central areas, the city lacks a central point where locals and tourists can meet and find a variety of products and services. In the Periodic Plan, one core center and three other nodes were proposed. The area to be developed as the city center has already been identified by the municipal officials.

The Lekhnath Core City Area Development was conceived with the support of the GIZ Sub-National Governance (SUNAG) Program and the World Bank supported Urban Governance and Development Programme’s (UGDP) Regular Track Projects. It aims to develop the central area of the municipality through greater participation from the local people. The approach is to consolidate the land (mostly private) through available legal provisions, providing roads, open space and urban services, re-plot the land parcels and return re-plotted land in equal percentages to the original owners. The concept is similar to the land amalgamation and consequent division commonly known as land-pooling. The original landowners will not be evicted during this process. The landowners shall contribute some portion of land (generally between 15-35%). The increase in land price due to the provision of infrastructure will benefit the landowners while the municipality will benefit from increased property taxes. The city center will undoubtedly play an important role in shaping the municipality’s identity.

5.1 Assignment

Considering the stated framework and the challenges the municipality of Lekhnath is facing, there is an evident need for an urban centre. The assignment is to assist Lekhnath Municipality with the development of visions and strategies for the planned development of an urban center which accommodates future growth without compromising the vision of a garden city.

5.2 Methodology

The project was executed using collection of primary and secondary information. With that in hand, analysis and preparation of the plan were conducted. Finally, a strategy for implementation along with an action plan were produced. The sources and steps are described below.
obtained, a SWOT analysis was applied to the physical, social, economic and institutional aspects in order to identify the strengths, weakness, opportunities and threats and the relationship between the issues as well as the stakeholders involved (see stakeholder analysis).

Preparation of the Plan
The available maps (municipality’s digital map and Google satellite map) were compared and analyzed and it was decided to work with the satellite map [accessed 17th April 2012] due to the availability of more in-depth information. Therefore, a new digital map was drawn based on the satellite map. These two maps are the basis for the following work presented in this chapter. However, it needs to be pointed out that their accuracy cannot be guaranteed; the only thing that can be guaranteed is that all maps in this report are consistent. In the next phase which is more implementation-oriented, a detailed plan, preferably based on a GIS and/or the cadastral map, should be prepared and matched with the existing ones.

Secondary Information
The key secondary information used for this report were: 1. IUCN Conservation Plan of Lekhnath Municipality (Oli 2000); 2. Municipality Profile of Lekhnath (GHK 2010) and 3. Periodic Plan (including Land Use Plan) of Lekhnath (2006). These documents provide a solid foundation for understanding the social, economic, financial, political and spatial aspects of the municipality. Beside secondary data, a range of primary data were also collected to understand the rapid changes the municipality has undergone in recent years.

Primary Information
Primary information was collected mainly by 1. interviewing and consulting different stakeholders and 2. conducting a field survey. The interviewees and consultations include the municipality, DUDBC, GIZ SUNAG and MST staff, the Pokhara Valley Town Development Committee, Lekhnath Chamber of Commerce and Industries, the founding mayor of Lekhnath, the local hotel sector, landowners, coffee farmers, community, Water User Group, and Private Land Developers. In the field survey, the geographical features, land use of the entire municipality and the identified site for the city center were investigated. For an detailed overview of interviewees, see the annex page 202.

Analysis
Based on the secondary information and the range of stakeholder interviews, the economic analysis was made. A comprehensive understanding of the local economy was gained from the range of stakeholders’ responses rather than from any single stakeholder, which was considered vital for the analysis and consequent proposals. In addition, a detailed spatial analysis was undertaken and the road network, the current land use and building conditions were analyzed. The city center site was analyzed in further detail, and the possibilities to develop the land in the future were considered. After a comprehensive understanding of the municipality and its center was
Figure 5.2: Meeting with the Municipality of Lekhnath
Source: Hana Yoosuf (2012)

Figure 5.3: Data Collection
Source: Gesa Schöneberg (2012)
5.3 Analysis of the Current Situation

5.3.1 The Regional Role of Lekhnath

Lekhnath is heavily influenced by Pokhara’s economy, not just because of spillover tourism from Pokhara (20% of tourists who go to Pokhara also visit Lekhnath), but also because Lekhnath is increasingly becoming a promising residential area for people who work in Pokhara and commute everyday. Medium to high income families are buying houses in Lekhnath, due to its calmer and less polluted environment and 37% of migrants cited “better lifestyle” as their reason for migrating to Lekhnath (GHK 2010). However, land prices in Lekhnath and Pokhara - excluding the center of Pokhara - are already comparable, as greenfield land in Pokhara becomes increasingly scarce.

Lekhnath is also home to Pokhara University and the Pokhara Fish Research Center which demonstrates the influence of Pokhara in Lekhnath, and the potential benefits of coordinated development.

5.3.2 Current Situation and Potential of the Local Economy

Agriculture
At present, the majority of economic activity in Lekhnath is based on agriculture, including livestock rearing, crop-farming and fish-farming. More than 75% of the households are engaged in rearing livestock in the municipality (cow, buffalo, oxen, goat, and poultry). As per municipal profile, land use for agriculture accounts for some 23%. Around a quarter of the land owned by the municipality consists of steep terrain on which it is often difficult to build and sometimes difficult to farm. Around 16% of households own agricultural land in the municipality. For about 3% of people in Lekhnath, fishing is the primary source of income, undertaken by farmers on their own land or on rented land and waters.

In addition, Lekhnath has an important commercial sector, which includes retail, wholesale, catering, and personal and professional services. This is an important foundation for the municipality’s economic development and overall growth.

Tourism
There is also great tourism potential in Lekhnath. It has nature, a mild climate, a relatively unpolluted environment, easy access to Kathmandu and other parts of the country. Magnificent views of the Himalayan Peaks and the Annapurna Range can be seen across the municipality. Tourist spots like Thulakot, Rupakot, Syaklungkot, Deurali Mandir, Gorakhnath Temple and Sita Cave are all located in the municipality and offer views to rival the highly touristed Sarangkot viewpoint near Pokhara. Additionally the (bigger) lakes are a great selling point for the tourism sector. If managed well, there could be a significant increase in revenue earned from tourism (see previous chapter on ecotourism development in Lekhnath Municipality).

Education Hub
Pokhara University, located in Lekhnath offers courses in business, engineering, health and applied science, development and social engineering. The current expansion of the university will also have an impact on the future urbanisation of Lekhnath.

Favourable Climate and Rich Biodiversity
Lekhnath has a sub-tropical climate with heavy rainfall. It hosts a rich variety of both evergreen
and deciduous plant species; e.g. the area is rich in orchids. Altogether there is a great potential to develop floriculture activities in Lekhnath.

**Energy**

The Kali Gandaki Hydro Power Station lies within the boundary of the municipality. While this does not guarantee an uninterrupted electricity supply, it is indicative of the energy potential of the area.

**Regional Bus Terminal**

The construction of a regional bus terminal is planned within the municipal boundary, approximately 3km from the city center. This bus terminal will generate a lot of formal and informal employment opportunities, while also encouraging external visitors. This regional bus terminal will play a crucial role in the urbanisation of Lekhnath.

### 5.4 Spatial Analysis

The figure-ground map is based on the Google Earth map, where it shows:

1. Low-density in the built-up area, higher density in the commercial nodes and along the highway.
2. Urban pattern of the area is scattered due to the lack of regulations and multiple ownership of small plots of land.
Figure 5.5: The Figure Ground Map of the Study Area Shows the Density Level and Scattered Pattern of the Buildings. Source: Based on Google maps [accessed 17th April 2012]

Figure 5.6: The Map Shows the Road Network of the Study Area Which is Insufficient for Further Development. Source: Based on Google maps [accessed 17th April 2012]

Pokhara - Kathmandu highway (50m wide)
Danda Ko Nak- Shishuwa (30m wide)
TAL Chowk – Shishuwa (30m wide)
Two secondary roads with a width of 15m connecting the main roads.
Figure 5.7: The Highway is in Relatively Good Condition Compared to Other Roads but Lacks Traffic Management
Source: Sara Abdelaal (2012)

Figure 5.8: One of the Inner Main Roads Running from Tal Chowk to Shishuwa (30m Wide)
Source: Hana Yoosuf (2012)
5.4.1 Road Network and Accessibility

From these findings, we can see that the accessibility of the area is not sufficient for further development of the area as a city center; mobility is limited and there is a lack of public transportation and lack of traffic management.

Table 5.1: Existing Land Use
Source: The authors calculation

<table>
<thead>
<tr>
<th>Land Use: (Built-up area, table 5.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The primary land use is agricultural, followed by residential and there is a small area designated to commercial and mixed use. Around Shishuwa, there are mostly commercial-use buildings, and there is a tendency of this kind of building to spread toward Jyamire Kuna.</td>
</tr>
</tbody>
</table>

Architectural Typology

The majority of the buildings in Lekhnath are relatively new constructions. While most of the buildings are single residential buildings, there is a concentration of commercial buildings along the TAL Chowk to Shishuwa Road where the ground floor is commercial and the first floor residential. The modern style buildings mostly rely on materials which are not found locally and do not fit with the natural landscape of the area. Altogether the ‘architectural identity’ of the area can be seen as ‘constantly diminishing’.
Ownership
As is the case across the country, renting is not common. The tendency is to build houses on agricultural land, meaning most of the buildings are owned and occupied by the land owners.

Density
The urban pattern of the area is unregulated. The areas along the commercial roads (boundaries of the study area) are relatively densely settled but the density in the study area is lower and more scattered.
5.4.2 Stakeholders

**Government**
- Local government: Lekhnath Municipality
- Central government: DUDBC Department of Urban Development and Building Construction, Ministry of Federal Affairs and Local Development (MoFALD) Pokhara Valley Town Development Committee
- Line agencies

**Civil Society**
- Land owners
- Community/TLOs
- Fishing Cooperatives
- Water Users Group
- Former Mayor

**Private sector**
- Lake Conservation Committee
- Local Hotel Sector
- Chamber of Commerce and Industries

5.4.3 SWOT Analysis

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- The central location of the study area is a strength as it is the geographical center of the four original villages.</td>
<td></td>
</tr>
<tr>
<td>- There is also great potential for the area to be developed as a city center due to the flat topography and natural landscape.</td>
<td></td>
</tr>
<tr>
<td>- Land-pooling has already been agreed on for one-third of the site, which is a solid foundation for overcoming the issue of the land being owned by several owners.</td>
<td></td>
</tr>
<tr>
<td>- The physical distribution of the built-up area, the scattered buildings, land owned by multiple owners and the acceleration of unregulated construction, affects both the planned development of the area and the overall image of the area.</td>
<td></td>
</tr>
<tr>
<td>- Interrupted energy supply (‘Load shedding’)</td>
<td></td>
</tr>
<tr>
<td>- Inefficient Water supply</td>
<td></td>
</tr>
<tr>
<td>- The physical condition of the roads are bad and unpaved and as a result there is a lack of sidewalks and crosswalks, only the highway is paved with lack of traffic management and designated bus stops.</td>
<td></td>
</tr>
<tr>
<td>- There is a lack of facilities and designated public spaces which weakens the variety of the land use in the study area.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- The proximity to Pokhara is advantageous. Pokhara can only expand towards the east in the direction to Lekhnath as it is surrounded by hills in the north and the south. Additionally, Pokhara is currently experiencing a housing shortage which is expected to worsen, which is resulting in a growing demand for land in Lekhnath (can also become a threat if the growth is not controlled).</td>
<td></td>
</tr>
<tr>
<td>- Moreover, as the land in Lekhnath is primarily agricultural and many land-owners are pro land-pooling, there is a great level of flexibility associated with the development of the study area.</td>
<td></td>
</tr>
<tr>
<td>- Developing the city center in cooperation with the Eco-trail Project will strengthen the municipality’s identity and stimulate the economic development of the whole municipality.</td>
<td></td>
</tr>
<tr>
<td>- The potential obstacles for developing this area is the practice of sub-dividing land and the fact that many of the owners of small plots of land in the study area, are not fully aware of the benefits of land-pooling.</td>
<td></td>
</tr>
<tr>
<td>- The lack of building regulations or their limited enforcement when they are in place, puts Lekhnath at great risk of developing in an unplanned and unsustainable manner.</td>
<td></td>
</tr>
</tbody>
</table>
5.5 The Concept of the Garden City

5.5.1 Vision and Concept

The main idea expressed in the ‘Garden City of the Seven Lakes’ vision, is to conserve the lakes and the natural landscape. Thus, the city center should be developed in harmony with the natural environment in order to realise the vision of the municipality as a whole. The following vision for the city center is proposed:

“A garden city at the heart of Lekhnath, featuring a vibrant market square, housing and public space by 2030”

The elements and premises of this vision are translated in the concept of the ‘Garden City Center’:

1. The “Garden City Center” will be the main commercial center of Lekhnath. It will be a Mixed Use Income Center, where a combination of commercial, residential and low scale industrial areas are located together. One key project for stimulating economic development in the center will be a central market place.

2. This central area will interact with the natural landscape through a park system. Linear parks and the larger park inside the city center are representations of Lekhnath’s natural features. They are ‘Inner-City Gardens’. One key project will be a linear park developed along the irrigation channel. The edges of this park would be used both for hotels and small vegetable gardens. The front of the farmlands would host vegetable markets.

3. The commercial areas, the park system, the central market and the tree corridors connect the city center to the lakes, promoting tourism and creating a more cohesive municipality.

This concept will be delivered through six cross-cutting themes within a clear framework and in accordance with what type of development is promoted in different locations.

As the city center cannot be developed as a fully residential or commercial area, Option B would be the most feasible solution because it is a well balanced, mixed use proposal comprising the local potential to develop as a garden city. In this scenario, the land-pooling strategy is more likely to succeed and it will provide the necessary infrastructure for the area.

The major challenges to the implementation of the land use plan are a lack of rules and regulations and weak institutional capacities. However for implementing the city center plan, some bi-laws are needed. The implementation of this concept plan totally depends on land-pooling\textsuperscript{10}. Even though Nepal already has some experiences in implementing land-pooling, they are mainly limited to residential area development. As the city center concept plan highlights the mixed use and development of two linear parks it needs special attention from the municipality side to experiment with land-pooling of other categories, such as commercial land. However it has been calculated that only 22.96\% of the land is needed from the landowners for developing this concept plan. The strong facilitation role from the municipality is essential to the successful implementation of this concept plan.

\textsuperscript{10} For the concept land-pooling see grey box on page 155.
### Table 5.2: Objectives and Strategies Developed Based on the Consultation of Different Stakeholders

<table>
<thead>
<tr>
<th>The City Centre will be</th>
<th>Strategies</th>
</tr>
</thead>
</table>
| **A great place for business** | • The city centre will offer a highly attractive investment environment for businesses, attracting major companies from Pokhara region and also from Kathmandu, and growing local companies. The city centre will continue to be a focal point for driving economic prosperity, competitiveness and job growth across Pokhara region. The city centre has strong potential to support growth in retail, leisure, financial / business service and green economy sectors  
• Develop an icon project to attract investment and enhance local economic activity  
• Capacity Development of local entrepreneurs together with Lekhnath Chamber, Commerce and Industries |
| **A great place to live** | • Centralize Residential development to control haphazard urban development  
• Focus Land Pooling system in centre of the town  
• New and existing communities will flourish in attractive, safe, neighborhoods, having chosen the excitement and convenience of city centre living.  
• There will be a range of different house types, sizes and tenures with efficient infrastructure and services |
| **A great place to visit** | • More shops a greater choice of leisure and cultural attractions, restaurants and bars, and regular events will mean that the centre is used during the day and evening by residents, visitors and workers of all ages and cultures. The Cultural Quarter, already including the art gallery, library, theatre  
• Developing ecotourism  
• Provide tourist facilities |
| **Attractive and distinctive** | • A new structure of high quality streets, pedestrian – friendly routes, parks, civic spaces and views of linear parks, trees and organic farming will develop the area as an attractive place |
| **Easy to get about** | • A network of well – signed, attractive routes which are accessible for all people, together with views of individual landmark buildings, gateway developments, the linear park activity will make it easy for people to find their way about. It will encourage people to spend more time in the city centre and promote walking, cycling and use of public transport  
• Connect inner city with 7 lakes and other important tourist spots |
| **A greener centre** | • The linear park with improved agricultural practice will serve both environmental and economic aspects of living. The other linear park with canal development will give a natural beauty for the local people as well for the visitors. The low carbon approach can be introduced by adopting greener design for new buildings including green roofs and walls. There will be many more jobs in the green economy, creating and delivering renewable energy, retrofitting our current building stock or developing and applying |
green technologies. More people will walk, cycle and use public transport to get about, which, coupled with respect for the natural environment and biodiversity, will promote physical and mental wellbeing as well as reduce carbon emissions
  • Establishing urban forestry along major roads and water bodies

<table>
<thead>
<tr>
<th>Alternative Proposals</th>
<th>Final outlook</th>
<th>Land Use</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option A</td>
<td>Mainly residential</td>
<td>12,000 thousand inhabitants</td>
<td></td>
</tr>
</tbody>
</table>
|                       |              | ![Legend](image) | - Poor integration with city  
- People travelling higher distances to get products  
- Lack of job opportunities |
| Option B              | Balanced commercial and residential (30%/70%, for example) | 8,000 inhabitants + 4,000 thousand jobs | |
|                       |              | ![Legend](image) | - Commerce feasible for local inhabitants and city in general  
- Higher traffic only in main commercial roads  
- More safety  
- Proportion 30%/70% Land Pooling more feasible |
| Option C              | Only Commercial | 12,000 thousand jobs | |
|                       |              | ![Legend](image) | - Very heavy traffic and pollution in the area  
- Higher overall transportation costs, lost time  
- Land speculation, higher product prices  
- Necessity of developing a much bigger area of municipality to make commerce feasible  
- Larger pressure over Highway |
### Table 5.4: Proposed Plan for Future Land Use Development (Option B)

<table>
<thead>
<tr>
<th>Land Use category</th>
<th>Existing (sqm)</th>
<th>Proposed (sqm)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>36088 (4.21%)</td>
<td>268218 (31.29%)</td>
<td></td>
</tr>
<tr>
<td>Commercial/Mixed</td>
<td>10824 (1.26%)</td>
<td>252577 (29.47%)</td>
<td></td>
</tr>
<tr>
<td>Office</td>
<td>822 (0.096%)</td>
<td>18338 (2.14%)</td>
<td>Additional 2.044% land will come from Land Pooling</td>
</tr>
<tr>
<td>Road</td>
<td>14368 (1.67%)</td>
<td>95268 (11.12%)</td>
<td>Additional 9.45% land will come from Land Pooling</td>
</tr>
<tr>
<td>Agricultural</td>
<td>772100 (90.10%)</td>
<td></td>
<td>9.46% land will be kept for improved agriculture</td>
</tr>
<tr>
<td>Park (Organic including Canal)</td>
<td>9850 (1.15%)</td>
<td>64640 (7.54%)</td>
<td>Additional 6.30% land will come from Land Pooling</td>
</tr>
<tr>
<td>Park (Farmland)</td>
<td>13746 (1.60%)</td>
<td>90957 (10.61%)</td>
<td>Existing landowners will be encouraged for improved agricultural practices in their plots</td>
</tr>
<tr>
<td>Park (all)</td>
<td>0</td>
<td>199801 (23.32%)</td>
<td>Additional 5.17% land will come from Land Pooling</td>
</tr>
<tr>
<td>Total</td>
<td>856960 (100%)</td>
<td>856960 (100%)</td>
<td>In total 22.964% land is needed for implement this concept plan</td>
</tr>
</tbody>
</table>

### Table 5.5: Spatial Feasibility of Land Pooling for Implementing the Land Use Plan

<table>
<thead>
<tr>
<th>SL</th>
<th>Indicators (as identified in Land Pooling Manual DUDBC+UDLE/GIZ)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Is the site part of an urban expansion area?</td>
<td>The site is not part of an expansion area but as Lekhnath Municipality still looks rural character. So the overall outlook of the land area is almost agricultural but the construction of new buildings is taking place haphazardly</td>
</tr>
<tr>
<td>02</td>
<td>Is the site having mostly vacant plots?</td>
<td>Yes. Only 5.57% land area is built up. Other 94.43% land is still vacant</td>
</tr>
<tr>
<td>03</td>
<td>Does the site have few land owners?</td>
<td>Yes/No The land owners are already agreed for</td>
</tr>
</tbody>
</table>
Table 5.6: General Outlook of the Garden City Center.

The projected population, new employment opportunities and expected commercial services/facilities have been considered.

Source: Own design

- In addition to this only 22.96% land area of the site is needed for creation of road, infrastructure, facilities and open space.
- So, land pooling looks promising for implementing the proposed concept plan of city centre development.
- Some plots can be sold out for greeting fund for infrastructure development of this area. So around 12% land can be allocated for selling out. In such case upto 35% land to be shared by the land owners.

<table>
<thead>
<tr>
<th>SL</th>
<th>Indicators (as identified in Land Pooling Manual DUDBC+UDLE/GIZ)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>Are the plots large enough?</td>
<td>Yes</td>
</tr>
<tr>
<td>05</td>
<td>Are the plots regular in shape?</td>
<td>Mostly Yes</td>
</tr>
<tr>
<td>06</td>
<td>Are the before and after land values okay?</td>
<td>The site will be developed as the city center. So the land values may increase 300% or even more. So, there is a possibility of land speculation. Municipality should handle this speculation issues carefully</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Description of facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data</td>
<td>4.000 jobs / 8.000 population 140 people / hectare</td>
</tr>
<tr>
<td>Key Projects</td>
<td>Central Market; Park System</td>
</tr>
<tr>
<td>Commercial services / facilities</td>
<td>Food market; restaurants and bars; IT Hardware and Services; Garments;</td>
</tr>
<tr>
<td></td>
<td>Furniture; Home appliances; Vehicles; small offices (doctors, lawyers; accountants, etc)</td>
</tr>
<tr>
<td>Social Infrastructure</td>
<td>Community Centre; Botanic Garden</td>
</tr>
<tr>
<td>Green Public Space</td>
<td>Linear park; Central Park</td>
</tr>
</tbody>
</table>
The target residential groups for this area are lower-middle class, middle class and higher-middle class people. 

*Source: Own design*
**Integrating the plan with next periodic plan including detailed land use plan**

This plan should be integrated into the upcoming Periodic Plan of Lekhnath (the existing Periodic Plan ends in 2011/12). And this action area should become a development priority of Lekhnath Municipality. All sources of funds should be explored to support the implementation of this plan.

**Improved infrastructure and services**

Improved infrastructure and facilities are essential in any kind of area development project. As this concept plan is to develop the city center, infrastructure development is an essential focus. According to the UGDP project implementation manual, the following sub-sectors of infrastructure development are proposed (see table 5.7).

A list of sub-projects have been prepared for developing the infrastructure and services in the city center. The sub-projects are presented in the action plan.

<table>
<thead>
<tr>
<th>Social Infrastructure</th>
<th>Basic Urban Infrastructure</th>
<th>Economic/Revenue Generating Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Drainage (Bridges/Culverts if part of drainage)</td>
<td>1. Roads and Bridges</td>
<td>1. Bus Parks and Parking</td>
</tr>
<tr>
<td>2. Public Toilets</td>
<td>2. Drinking Water</td>
<td>Spaces for Rickshaws, Horse Carts, Trucks etc.</td>
</tr>
<tr>
<td>3. SWM (Collection, Transportation and Disposal including equipment)</td>
<td>3. Preservation of Natural, Cultural, Archaeological, or Heritage Sites</td>
<td>2. Cottage, Medium and Small Industries</td>
</tr>
<tr>
<td>5. Pre-primary Schools</td>
<td>5. Street Lightings</td>
<td>4. Heat Bazar/Market Fair Centers/Exhibition Centers</td>
</tr>
<tr>
<td>10. Water Pollution (including Sewerage, Waste Water Treatment Plants etc.)</td>
<td>10. Museums</td>
<td></td>
</tr>
<tr>
<td>11. School buildings (hostels for girls and physically challenged)</td>
<td>11. Protection of Natural resources, including Controlling Air, and noise pollution, Public Land Protection Works, River Cuttings/Floods/Soil Erosion Control, Preservation of Rivers, Streams, Ponds/ Deep Water Wells/Lakes/ Stone Spouts; and Plantation on Road sides</td>
<td></td>
</tr>
<tr>
<td>12. Green Zones/Parks/ Play Grounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Municipal Hospitals, Ayurveda Hospitals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.6 Key Projects

In order to tie into the already existing vision of a ‘garden city’ developed by the municipality, two projects enhancing the potentials of the surroundings are proposed: The linear organic park and the linear farm park. The organic park should be developed conserving the natural landscape of the area. This organic park would then be linked to a larger park, meeting the municipality area close to the main road.

The concept of the farm park aims at activating the existing irrigation channels. The objective is to keep some of the agricultural land of the area as a conservation buffer while at the same time cultivating it as vegetable garden. Another feature of the area is the proliferation of mixed use in the existing settlements. It is very common to find buildings where the ground floor is used for commercial purposes and the remaining floors are used for living. Through interviews and the analysis of the previous reports produced for the city (Oli 2010; GHK 2010), the possibility of developing a wholesale market was identified. Such a project can stimulate the local economy, while also providing a central reference point.¹¹

The concept plans of these key projects are described in the following paragraphs.

5.6.1 Proposed Linear Organic Park

The canal is about 2-3 meter wide. It is a natural canal between Khaste Lake in the north of the study area and Seti River in the west of the study area. The canal is in bad condition: There is a lot of accumulated solid waste inside and on the sides of the canal. Currently the canal is used for irrigation of the agricultural land surrounding it.

¹¹ Many urban regeneration projects use this tool in order to achieve the development goals proposed for a region.
Figure 5.20-21: Land next to the Canal
Source: Sara Abdelaal (2012)
Figure 5.22: The Proposed Plan for the Linear Organic Park
Source: Own design

Legend

- Proposed inner roads 18m
- Wooden benches
- 2-3m Path along the canal
- Bridge
- Water surface
  (3m wide natural canal)
- Residential Area
- Green areas
- Green fence

Proposed land use plan of the study area
Location of the linear organic park

Existing land use of the area along the canal

The area of the canal

Proposed area of the organic park excluding the canal

The organic park will connect the eco-trail to the study area as a way of creating a linkage between the lakes and the city center (see previous chapter for further information on the eco-trail development).

The park is proposed as an organic vegetable garden that will be planted with local plants. Inside the park there will be a 2-3 meter-wide pedestrian path along the canal to provide access for the locals and tourists to walk and enjoy the natural view. At regular intervals there will be 1m-wide wooden bridges across the canal and wooden benches every 30 meters.

• Conservation of the canal from further damage due to solid waste and water pollution.
• It increases the variety and vitality of the landscape of the park surrounding it.

Premises for the Development/Strategy to Implement the Project

Creating open spaces and recreational areas in the municipality thus improving the existing conditions of the area and the whole municipality

In order to encourage the participation of the local community, the park will be planted - under the supervision of specialists – mainly by locals. This will create a sense of ownership of the park and promote the role of the community in maintaining it.
**5.6.2 Proposed Linear Farm Park**

**Background Facts**
A certain amount of green land should be ensured in order to achieve the vision of the ‘Garden City’. Therefore two linear parks are proposed in the land use plan of the city center, with an additional approx. 30-meter-wide green park strip along the riverbanks. While this ensures a higher portion of urban green space, it also requires significant investment, both for the construction and the daily maintenance.

**Description of the Linear Farm Park**
As a solution, the concept of a “Farmland Park” is proposed. It is still a park in the original demarcated park area, but crops are planted in place of grass. Of the two rivers, the irrigation canal is chosen for this plan, because the canal is a ready-built facility for agriculture.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Qinhuangdao Red Ribbon Park</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Established/ launched</strong></td>
<td>• 2007</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>• Qinhuangdao, China</td>
</tr>
<tr>
<td><strong>Aim of Program</strong></td>
<td>• Preserving as much of the natural river corridor as possible during the process of urbanization</td>
</tr>
<tr>
<td><strong>Achievements</strong></td>
<td>• Combining trails, seating, environmental interpretation, native plants, lighting and many features and facilities</td>
</tr>
<tr>
<td><strong>Lessons Learned</strong></td>
<td>• This project demonstrates how a minimal design solution can achieve a dramatic improvement to the landscape and helps harmonizing the society</td>
</tr>
</tbody>
</table>
Figure 5.24 a-d: Current Conditions of the Canal
Source: Sara Abdelaal (2012)
The proposed plan for the linear park (farm land)

Legend

- The hotels area (residential Blocks)
- The farm land along the irrigation canal
- The irrigation canal with paths on both sides

Proposed land use plan of the study area
Figure 5.26-27: Image for Farmland Park
Source: Own design
**Project Name**  
Lekhnath municipality in the study area (city center) along the irrigation canal.

**Location of the linear farm park**  
- Lekhnath municipality in the study area (city center) along the irrigation canal.
- Mainly agricultural land with small residential plots for the land owners
- 13,746 sqm

**Existing land use of the area along the canal**  
- Approx. 90,957 sqm (30m on either side of the canal)

**Proposed Area of the linear farm park including the canal**

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**Benefits of the Project**

The linear farm park project will be financially feasible. As a main requirement the canal has to be cleaned to function for irrigation purposes. Besides, facilities for tourists, like a walking path, platforms, chairs, etc., should be installed. Therefore some investment is needed, but these costs amount to substantially less than building a traditional park, relieving the financial pressure on the municipality. For example, orchards of different kinds can be planted, and they can attract tourists to visit. Moreover, a well-managed ‘agrotourism’, where tourists pay to pick fruit in the orchards, could be profitable.

The Linear Farm Park preserves and exhibits the culture of agriculture which is such a substantial part of Nepal’s economy. In this sense, it is a huge “agriculture museum” in the city center.

**Premises for the Development**

The irrigation canal must be repaired. In addition, a special design, based on the concept of the ‘Garden City’, should be developed. According to the design, plots have to be demarcated and policies to ensure the implementation will be necessary. For example, taxes should be imposed on profitable businesses, e.g. tourism orchards, and this income should be used to subsidise the less profitable enterprises such as rice, wheat, etc.

5.6.3 Central Market Place

The central market will serve as an organic produce market, a local handicrafts market and a wholesale market for the entire Pokhara region. At present, the majority of fish is sold in Pokhara with claims of being ‘fresh from Fewa Lake’ in Pokhara. And while there are many coffee farmers in Lekhnath, there is at present just one family packaging, distributing and serving coffee in the municipality.

Beyond stimulating economic activities, this project might also contribute to consolidating Lekhnath’s identity as a municipality – known for organic fish, coffee, honey, milk and oranges which can both be bought and consumed at the market.

In addition, the market area would serve as a place for women from the municipality to be trained in making handicrafts (which tourists could observe) and to sell their products. This idea was developed in response to women’s desire to be more independent from their husbands and to have an alternative source of income to working in the fields.
Such products would also add a great deal to the market and to Lekhnath’s identity.

The market would not just be for Lekhnath but also for surrounding regions.

**Premises for the Development**
- All permanent buildings are kept. At the same time, all existing mixed-use land is kept (Residential+Commercial).
- Feasibility of the market is related to the development of residential areas, such as the current ones (Himalayan and Annapurna Development projects)
- For the wholesale market, a pre-feasibility and final feasibility study must be conducted, attesting the potential capability of Lekhnath as a specialized hub for fish, coffee, honey, milk, oranges, vegetables and handicrafts.
- There must be a program to stimulate the expansion of agricultural production in Lekhnath, such as the LED to facilitate greater production but in a sustainable manner keeping in line with the eco-friendly image the municipality projects
- Good governance is vital for this project. The plan has to be approved at the community level (affected stakeholders) if it is to be sustainable and successful.

---

### Best Practice

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Landscape Design for Shenyang Architectural University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established/ launched</td>
<td>2002-2003</td>
</tr>
<tr>
<td>Location</td>
<td>Shenyang, China</td>
</tr>
<tr>
<td>Aim of Program</td>
<td>To build up a special landscape with a limited budget</td>
</tr>
<tr>
<td>Achievements</td>
<td>By introducing modern-designed rice fields into university campus, it is both for landscape and production. The municipality’s agriculture culture is shown. The expense for construction and maintenance is less than for normal parks; it even generates profit</td>
</tr>
<tr>
<td>Lessons Learned</td>
<td>Crop fields can be landscape. It makes sense to explore and to show the culture behind agriculture. But it does not simply mean planting crops in parks - special design is needed</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.china001.com/show_hdr.php?xname=PPDDMV0&amp;dname=6A5DK41&amp;xpos=10">http://www.china001.com/show_hdr.php?xname=PPDDMV0&amp;dname=6A5DK41&amp;xpos=10</a> [accessed on 06/05/2012]</td>
</tr>
</tbody>
</table>
Figure 5.28: Strategic Map for the City Center Development
Source: Based on Strategic Map, GHK (2010)
5.7 Actions and Strategy for Implementation

The development of the city center should not be implemented independently from the development concept of the municipality as a whole, but rather it should be an integral part of it, adding a new layer of detail to the existing Periodic Plan of the City. Therefore, a three-tier plan has been proposed. This plan contains:

1. Strategic Plan for the city center development
2. Detailed Land Use Plan for the designated area for the city center development (described in the concept)
3. Action Plan for implementation

5.7.1 Strategic Plan for the City Center Development

A strategic plan has been developed considering all the strategic potentials of Lekhnath municipality which will ultimately contribute to achieving the future vision of a ‘garden city’ and a ‘nature lovers’ tourist destination’.

The Main Components of this Plan are:
• Connect the inner-city with the main lakes and other important tourist spots
• Establish urban forestry along major roads and water bodies
• Centralize commercial and residential uses in the study area
• Develop ecotourism with adequate infrastructures and facilities
• Position Lekhnath as a ‘garden city’
• Consolidate the identity of the municipality by developing a city center that connects commercial areas and functions as an anchor project to attract and enhance local economic activity and capacity development of local entrepreneurs

The Implementation Strategy Envisions Three Main Objectives
• Provide an order for intervention
• Stimulate tourism and the local economy
• Recognise and intensify the already existing uses in the area

5.7.3 Action Plan for Implementation

To develop the ‘green’ city center as a place to live, a place to visit and a place for business, an action plan for implementation has been developed. The different steps of the action plan are presented below:

Step 1: Mobilization of land-owners and finalizing the concept plan with their opinions
Step 2: Approval of the concept plan by the municipality
Step 3: Prepare Land-Pooling Plan and prepare detailed area plan of the area
Step 4: Pre-feasibility study and feasibility study on the sub-projects
Step 5: Detailed design and Tendering/implementa- tion of different sub-projects
Step 6: Monitoring and Evaluation
Step 7: Operations and Maintenance (community-led)

Some important sub-projects have also been identified in consultation with the municipal officials and civil society representatives. The sub-projects are presented in table 5.12.

Capacity Development of Lekhnath Municipality

As the municipality currently lacks capacity in terms of human resources, financial resources and a modern knowledge management system, capacity development of Lekhnath Municipality is a priority. All the relevant government line agencies, especially DUDBC, can play a greater role in this capacity-building.
<table>
<thead>
<tr>
<th>SL</th>
<th>Name of the Sub Project</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Sector</th>
<th>Required Fund</th>
<th>Possible Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Land development (Land Pooling, layout plan with designated use)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social + Urban/Utility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Construction of Multiuse commercial complex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Economic/Revenue</td>
<td>10 to 15 m USD PPP</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Construction of Road Network for improving connectivity with 7 lakes and other parts of the town</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Urban/Utility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Construction of Road Network inside the Neighborhood area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Urban/Utility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Development of Public transportation system for improving the connectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Urban/Utility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Excavation of canals with proper beautification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Preparation and implementation of Drainage Network</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Development of Linear parks within the Neighborhood area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Construction of Water Supply System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Urban/Utility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Construction of street lights</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Urban/Utility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Improvement of SWM including construction of compost plant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Construction of Public Toilets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Construction of Hospital, Public Library, Play Ground, Recreational Facilities, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Women Empowerment through Income Generating Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.8 Conclusions

The ‘Garden City’ project identifies and addresses the potentials and challenges of the Lekhnath central area. This is one of the main tasks in order to create an attractive business environment, bringing funds and stimulating public and private investment. Consultation and participation of the community are vital for achieving this goal as well as for creating a sense of ownership and belonging for the people that will use the new center. The project involves a range of stakeholders with diverse interests. In order to develop the ‘Garden City’, the use of land-pooling is crucial. Despite how widely used this strategy is, many landowners are still unaware of its benefits. And even when the land-owners are aware, it is nevertheless a challenge to implement for a large area. For this reason, a large-scale vision is necessary, in order to visualize and analyze the effects of different land use patterns.

The ‘Garden City’ concept also aims to consolidate the identity of the municipality as it develops as a municipality expecting significant population growth in the coming decades. This will lead to an increasing importance to develop services and provide infrastructure to meet the population’s needs. This proposed ‘Garden City’ center should be an inclusive one, where people from different income levels have opportunities. Only if the city center achieves this objective, will it be able to offer a feasible alternative to the haphazard development that characterizes the actual state of Lekhnath. In parallel, tourism and agriculture development are major drivers of economic growth in the region. These concerns were addressed by the proposition of a park system and the market.

Organic products are a big potential for the city, and programs such as the LED proved that specific crops can successfully supplement income generation in the local economy. Fish and coffee appear to be attractive sectors, exhibiting solid growth in Nepal in the last years. The LED program, therefore, could be extended for more producers and to a larger area. And the market could promote these products together with other organic products such as oranges, honey and vegetables.

As a linkage to the eco-trail project (see previous chapter), a large potential is seen in promoting the trails and thereby helping bring money to the local economy through tourism. The ‘Garden City’ center would also be a central point for public gatherings, recreation and facilities use by tourists. In this case, the landscape also plays an important role, as well as the harmonisation of the city center with the natural surroundings. This was a crucial consideration in the development of this plan and should continue to be so in its implementation.

The objective of the project was to offer this initial proposal of the ‘Garden City’ center. In order to do so, various techniques were used, which led to a conceptual vision translated into a land use map, projects and a strategy for implementation. Finally, due to the limited scope of this project, further detailed studies should be undertaken in the future. This report and the corresponding action plan - together with the existing ones developed by IUCN and GHK - nevertheless provides a solid foundation for the development of Lekhnath’s ‘Garden City’ center.
6 Conclusion
All four projects presented in this report developed suggestions for their specific local context by applying the rapid assessment techniques. Thereby it became obvious that a detailed diagnosis was needed in both Panchkhal and Kohalpur in order to develop strategies and actions for the emerging municipalities. On the contrary, several analyzes and ‘diagnostics’ have already been made by other consultants in Lekhnath. Therefore, the two teams working in Lekhnath focused on the development of concepts followed by an action plan relevant for urgent urban development aspects.

The two weeks of fieldwork revealed several challenges that can be seen as cross-cutting issues among the four projects. In the emerging towns, Kohalpur and Panchkhal, the lack of data, lacking coordination between the different local institutions (e.g. VDC and TDC) as well as lack of executive power at the local level were crucial aspects identified. These aspects combined with a lack of capacities and financial support hinder the preparation of PPs. In the municipality of Lekhnath, the implementation of PPs in particular seem to be a large challenge. Thus, interventions need to take place on several levels, including a simplified planning process, as suggested in this report (Herrle/Ley 2010; see also reflections on the method). In the following general conclusions and observations that have been made in the four projects will be reflected upon.

6.1 Institutional Context

Observations of political instability in Nepal were consistent with those reported in the literature reviewed prior to the fieldwork. Despite the democratic revolution of 1990 and measures for the decentralization of power (chiefly, the Local Self-Governing Act of 1999), concerted governance from the national level struggles to maintain its authority in the subnational organizational hierarchy. Sluggishness persists in the development of Nepal’s economy and infrastructure as it has over the course of the last two decades (Santos 2011).

Though it has been nearly four years since Nepal was declared a federal democratic republic, the continuing political infighting has prevented a national constitution from being adapted to this day.

In addition, political instability remains compounded by the prevalence of lacking transparency and accountability, as well as diminished legal controls for monitoring and upholding regulations within public administration sectors, including those related to planning and development. Appointed officials have been designated to many posts in the absence of democratic elections, which cannot take place until a constitution is ratified. Furthermore, the rapid turnover in political party control means that these appointed officials have little time to complete projects that require greater tenure, which translates into the implementation of small-scale, short-term projects that can be disjointed from one another and from broader strategic national plans. Even when projects are implemented, they are often devised by appointees who may have little technical savvy related to their post. With interim municipal-level planning authorities, one potential idea is to support municipalities further in empowering their wards to implement short-term model community-based projects. This would promote greater participatory planning and drive successful bottom-up development, which has been exemplified by projects managed by SUNAG.

Findings from some of the project teams revealed that common resolve is expressed among competing stakeholders to move development forward despite the lack of political commitment noted in the literature.

Administrative capacity is additionally challenged by insufficient resources. Local government offices are poorly equipped and lack basic services; organized data storage is not in place, and even electricity is intermittent. It was reported on many
occasions that insufficient national funding is the primary limiting factor. Without appropriate funds, an adequate number of technically-trained and administrative support staff, as well as basic organizational amenities, are challenging to provide. Such limitations significantly restrain the overall productivity and output of local planning offices.

6.2 Spatial Planning

Lacking capacity at the local level was established as a major factor for the inability to implement development plans. Furthermore, findings from the three site studies (four projects) indicated that the capacity to monitor established regulations was diminished (i.e. there is minimal regulation of land, construction, water and waste). Informal land settlement has hindered planners from implementing coordinated planning efforts, and instead necessitates a ‘negotiated planning’ through schemes such as land-pooling. Local agencies do not have the ability to monitor construction, especially in areas where urbanization is rapid. In the cases of water and solid waste, lack of regulation exacerbates health issues, diminishes the efficiency of other systems such as drainage and irrigation, and negatively impacts local environmental conditions. A vicious cycle is perpetuated in which progressive planning is continually hindered, and makeshift solutions are instead deployed to achieve temporal results. The four groups have made proposals for SPATIAL development in the three selected areas, presented in the previous chapters. The triangulation of findings from the projects conducted at three unique sites provided a mechanism for identifying recurring themes for significant institutional inadequacies.

6.3 Economic Development

Even though all four projects are concerned with the urban development of emerging towns and a municipality, Nepal is still highly dependent on agricultural production for food security. In this context, increasing Nepali crop production and productivity, while conserving the natural landscape, is a future challenge for the country, mainly in the Western region. Another economic challenge is the high dependency on India for import and export. This was especially notice in Kohalpur, which is located in the Terai, and Panchkhal, which is strategically located along the Arniko highway from China to India. As stated in the introduction, Nepal has large natural resources attracting foreign tourists. On a national level Nepal has prioritized the development of ecotourism as a way to promote economic growth while supporting the local culture and traditional lifestyles. The Himalaya Mountains are the country’s heritage, and have been explored by tourism in very efficient schemes, with the development and promotion of trails, expeditions, aquatic sports and village tourism. In 2010, foreign tourists generated almost 330 million dollars in revenues. Nearly 12% of the tourists come to the country for trekking, and 10% for holiday and pleasure. Pilgrimage is also an important attractor, responsible for 17% of tourism (NTS 2010). In Lekhnath, the trends of developing ecotourism had already been set, whereas Panchkhal and Kohalpur have large potential in terms of proximity to natural resources (e.g. national park and view of the Himalayas).

An increase in tourists and development of the tourist industry, however, will exert pressure over the country’s natural resources. Therefore, strategies for conservation of the natural resources have been suggested in combination with the development of tourism industry. Thus, ecotourism can be seen as a mechanism for economic development and a catalyst for environmental sustainability.

6.4 Capacity Building

Capacity building is key to increasing expertise among the local inhabitants. It refers to actions related to the need to organize training of the municipal staff and the local inhabitants. This
training is aimed at strengthening awareness of the role of development as proposed in strategic actions.

During the fieldwork in the regions of study, a lack of institutional capacity and human capacity was observed. Developing an institutional framework for the preparation, implementation and monitoring of the strategic plans are only one part of the efforts. Two primary areas of capacity building are of equal importance and vital to the success of the strategic plan. First, the institutional and organizational capacity of the stakeholders in the planning process, and second, the training and development of human capacity of the planning process. Both groups need to understand what the key advantages are for them and for their community.

Capacity building in Nepal must happen from the ground up, both involving planners, local elected officials and other stakeholders, as well as municipal staff and the community at-large in their daily work and activities. Service providers, teachers, building inspectors, and others should be involved in the community efforts.

### Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish baseline of capacity</td>
<td>• Assessment of human, institutional and organizational capacity</td>
</tr>
<tr>
<td>Workshops on strategic plan</td>
<td>• Define purpose, nature and scope, potential for development support and limitations</td>
</tr>
<tr>
<td></td>
<td>• The strategic plan as a guiding vs legal instrument and the consequences thereof</td>
</tr>
<tr>
<td></td>
<td>• How to use the plan in daily work</td>
</tr>
<tr>
<td>Informal training seminars on strategic plan</td>
<td>• Define purpose and scope, potentials, constraints, etc</td>
</tr>
<tr>
<td>Organization and management changes</td>
<td>• Decrease corruption, increase accountability, transparency, etc</td>
</tr>
</tbody>
</table>

To realize the aims set forward in strategic planning, training in monitoring and enforcement techniques could be an initial attempt to improve the situation. Training for local elected politicians and all municipal staff can assist in future decision-making and consensus building to achieve the goals and objectives set forward by the municipality.

To achieve the capacity building aims and achieve both human and institutional capacity building, partnership and collaboration should be sought with external partners. The key element to a successful collaboration and partnership is institutional capacity building. Without the ability of the municipality to make decisions in a clear way within the organization and throughout the community, the ability to partner with that organization is in question. Transparency could serve to reduce bureaucracy and corruption.
6.5 General Reflections

During the field surveys, a key issue that emerged was a lack of information, or a lack of access to information. There is a strong need for municipalities to establish an updated database with all available data. Organizational data should depict what information is available, what is missing, the data source, and the time of collection. Furthermore, a clear delineation of who collected the data, if it was developed by external partners, or from members of the municipal staff should be provided.

The coordination of donor initiatives is highly dependent on the institutional capacity of the country and municipality. A high level of involvement from various donor agencies has been identified in the literature as well as in the fieldwork, especially in the case of Lekhnath. Therefore, there is a need for a better coordination of donors working in different regions of Nepal. The national government could be responsible for the coordination, and in return, the donor agencies should be responsible for informing the national government with a detailed status report of the activities of the organization.

The results presented here should be seen as guidelines or for inspiration; a thorough investigation is needed before implementing any of the activities suggested here.

6.6 Reflections on Rapid Assessment Technique

The Rapid Assessment Technique (RAT) was applied by two of the teams to formulate a diagnosis of Panchkhal and Kohalpur and to propose strategies and specific actions for urban development in the respective context.

The research teams conducted a nine-day field study to consider the unique position of these settlements among the 41 VDCs that are being upgraded to the status of Municipality. Divided into two (Kohalpur and Panchkhal), the research team was composed of nine international students representing Colombia, Indonesia, South Korea, Kenya, Zambia and the United States and provided a mix of professional backgrounds including architecture, planning, government and education.

6.6.1 Achievements

RAT is useful to understand the local context especially when the area of application is defined or it is applied in order to develop troubleshooting plans. In addition, this tool is useful to monitor and evaluate actions, plans and programs where the scope is already set and goals and indicators already defined. A lot of literature regarding the technique is available and it is possible to find literature documenting specific cases in which it was applied, for example in the health sector or after a natural disaster to evaluate the damage.

6.6.2 Challenges

The main challenge while applying the Rapid Assessment Technique is related to time. There is always a dilemma about the amount of information that can be analyzed in a short time period and the possibility to have a better understanding of a situation with more time. The length of the research should depend on the scope. Regarding time management, both teams agreed on the importance of having an initial schedule and that it should be flexible. Also, another challenge within the process was to create synergies and cooperation within the team members. As there is little time to lose, the role of the selected team leader for this purpose is very important.

6.6.3 Limitations

The technique mainly relies on the use of qualitative data collection methods, which sometimes are easily questioned, especially when the results of its use is related with decision and public policy
making. However, due to the time limitations it is impossible to rely on quantitative methods. Furthermore qualitative methods also inform the researcher of more complex issues as well as of correlations. Thus, well-organized data collection, processing and analysis is necessary. The length of the research and the local language was a limitation to achieving a comprehensive understanding of the issues in a short time, specifically related to secondary data (documents).

6.6.4 Reflections on Lessons Learned

The following short list presents aspects relevant for conducting and applying the RAT:

• Training in project management, data collection and/or data analysis is an asset for the application of the method
• To have results in a short time, it is important to have a defined thematic and spatial scope
• To apply short-term RAT, it is highly recommended to acquire knowledge of the area before arrival. The people working in the area should be encouraged to get involved in the application of the method. For example, a VDC Secretary will be able to assist with the coordination of the implementation of RAT
• It is recommended to gather secondary information in advance, if available, as it could make a difference to the research
• Using this technique is recommended to develop troubleshooting plans or for specific areas of cross-cutting topics, e.g. to understand capacity building in a village or the institutional framework

In summary, Nepal has a large potential for development in human capital, however there is a need for capacity building in order to activate the resources. The application of the RAT has been shown to be useful in order to establish a first diagnosis on which strategic planning can be based. Therefore, the aspect of simplifying the preparation of PPs by applying the rapid assessment techniques can be recommended, especially for urgent urban development issues in the emerging towns of Nepal.
7 References


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Village Development Committee (VDC), Panchkhal (2011): Profile of Panchkhal, Panchkhal: VDC.


Best Practice Webpages:


http://www.rupp.org.np/activities2.asp


http://www.theecologist.org

http://www.tropicaltrails.com

https://sites.google.com/site/ruptaview/


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<table>
<thead>
<tr>
<th>No</th>
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<th>Type of Interview</th>
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<td>1</td>
<td>Ammar Khatri</td>
<td>VDC secretary of Kohalpur</td>
<td>15.04.2012</td>
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<td>2</td>
<td>Ganesh Shah</td>
<td>TDC engineer</td>
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<td>Dr. SK Kanodia MD (Hons) MS (General Surgery) (President association of private medical and dental college of Nepal)</td>
<td>Doctor, Director of Medical College</td>
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<td>4</td>
<td>Bhim Prasad Devkota (former chairman of TDC), Krishna Bahadur Karki (former chairman of TDC, member Nepali Congress Party), Girija Prasad Pathak (Present chairman of TDC).</td>
<td>Chairman and Members of TDC</td>
<td>16.04.2012</td>
<td>Formal</td>
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<td>5</td>
<td>Chinta Mani Dhital, President (Dang) Nim Prashad Sharma, VP (Sengya) Khil Prashad Bhusal, Treasurer (Parbat) Devananda Aryal, member (Chitwan) Bishnu Khanal, member (Syanja)</td>
<td>Chamber of Commerce Kohalpur</td>
<td>16.04.2012</td>
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<td>Sunil Kumar Sharma</td>
<td>Chamber of Commerce and Industry Nepalgunj</td>
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<td>Nepalgunj Municipality office, secretary</td>
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<td>8</td>
<td>Bishwo Raj Dhotel</td>
<td>LDO, Banke</td>
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<th>Date of Interview</th>
<th>Type of Interview</th>
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<td>9</td>
<td>Lalita Thapa (program officer), Rita Tamang (program officer), Yagya Raj Joshi (senior program officer)</td>
<td>GIZ, Sub National Governance Programme (SUNAG)</td>
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<td>10</td>
<td>Jhagat Bhadur Baraghare &amp; Dili Subedi (Lumanti), Community</td>
<td>Informal settlement with Lumanti NGO</td>
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<td>11</td>
<td>Jit Man Sharki (Chairman)</td>
<td>Ward Citizen Forum</td>
<td>18.04.2012</td>
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<td></td>
<td>Bhanu Bhakta Adhikari (Teacher)</td>
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<td></td>
<td>Sagar Gaire (Businessman)</td>
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<td></td>
<td>Punam Baduwal (Social Mobilizer)</td>
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<td>SD Rajure</td>
<td>VDC Rajhena</td>
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<td>Deepak Shrestha</td>
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<td>20.04.2012</td>
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<td>Village Development Committee</td>
<td>Focused Group Discussion</td>
<td>Health Service Worker</td>
<td>Informal Interview (Nepali)</td>
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<td>Sabita Aryal Khan – Expert in irrigation and Natural Resource Management – Kathmandu University</td>
<td>Formal Interview (English)</td>
<td>Hotel Owner in Dulikhel, inhabitant of Panchkhal (private sector)</td>
<td>Informal Interview (English/ Nepali)</td>
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<tr>
<td>District Agricultural Office (Government)</td>
<td>Formal Interview (English)</td>
<td>District Development Committee – District Facilitator (Government)</td>
<td>Formal Interview (English/ Nepali)</td>
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<td>Spice Center (Government)</td>
<td>Formal Interview (English/Nepali)</td>
<td>Ex political representative of Ward Five</td>
<td>Informal Interview (Nepali)</td>
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<td>Agriculture Service Center – Mr. Badri Prashad Sharma (Government)</td>
<td>Formal Interview (English/ Nepali)</td>
<td>Local Teacher</td>
<td>Informal Interview (Nepali)</td>
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<td>Love Green Nepal- Ms Lila Nunamanga (NGO)</td>
<td>Formal Interview (Nepali)</td>
<td>Wood Factory (local investors)</td>
<td>Informal Interview (Nepali)</td>
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<td>Women’s Group (CBO)</td>
<td>Informal Interview (Nepali)</td>
<td>Milk Chilling Center (Semi Government)</td>
<td>Informal Interview (Nepali)</td>
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<td>Youth Social Welfare Group (CBO and local investors)</td>
<td>Informal Interview (Nepali)</td>
<td>Water and Sanitation Department (Government)</td>
<td>Formal Interview (English/ Nepali)</td>
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<tr>
<td>Local Farmer 1</td>
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<td>Local Farmer 2 (rice and potato producer)</td>
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<td>Local Farmer and Political Representative</td>
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</table>

**Table 8.2**: List of Stakeholders Interviewed, Panchkhal.
### List of Stakeholders

**Lekhnath Municipality**
- Founding Mayor and Director of the Lake Conservation & Development Board / Ex-Mayor, Lekhnath Municipality
- Program Coordinator, Urban Poverty Reduction for the Municipality and Organic Bee Keeper
- Architect / Urban Planner, Lekhnath Municipality

**Civil Society**
- Forest User Committee
- Rupa Lake Restoration & Fisheries Co-operative
- Lekhnath Hotel & Restaurant Association
- SEED (Social, Environment, Education Development) Foundation
- Pachbhaiya Home-Stay community based organisation
- Begnas Lake Boat Association
- Ayurvedic medicine farmer
- Homestay owners near Begnas & Rupa Lakes
- Landowner near Gunde, Khaste & Maide Lakes
- Women and village elder from Baral Dunda community (near Gunde, Khaste & Maide Lakes)
- Tourists to Lekhnath
- Kathmandu Renewable Energy Advisor

**Private Sector**
- Resort Manager
- Organic Coffee Producer / café operator

### List of Interviews Conducted
To maintain the anonymity of the informants, some of the interviewees in the following list have only be included as representatives from certain groups or locations:

<table>
<thead>
<tr>
<th>Name of the Stakeholders</th>
<th>Date</th>
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<tbody>
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<td>UGDP (DUDBC/GIZ)</td>
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<td>Chamber of Commerce and Industries</td>
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<td>Community/TLOs</td>
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<td>Water User Group</td>
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<td>Ex - Mayor</td>
<td>17/04/2012</td>
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<td>Local Hotel Sector</td>
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<td>Lake Conservation Committee</td>
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<td>Farmers/Local Producers</td>
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<td>Pokhara Valley TDC</td>
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Personal Profiles - Kohalpur Team

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Iwan Suharyanto was born in Indonesia. He has earned a bachelor degree in Urban and Regional Planning. As a member of the university staff at Gadjah Mada University, he is currently studying at TU Berlin and interested in social planning, community participation and rural development.

Maria del Pilar Ospina is an architect from Cali Colombia. After years of experience in design and construction in her home country, she wanted to deepen her interest in sustainable urban development and joined the Urban Management master course at the TU Berlin where she is currently studying.

Jieun Lee is a certificated architect of Republic of Korea. She received her first masters in Architectural Engineering in 2000. She has several years of relevant work experience in architectural design firms, and she served as a lecturer in school of architecture of Soongsil University (2004-2009). Prior to enrollment in the Urban Management Program, she started her research as a guest researcher at TU Berlin (2009-2011).
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Trained as an architect, **Carolina Hernández G.** (Colombia), earned her degree at Universidad Piloto de Colombia in 2004. She has 7 years of relevant work experience in architectural design and urban planning. Prior to enrollment in the Urban Management Program she participated as urban coordinator in the creation of master plans in the public space field and land use management plans. Carolina is particularly interested in sustainable urban development, with an emphasis on climate change and energy-efficiency.
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Personal Profiles - Lekhnath Team 1
(Eco-Trail)

Linn Marie Heimberg is from Oslo in Norway. With a background in political science and natural resource management she has worked as an advisor on sustainable development. She has focused her studies on environmental management in urban areas and will continue her career on climate change and sustainable development.

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Originally from Mexico City, Christian Herrera-Kobashi is an architect with 12 years of private sector work experience. Additionally, in 2009 Christian was part of the board of professors of “taller de proyectos X” which is the last workshop of undergraduate architectural students at the Universidad Iberoamericana. His studies at the TU-Berlin Urban Management Program were initiated by the idea of researching an integrated approach for urban development, with an emphasis on transport systems management.

Nancy J. Cole is an urban and energy planner from California, USA. In 2009, she co-authored the energy section of a Climate Action Plan for the City of Benecia, California. She co-chaired a commission on renewable energy education in the County of San Luis Obispo, and led several renewable energy tours in both California and throughout Western Europe for teachers, students, policy-makers and entrepreneurs. Her focus in the TU Berlin’s Urban Management course is to analyze the public participatory process in the municipal solid waste-to-energy sector.
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Hana Yoosuf grew up in Sri Lanka, Australia and the United Kingdom. After completing her Bachelor in Media and International Development in Melbourne, Australia, she worked as a journalist for three years in London. Prior to studying Urban Management, Hana spent four years working in a range of communications, advocacy and project management roles for NGOs in the UK, Germany, Argentina and Sri Lanka. She has focused her Master’s studies on urban governance and urban sociology.

Wentong Zhu is from Harbin, China. He received his Bachelor of Architecture from the Harbin Institute of Technology in 2009, and since then has been working in Shenyang and Beijing as an architect, mainly participating in several urban planning and urban design projects. He views the city as a complex system and believes that a proper understanding of the whole city is fundamental for projects. With this in mind, he joined the 7th Course of Urban Management at the TU Berlin.
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Sara Abdelaal is a Master student in Urban Management master course, TU Berlin. She received her bachelor degree in Architecture in Shorouk academy, Egypt. After her bachelor degree, she worked as an Architect in Hussein Sabbour consulting bureau, Cairo. Currently she is ending her master course and looking forward to start a new and interesting career as an urban manager.