

# CITIZEN PARTICIPATION IN DEVELOPMENT OF PUBLIC SPACES

A case study in Nepal looking at Minecraft as a tool in urban planning



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Both authors have together contributed to this thesis.

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# **Citizen participation in development of Urban Planning**

A case study in Nepal looking at Minecraft as an urban planning tool

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## **Abstract**

Public spaces are open spaces and areas where people in the city move around, get together and play. They are particularly important in poor neighborhoods where people lack alternative places and areas to socialize and do their daily chores. As it is getting more common for all citizens to be involved in the development of public spaces, it is important the needs of all citizens' are represented in the planning process and in the finished result of the developed area.

The computer game Minecraft that is built on the Lego principle is one tool used to involve citizens in the planning process. This thesis is based on a case study in Nepal where Minecraft was used in the planning process. The objective is to analyze its strengths and weaknesses and the focus is on the gender perspective and minority groups' representation.

The result shows that when using Minecraft in the planning processes it attracts youths to participate and it shortens the planning process significantly. However, girls are underrepresented and minority groups are neglected. Finally two complementary methods are presented that can be used together with Minecraft in order to address its weaknesses and to improve the method. These methods are called Gehl analyses and "Walking tour".

## Summary

Public spaces are open spaces and areas where people in the city move around, get together and play, regardless of background, age, ethnicity, gender and income. This is particularly important in poor neighborhoods where people have no access to places where to socialize. Well designed and planned public spaces are symbols of several important aspects of a city; health, safety, culture and local economy. UN-Habitat (United Nations Human Settlements Programme) has therefore started the project Block by Block together with Mojang, the developer of the computer game Minecraft. The objective with the project is to develop public spaces in low income countries by using Minecraft as an urban planning tool. Through this project, UN-Habitat wants to involve youths in urban planning.

The purpose of this study is to analyze the strengths and weaknesses of using Minecraft as an urban planning tool. Emphasis is on how the gender perspective is applicable in the development of public spaces and whether the Minecraft method is gender equal. Finally the objective with the study is to analyze how the method can be improved to address its weaknesses.

In order to answer the research question an eight week case study has been conducted in the suburb Kirtipur of Kathmandu in Nepal, where a park is being developed through Block by Block. The case study includes a workshop where youths are invited to design their future park in Minecraft. The park is today used as a dumping ground and it has been encroached by illegal settlements. Since it is the only green area left in the city it is of great importance that it is revitalized. The case study is based on observations, a questionnaire and interviews with the Minecraft participants and the different stakeholders.

The result shows that Minecraft is a successful, fun and creative tool for youths to visualize their ideas. It makes the process more effective and it also opens up for discussions and interactions between different age and community groups. The weaknesses that were found with the methods were that girls are underrepresented and that urban poor and people with disabilities are neglected. The result shows that Minecraft focuses too much on the physical aspects and too little on experiences and feelings.

Two citizen participation methods were found that could be used together with Minecraft; a Gehl analysis and a Walking tour. The Walking tour, which is a mix between a Safety tour and a Role play lets the participants walk around in the area and try to see it from another person's point of view. The aim is for them to discover the needs for a person with disability or a woman at nighttime, in order to include their needs and other relevant society groups in the design. The second method is to conduct a Gehl analysis, where the existing park is evaluated based on 12 quality criteria. The purpose is to find qualities that they like and dislike about the park today, in order to better understand the possibilities and what needs to be developed.

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## Outline

The thesis consists of six chapters. Below is an overall review of the content of each chapter.

CHAPTER	CONTENT
<b>1. Introduction</b>	The introduction describes the background to the thesis and its purpose, the questions that are going to be answered, a methodology section and delimitations.
<b>2. Involved stakeholders and background to the case study</b>	This section gives an explanation about the involved stakeholders and what the organizations do. It also explains what Minecraft is and how the project Block by Block started and its incentives.
<b>3. Theoretical background</b>	The third chapter is about the general planning process and its different steps. It also brings up the theoretical background to gender equality in the use of public spaces and its importance when developing urban areas. In the end there are some citizens dialogue methods presented.
<b>4. Nepal</b>	This chapter gives an introduction to the political system in Nepal, general background information and Nepal's physical planning process.
<b>5. Case study</b>	Chapter five is about the conducted case study in Nepal and explains what happen in the workshop and in the interviews. A summary of the result from the questionnaire is also presented.
<b>6. Analysis</b>	The last chapter contains the result and an analysis and gives suggestions on methods to improve the weaknesses with the Minecraft method.

# 1. Introduction

## Background

Public spaces are more vital for society than many people think. They play an important role in a person's life and they are essential for people to feel enjoyment in cities. They are also important for citizens in many countries because public spaces is where each and everyone are going perform their daily chores, socialize and relax. It is particularly important in low-income countries where people have access to few such places due to lack of space or no such facilities in their homes.

Recently, it has been acknowledged that involving citizens in the process of developing public spaces improves the end result. Urban planners do not always have the right answers on how a place shall be designed in the best way. An important element in the designing of public spaces through citizen participation is to have a method arranged to achieve effective urban planning, where everyone in the society have their needs met. It is of great importance to design gender equal public areas. Men and women use the areas in different ways and therefore have different needs.

The case is often that the women have more use of public spaces for their daily chores. Overall, women have a weak position in the society but by involving them in the decision making in urban planning processes, their role in the society can hopefully be strengthened. Youth's role in the society is also an issue that has not received the proper attention. How they use or wish to use public areas is often forgotten. UN-Habitat has therefore started the project Block by Block with the purpose to involve youths in the development of public spaces. The project is collaboration between UN-Habitat and the game company Mojang AB, where the game Minecraft is used as an urban planning tool.

One project that is located in Kirtipur, a suburb north-west of Kathmandu in Nepal, is focusing on revitalizing a green area that is used as a dumping ground today but is going to be developed into a park for the citizens. Youths in the neighborhood gathered in a workshop where they designed the future park in Minecraft and presented their ideas for representatives from the local organization CIUD, UN-Habitat, the municipality and other community members.

The locals in Kirtipur have a strong commitment to develop and renovate public spaces and to put a lot of energy on preserving heritage and cultural elements. An important water source, a pond and a courtyard for women's groups to have meetings were revitalized on the initiative from the citizens. Because of this involvement, UN-Habitat decided to do the first Block by Block project located in Nepal in Kirtipur.

## **Purpose of study**

The purpose of the study is to analyze if the computer game Minecraft is a good tool for citizens to use to visualize their ideas when they are involved in the development of public spaces in a low income country like Nepal.

### Research questions

- How does Minecraft work as an urban planning tool?
- How can Minecraft as an urban planning tool be improved?
- How is the gender perspective applicable on the development of public spaces?
- How can the Minecraft method become gender equal?

## **Method**

Below is presented what methods we have used and why we have chosen these methods.

### Research strategy

The thesis is based on the methods below:

- Case study in Nepal
- Participating in the workshop and observing how it is structured
- Inventory of the project area
- Interviews with the participants in the workshop
- Interviews with the involved stakeholders
- Questionnaire
- Literature research

### *Case study*

We chose to conduct a case study because it gives valid information by participating in the project in Nepal. The observations, inventory, interviews and the questionnaire, big parts of the thesis, are only possible to do if we are present during the project in Nepal.

To be prepared for our work in Nepal it was important to get in contact with the stakeholders and the people involved in this project. Also to get a clear view of the case study and what the thesis should cover. Therefore we had email contact with UN-Habitat in Nairobi (UN-Habitat's head office) and UN-Habitat in Nepal as well as the local non-government organization CIUD that is organizing the project in order to arrange meetings on our arrival. In Kathmandu we met with Padma Sundar Joshi, Program Manager for UN-Habitat in Nepal since it is UN-Habitat who is responsible for the Block by Block project. He gave us an introduction about Nepal's history and the reason why it has developed so slowly and the main issues. We also met with CIUD and Sangeeta Singh, the architect, because they have central roles in the project who gave us an introduction to this particular Block by Block project.

### *Participating in the workshop and observing how it is structured*

The incentive with the workshop is to let youths who live around the project area to cooperate with each other to develop the park. Computers and the game Minecraft are available during

the workshop so they can create 3D models to show the stakeholders. Letting youths play with Minecraft in groups is a good way to involve them in the urban planning, by letting them create their own models of how they want their city environment to look like. Other methods that show how they want to develop the area are not as convenient as Minecraft.

The workshop is the main event where the youths work in Minecraft and present their ideas for stakeholders, therefore it is important to investigate how the workshop is structured. The structure of the workshop can affect how Minecraft is being used as an urban planning tool and it is also possible for us to notice methods that can complement the workshop so the use of Minecraft becomes more effective.

The best way to investigate that and figure out people's impressions is for us to participate in the workshop. Being part of it let us observe how the workshop is structured, the atmosphere among the youths, how they collaborated and what part the stakeholders play. It adds a vital part to our study, to get a sense by observing what people thought about the concept. We chose this method because by participating we could see parts that do not get brought up in an interview.

#### *Inventory of the project area*

A part of the method is to do an inventory of the park area to get a closer look at each existing element and to see how the park is structured today. It will give us a better understanding of what the adolescents wish to improve. It also let us see if there are differences between the physical area and the model area that has been constructed in Minecraft. There might be differences between the model and the physical place that makes it harder to use Minecraft as an urban planning tool or other incentives that hinders the participants. When doing a case study it is important for us to know the area we are studying well. Therefore we also stayed at a family for a couple of days who was involved in this project and lived near the park.

#### *Interviews with the participants in the workshop*

We thought interviews would be a good method to be able to ask direct questions that we wanted to be answered. It can also lead to discussions among the youths and reveal opinions that would not be said otherwise. We interviewed the youths because they were the ones playing Minecraft and know whether it is a good tool to visualize their visions. They can also tell us what elements need to be better to be able to improve the Minecraft method. By asking the once who use Minecraft we can evaluate the game and discuss the obstacles with the participants.

We held the interviews in smaller groups with girls and boys separately to have a chance to discuss the gender perspective. The aim was to focus a lot on the gender perspective and to understand if there were any differences between the boys' and the girls' experiences. In this way we can ask other questions to the girls and how they think the Minecraft method can become gender equal. We chose smaller groups to be able to have a direct interaction. The interviews with the youths were around 30 minutes and questions about Minecraft, the project

and what elements they wanted in the park, were discussed. Afterwards we transcribed the interviews. We also did that for the interviews with the stakeholders.

#### *Interviews with the involved stakeholders*

It was important for us to interview representatives from UN-Habitat because of the fact that they are the stakeholders responsible of the project. We could get information about already finished Block by Block projects and what their input was regarding those projects as well as this project. We wanted to interview Mojang because they have the power to actually change Minecraft. The object with the interview with the Minecraft expert was to know his role and how he communicated with the youths.

We interviewed CIUD because they organized the workshop and they are the stakeholders who are going to complete the project. The questions were about the structure of the workshop and things they want to change for next time. We chose to interview the architect Singh because she is the one finalizing the technical aspects of the models and knows what is implementable in the park. She has been involved in other planning processes with the residents in Kirtipur so she has experiences of the area.

To understand the low development of public spaces and urban planning in general in Nepal, we wanted to learn about Nepal's physical planning process and how it is structured. The planning process is different within the municipalities in Nepal and they have their own ways of decision making. Since the project is located in Kirtipur we wanted to know the process in Kirtipur municipality and therefore conducted an interview with them. To understand Nepal's planning process further we asked questions about that when we interviewed Sangeeta Singh and CIUD.

We also interviewed professionals in Sweden, who have experience on citizen participation methods and know what methods are suitable in different situations. One of the professionals we talked to works within projects for Architects Without Borders and therefore have knowledge about working in low income countries.

#### *Questionnaire*

The questionnaire consisted of 13 statements where the aim was to get the adolescent's overall opinions about Minecraft and the workshop. The participants rated on a scale from 1-5 how well they agreed with the different statements. It was a way for us to see if there were any differences between the girl's and the boy's opinions, to be able to investigate the gender perspective. It was furthermore an approach to find ways to improve the Minecraft method in the Block by Block project.

#### *Literature research*

To be prepared for our work in Nepal we decided to conduct research about their physical planning process and the Block by Block project before leaving.

To complement our knowledge from the case study with theoretical information we have to conduct a literature research. Research about physical planning processes, gender in

development of public spaces and citizens participation methods will give us useful knowledge for our analysis.

In order for us to make suggestions on how to improve the Minecraft method we looked for citizen participation methods that could work well combined with the workshop. Citizen participation is used more and more in city development, especially in Sweden. Therefore there is a lot written about this topic, about different methods and examples of how they have been used in several projects.

To answer the research questions about gender differences and how the gender perspective is applicable on the development of public spaces, we also conducted literature research on this topic to add to our observations. It was especially important for us to learn about gender and development of public spaces in low income countries because we have limited knowledge about that. We have to base our result on theoretical facts and not just only on the information we got from the case study. A combination of results from Nepal and from literature gives us a better validity to our work.

#### Delimitations

One of the reasons why we did our case study in Nepal was because they had already finished one Block by Block project where they used Minecraft, a pond and a courtyard had been revitalized. Therefore the idea from the start was to compare these projects as well as evaluating the finished pond + courtyard project. Unfortunately when we came to Nepal we realized that Minecraft had barely been used in the finished project, due to time constraint. It was a pilot project where they just tested Minecraft, but they never used the Minecraft models that were built. Therefore we chose to concentrate on the park project.

Another issue with that project was that it was just a small renovation of the pond. No larger developments were made. When we conducted interviews with the citizens and the stakeholders we realized that we did not get any useful information from the pond + the courtyard to our report. Therefore we chose to use it as background knowledge, but not focus on it further than that.

The arrangement of our thesis changed a lot in the beginning before we had everyone's views put together. We fairly quickly learned that it takes more time than we estimated to arrange meetings with the people that we wanted to interview.

The stakeholders that we worked with were very helpful in trying to get us in contact with all the people that we wanted to meet. Therefore we were able to meet most of the stakeholders involved. Groups that we did not meet that would broaden the research were the older men, the very rich and poor, as well as people with disabilities. It was difficult to obtain this since the men did not have a men's group as the women had, and CIUD mostly had contact with the middle class living in Kirtipur. We therefore chose to limit our research into interviews with the stakeholders that are the most involved in the project and the youths that were participating in the workshop and the women's group. We thought this was enough to be able

to answer our research questions. It would also have been useful for our thesis if we had contact with political representatives on a higher level than the local municipality, in order to get their opinion on city development in Nepal.

It was hard for us to understand the planning process in Nepal because not a lot of it is documented and most of it is in Nepali. We only found a few documents about the process that we used. Therefore we were not able to find all the parts of the planning process that we wanted to. Instead we had to rely on the oral sources and try to put together all their information to try to cover the process.

### Data collection

We used the questionnaire to increase the validity of our thesis. We could compare the results with what were said in the interviews and see if the statements were similar. We anticipated that what was said during the interviews was true, therefore our data is to be trusted. The risk we noticed with interviews is that the interviewees were affected by how the interviewers asked the questions. That was one of the most difficult parts for us, due to our low experiences as interviewers. We noticed that sometimes we affected their answers by giving examples in our questions. They replied with our examples instead of coming up with their own. The reason for this was because it was hard sometimes to get them to talk and because of the language barrier. It did not affect our findings much because we could still understand their general opinion, which was the most important for our result. We got better at this over time but we should have prepared better by reading about interview techniques beforehand.

One thing that we think strengthens our validity further is the fact that we are almost in the same age as the participants and we noticed that they felt comfortable talking to us. We developed a friendship, which we think increased their trust in us. Because our research questions were answered based on the interviews, we had the right approach in our investigation.

Another important strength is the fact that we lived in Kathmandu for eight weeks. It made us develop important relationships with both our coworkers but also with other people that we met. It made the cooperation easier and people were very eager to help us with our work. Spending a lot of time in the area increases the validity of the report since we developed a good understanding for the country and the people. We learned a lot about their environment, culture and everyday life, which helped gaining a broader knowledge.

### Analysis

By analyzing the result from the case study and what we learned from other sources we came to conclusions on what we thought were already good with the Minecraft method and what needs to be developed. By using that knowledge we decided what other citizens participation methods were appropriate to use together with Minecraft. We chose two methods and made some alterations to them in order to cover the weakness that we detected with Minecraft. Finally we presented our proposal on how the Minecraft method can be improved.

## **2. Involved stakeholders and background to the case study**

### **UN-Habitat**

The UN's (United Nations) agency UN-Habitat (United Nations Human Settlements Programme) is the agency working for sustainable urban development and human settlements. It was established in 1970 and is active in more than 70 countries with the headquarters in Nairobi, Kenya. UN-Habitat works towards a better urban future. Its goal is to promote environmentally and socially sustainable cities focusing on the following seven areas (UN-Habitat, 2015):

- Urban Legislation, Land and Governance
- Urban Planning and Design
- Urban Economy
- Urban Basic Services
- Housing and Slum Upgrading
- Risk Reduction and Rehabilitation
- Urban Research and Capacity Development

UN-Habitat has four mainstream issues to be taken into account in all their projects. These are the human rights, gender, youths and climate changes (Westerberg, 2015).

### **CIUD**

CIUD (Centre of Integrated Urban Development) is a non-government organization in Kathmandu that has worked together with UN-Habitat in several projects. CIUD works with urban development and they focus on transportation planning, water and sanitation. Their priority is the urban poor. CIUD promotes long term sustainable solutions and their approach is to work together with local communities, municipalities and other stakeholders. In this project, CIUD is responsible for arranging the workshop and the whole process of developing the park. They have worked in Kirtipur, the project area, before. Therefore they have a well-established relationship with the community and they know the needs for the city (CIUD, 2015).

### **Minecraft**

The videogame Minecraft was first created by Marcus Persson, a Swedish programmer and it was released by Mojang AB to the public in May 2009. It then gradually got updated to finally be released in November 2011. Minecraft is now one of the bestselling computer games with over 40 million copies sold worldwide (Minecraft, 2015).

The game could be explained as a creative “sandbox” game where the players build structures using 1x1 meter cubes as building parts in a 3D generated world. Picture 1 shows an example

of how the game looks like. With the cubes the player is able to create whole cities. Minecraft has two modes: creative, where the players are supplied with unlimited resources and the survival mode, where the player has to handle hunger and health and gather resources to defend against enemies. Other activities that the game includes are the ability to fly, crafting, combat and exploration. In the creative mode the players can create structures and buildings that are similar to what you can achieve using advanced 3D modeling tools in a quite easy way (Mojang, 2015). Minecraft also has the benefit that you can use the multiplayer setting to construct the world together with other players (Minecraft, 2015).



Picture 1: Example of a Minecraft model from the workshop (Maharjan, Rajbhandari and Singh, 2015).

### **Block by block**

The project Block by block is a partnership between Mojang AB and UN-Habitat that started in September 2012. The goal with Block by Block is to develop sustainable urban spaces by using Minecraft and also to achieve a greater awareness and appreciation of public spaces. The project is implemented through SUDNet; UN-Habitat's Sustainable Urban Development Network and UPDB; Urban Planning & Design Branch. Block by Block is a major part of the UN-Habitat Global Public Space Program. Minecraft has shown to have great potential as a planning tool by including youths in the planning process (Block by Block, 2014).

Block by block is promoting the importance of public spaces when creating sustainable cities and how they can improve the life quality for the urban citizens. Important aspects of the project is to combine knowledge, methodologies and tools in public spaces and include the local government partners to make these accessible for them. It is of great importance to engage a broader network and promote good practice and policies when developing public spaces. The object with the program is to demonstrate the importance of successful and functioning public spaces in order to achieve economic, social and environmental benefits for the cities and the citizens (Block by Block, 2014).

### 3. Theoretical background

#### Public space

Public space are open spaces and areas where people in the city can move around, get together and play, no matter their background, age, ethnicity, sex and income. This is especially important in poor neighbourhoods where people might not have other places to socialize. These locations can be parks, squares, streets, roads and plazas; places that are accessible for pedestrians and can be used for commercial purpose such as markets (UN-Habitat, 2014).

Well-designed and planned public spaces are symbols of several important aspects of a city, such as health, safety, culture and the local economy. As significant it is for civil spaces to be a platform for political discussion and protests, it is for people to be able to enjoy beautiful surroundings and for kids to play and run around. It is very important with the improvement of life quality in urban areas and far too often these public spaces reflects the poor conditions in the city, which discourages revitalization (UN-Habitat, 2014).

Development and renewal of public open spaces is not prioritized in Nepal. The existing situation is that less than 0.5 % of the land is public space in Kathmandu municipality and only 0.06 % in Lalitpur, the municipalities that represent the capital. As a minimum, World Health Organization (WHO) has calculated that 9 m<sup>2</sup> green open space per person is required for a healthy everyday life in a city. In Kathmandu the number is 0.25 m<sup>2</sup> per person. This project is a step in the right direction regarding green public spaces in Kathmandu (Ministry of Urban Development, 2014).

#### General planning process

The planning process for urban planning projects is often organized like the one explained here. It starts with an idea, as an example building of a park. The purpose in the process is to balance public and private interests against each other. If the project implies changes in the Master plan there must be an application sent to the Building Committee for approval.

**Program-** The first step in the planning process is to do a program. This should involve goals and conditions for the planned work. It should also examine the environmental effects.

**Program consultation-** People that get affected by the plan like neighbors, authorities and others can give comment on the program during a certain time. It is during this step in the planning process that the project Block by Block gets involved. This is when the youths worked in Minecraft in this case study.

**Plan consultation-** When the input from the program consultation is done the program is converted to a specific suggestion. The plan is shown to concerned parties again and they

comment on the suggestion. The inputs presented in the consultation are taken into account and get approved by the Building Committee.

**Review-** The new plan is displayed for review by the public. It is now that people get involved and can see if their suggestions were taken into account in the plan. To be able to appeal against the plan, changes must be presented during this period.

**Acceptance-** After smaller alternations the plan get send to the Building Committee for acceptance.

**Appeals and legal effect-** If no appeals were made against the plan or the appeals made were rejected the plan win legal effect and the plan can be implemented (Göteborgs Stad, n.d.).

## **Gender**

Urban planning, or the lack of successful urban planning, plays an important role in obtaining a gender equal society where women and men have the same opportunity to access transport, jobs and health services in a safe way. Men and women live their lives differently, hence their needs and usability of and accessibility to places are different. Therefore, urban planning with gender in mind has great potential to form a city as suitable for women as well as for men. It is very important that the women's needs are taken into account in the planning process. Below are key areas to focus on (UN-Habitat, 2012).

### **Employment**

When developing places that are used for work there are different gender needs that have to be considered since men and women have different prerequisites regarding work and working conditions. First and foremost, women are often left out from the work sector and if they do have a job they are more likely to get less paid than men, for the same work. Even though there is a growth in number of young women attending university, the females are still underrepresented in areas such as urban planning, politics and government work, which reflects in the urban planning. Instead women are overrepresented in the service area and they tend to have informal jobs, such as street traders (see picture 2) or home based jobs.

Women also tend to have high risk jobs, such as waste pickers or employment in constructions sites. These factors matters to what particular needs women have to have to feel safe and to facilitate their particular requirements. For example, women in the informal sector are forced to unsafe places, where there is no access to public water, sanitary facilities and shelters a threat to many while working. Often cities lack of childcare system and therefore the women often have to bring their children to work. Not only does it put the children in dangerous situations, but it is also a burden for the women in their working life (UN-Habitat, 2012).



Picture 2: Street traders in Kathmandu (Singh, 2014)

### Infrastructure and transport

Infrastructure is often associated with larger systems, such as railways or highways. To make it gender equal, more focus has to lie upon the small-scale issues to meet the women's needs. Since women are more likely to take the responsibility for collecting water, it is important to have a functional water system. As stated before, an important part of the infrastructure development is to focus on sanitary, both in the households as well as in public spaces (UN-Habitat, 2012).

Since women often take care of the sick, the elderly and the children, it is of great importance that, first of all the cities are provided with hospitals and childcare, but also that they are accessible. Women have less access to a car, which makes it important to develop the public transport system in order to develop a gender equal city. An important aspect is also the safety issue on public transport. Studies show that women often feel unsafe on public transport and therefore do not use it to the extent that they would want to. Waste management is also a part of a city's infrastructure, which is usually taken care of by the women and therefore they need to be included in the waste and recycling planning in order to make the system adjusted for them (UN-Habitat, 2012).

### Activity space

In an urban development project in Malmo in Sweden, the city wanted to investigate how a public space could attract more women. The project was a parking lot that the city wanted to turn into an "activity space", by which they mean an area for youths to do sport and other activities. By taking an overlook on the existing activity areas they noted that they are mostly dominated by boys. One of the goals with the project was therefore to make the area attractive

to young women instead. To get their input they involved girls throughout the whole planning process to investigate how the area should be designed and what elements should be included.

The study was made on several levels and with different methods, such as workshops, interviews and seminars arranged by researchers. During a whole summer the girls worked together with planners to come up with ideas and a design. The result showed that when women were in charge of designing the place they chose to set up a stage for singing and dancing. They were focusing on questions such as: Where is the audience likely to gather? How can you move around in the area? How do you get to the park? How are the neighbours affected? The study showed that by involving girls early in the process and through the whole process there was a difference in the result and the girl's views made changes in the planning process and in the final result (Malmo Stad, n.d.).

### Safety

Many women and girls face violence in their home environment. They do so also in public surrounding because of badly managed public spaces and poor urban design. Whether it is harassments, threats or sexual abuse, all aggressions have a huge and serious impact on women's freedom of movement in cities and it constrains them from visiting public spaces. The violence and unsafety women and girls face is due to their vulnerability, which in turn weakens their position in the society (Women in Cities International, 2008). The sad truth is that sexual harassments in public spaces is frequently seen as inevitable in everyday urban life and therefore not highlighted as a problem by authorities and stakeholders, and not an open issue to the public in many countries (Nikitin, 2011).

Elements that are missing in public spaces that make them unsafe such as lack lightning, benches, emergency phones or abandoned, overgrown and unclear areas that feel unsafe for everyone and especially for women. Therefore there is a high risk that this space will stay unused, which makes it necessary to include safety for women when planning and modeling. Places that more women and girls occupy have shown to be places where more people in general occupy. Thus, safety planning is about so much more than just the physical result.

Community participation, especially by women and collaborations among citizens help strengthen social relations, which can be a step forward for a safer public environment. It also helps architects and planners understand how public spaces are being used by its citizens so they feel safer and reinforce gender equality (UN Women, n.d.).

The unsafety women and girls feel outside their home is a heavy burden to bear, because of the constant anxiety they face when they are forced into the unsecure environment. Some characteristics that make public spaces safer for women are:

- Visibility and lighting so users have a clear view and can be seen
- Easy access to clean and secure toilets
- Diverse use throughout the entire day so there are always people around

The importance of designing secure public spaces for girls and women is paramount to strengthen the equality between women and men, girls and boys worldwide. It helps change the stereotypic role in the society where men work in the public and women work at home. This results in sustainable cities and communities (UN Women, n.d.).

Reasons why there might be low participation from women and girls in community discussions about safety:

- They cannot transport themselves to the location
- The fact that women being seen as objects and get sexually harassed are something they have accepted and do not see as a problem
- No one can take care of their children or they cannot afford childcare during the meeting
- Disabilities prevent them from getting to the location
- They are not allowed to attend because of their culture or family pressure
- They are not aware of the work the community does to improve women's safety
- They do not feel comfortable enough talking in front of men

Ways to attract more women and girls in the urban planning process

Umea municipality and Umea University in Sweden made a study to find ways to increase women's participation in urban planning. In their study they mentioned a seminar in Germany that was very successful in including women in the planning process regarding a Master plan. The seminar was held in 14 different areas where only women, of all ages, were invited. The organizers focused on using a language that was understandable for the participants, so no professional terms were used. The time and date were adjusted so it would suit the women and all of them were offered childcare. During one part of the seminar they discussed how some specific ideas and suggestions could be performed by the women. The result was used in the planning process and the seminars made a lot of women involved in the development of the city afterwards (Wide & Hudson, 2008).

The participating women in the study commented that for them to be interested in getting involved in urban planning processes, the project has to be understandable for them. It cannot be too big and complicated and has to be relevant for their needs. As an example, planners should attract women by expressing what specific things they can help with like; "Come and help make this park safer". If the projects is large, another example is to implement a small part of the project so the inhabitants can see a quick result. One suggestion is to put up some of the lighting or let the citizens decided the flowers for the area. There is a bigger chance to get the citizen participation if they feel like they are being heard and that it is possible for them to influence on a smaller scale. Hopefully it will lead to a stronger interest to get deeper involved (Wide & Hudson, 2008).

There was one design project where women decorated lamp posts with knitted details, painted patterns and ceramic. This was used to draw attention to posted information on what was

happening with the planning of the area and public meetings connected to it. It was a way to make women more comfortable to take part in urban planning processes, by highlighting women's designing skills in their homes and moving it into the public room and showing appreciation. Other women in the study mentioned that the municipalities should organize meetings only for women and also involve students, collaborating with schools and universities. The right location of meetings was also brought up as an approach to attract more women. The municipality and the planners should come to the citizens instead of the opposite. For example go to places where women socialize and run errands (Wide & Hudson, 2008) like markets, their homes and waterspouts.

## **Citizen participation methods**

### Role play

Planners in Sweden have used a role play method to broaden stakeholders' perspectives in urban planning projects. To get architects, planners, construction companies and municipality members to explore the environment, they are asked to visualize themselves in another person's life. A way to get them to understand what the citizens want and need in the planned area. Say for example that a municipality is building a square and for the planners to realize and understand what a child would want in that square, they get to imagine being a 10 year old girl while they walk around in the area. It is a chance for them to do an inventory of the square from a different context. Later they combine their experiences from the walk with their professional knowledge when they are working on the design.

### Safety tour

Because security in public surroundings is perceived differently from person to person, gender to gender and social group to social group, there is a method called Safety tour that has been used in Sweden, as a part of citizen participation. For public spaces to attract maximum of people all year around at every time, they have to be safe for everyone and it is also central for a democratic and justice society. Organizing a Safety tour for people in the neighborhood helps creating enjoyable and secure environments and also provides an opportunity for people living close to meet. The tour has shown to be a success all around Sweden and has led to concrete actions and a safer environment (Andersson-Ek, 2010).

The safety survey starts with a pre-meeting where the organizer and the participants talk about the meaning of security for different people. Afterwards they get divided into smaller groups to discuss places that are safe and unsafe during different times of the day in the given location.

The walk is the second meeting. Everyone meets by the development area and gets divided into groups of suitable sizes. Then the groups start their walks according to their pre-decided routes and discuss the area along the way. These kinds of walks take between one to two hours and are adapted so that everyone can join. The impressions and experiences are summarized after the walk.

A last meeting let participants and the construction company discuss the findings together and the company can explain what can be done in a near future and what needs more planning. This is also a chance for the community to talk about what they can do together to achieve their goals (Andersson-Ek, 2010).

#### Things to have in mind during the tour

One thing that can be a struggle is to remember the feelings that arise when you are alone in a specific place at different times of the day. You have to concentrate and try to recall the feelings and it can also help to talk to the other group members. Try to think of how feelings of insecurity and security arise and why. Reflect on who is using the area today, to what extent and for what purpose. It affects how people experience the locality. Also remember to consider why people are not using the space and the reason behind (Andersson-Ek, 2010).

Some paths towards or along a place can be beautiful and crowded during daytime but be the most insecure paths at night. Therefore the alternative routes to the bus stops, the school and parks are something to think about and also whether they are accessible for everyone. Another essential thing is to remember to preserve the elements that are appreciated, that are pretty and secure in the existing place. It is easy to forget but they are good to relate to and draw knowledge from. Consider if the elements have different meaning amongst the group (Andersson-Ek, 2010).

### Learnings from Tyréns

The architect Susanne Klint, from Tyréns in Malmo in Sweden has a broad experience of citizen participation methods. From Klint's<sup>1</sup> interaction with the citizens she has learned what is important in citizens' involvement and how to best use their knowledge. She<sup>1</sup> says that the most useful inputs from the residents are not their suggestions on designs and the physical elements. Instead you should focus on what feelings they want the space to generate, what activities they would like to do in the area and what needs they have. Afterwards it is up to the architect as a professional planner to make a design that fulfills these needs.

Text box 1: Learnings from Tyren's

Susanne Klint, architect from Tyréns in Sweden have broad knowledge about citizen participation methods and what she have learned can be read in text box 1 above.

#### Gehl analysis

The Danish professor and architect Jan Gehl has studied what people actually want to do in public spaces. He realized that designing a successful open space, such as squares or parks, is not just about fine materials and a modern architecture. Instead the design has to be based on people's needs and it should focus on how people can be offered fine places for sitting,

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<sup>1</sup> Susanne Klint Architect Tyréns, interview on the 23<sup>rd</sup> of April 2015.

walking and staying. The Gehl-analysis is a way to evaluate the quality of an existing open space in order to know how to develop it. Through his studies, Gehl came up with 12 quality criteria on designing good public spaces where the relations between the physical environment and the needs of people are being taken into account. The method has proven to be useful in the designing process. The 12 criteria are divided into three groups: Protection, Comfort and Enjoyment. The groups are explained below.

1) Protection: The traffic and safety issues fall within this area. The protection focuses on how we can be safe from traffic accidents so that we do not have to walk around feeling scared of getting hit by a car. It also focuses on how to feel secure in the area, in both day and night time and how crimes can be prevented. The third criterion that falls under protection is protection against pollution and unpleasant smells (Gemzøe, 2006).

2) Comfort: Comfort involves the quality of standing, walking and sitting in the area. Included are also the possibilities for hearing, seeing and talking. It also covers to what extent you can play and do other activities under good conditions (Gemzøe, 2006).

3) Enjoyment: Within enjoyment fall: enjoying the climate, sensory experiences of the area, including the quality of materials and design. It also covers the human scale, which means how well the sizes of buildings and other elements are adjusted to people and whether details and good materials are used. Enjoyments also depends on whether special opportunities and qualities are found in the area and what attractions it offers (Gemzøe, 2006).

A Gehl analysis of the park project in Nepal can be seen in chapter 5, the case study, in figure 1.

## Learnings from Architects Without Borders

Anna Vindelman from Architects Without Borders, Sweden has been involved in several projects in India. Recently she worked with a slum area, which due to problems with recurrent flooding was going to be relocated to a better suited area. As a part of the planning process, the architects used citizen participation methods to get important input from them. The citizens were therefore asked to walk around in their neighborhood with a camera to take photos of certain elements, objects and other physical things that were of importance to them. Vindelman<sup>2</sup> said that what she learned from this project was how important it is for the local residents to conduct their own inventory of their area. In that way they could detect things that they like or dislike within their existing neighborhood, things the architects might not consider otherwise. This method proved to contribute with useful information for the architects in their design process.

Text box 2: Learnings from Architects Without Borders.

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<sup>2</sup> Anna Vindelman Architect Tyréns, interview on the 27<sup>th</sup> of April 2015

## 4. Nepal

### Nepal, beginning till today

Nepal is located between gigantic China in the north and India in the south. These two countries have influenced Nepal in many ways but the country has been able to stay independent since it was discovered several thousand years ago (Conrado, 2010).

Kings have ruled Nepal from the beginning but the Muslim army from India has tried to take control over the country several times, which has split the country from time to time. It was not until 1372 that Jayasthiti Malla, the king of Kathmandu, gained a lot of power and formed Kathmandu Valley kingdom, which expanded a lot during Yaksha Malla, the king's grandson's ruling. Nepal's borders expanded towards India in the south and northwards into Tibet. The caste system became a way of stabilizing the society during this era, to keep the reign (Conrado, 2010).

After the king's death in 1482, Nepal was yet again divided into several small states. This lasted until the 18<sup>th</sup> century when Prithivi Narayan Shah gained power in the Gorkha Kingdom and tried to unite the different states to defeat colonialism. In the end he managed to master the Kathmandu Valley and form the Nepal we see today (Conrado, 2010).

Not long after, Nepal was at war with China over Tibet that continued almost a decade. A war that Nepal lost, which put the country in an annual debt to China that lasted until 1912. At the same time Nepal fought against the British that had colonized India throughout the 18<sup>th</sup> century. The British wanted to conquer south of Nepal and Nepal also lost this fight and had to give up a lot of land to the British. This shows how influenced Nepal has been by the giants in the north and south, which is something that still has influence on their politics (Conrado, 2010).

It was in the beginning of 1990 that the formation of the democracy we see today was shaped in Nepal. As a result of an attempt to restore the multiparty system by the political parties, protest broke out on the 40<sup>th</sup> anniversary of the declaration of democracy 18<sup>th</sup> of February 1990. The violence between the police and the citizens came as a big chock to the country and led to a new constitution. It stands for Nepal as "a multi-lingual, multi-ethnic, democratic, indivisible, independent, sovereign, Hindu and legitimate monarchial kingdom". The king still had the power, but it was now limited. Unfortunately the multiparty democracy did not bring stability to Nepal and a civil war broke out in 1996, followed by the death of 13 000 people on both sides as a result (Insight Guides, 2014).

A disaster that has haunted Nepal is the royal massacre in 2001. It is stated that Crown Prince Dipendra was drunk and killed his family and then committed suicide, but everyone "knows" that the king's brother Gyanendra was behind this. He became king three days after the massacre (Gayley, 2001). The unstable governance from the parliament and the fact that King Gyanendra took back his sovereignty, led to great dissatisfaction among the people. Protests led to the abolishment of the monarchy. Nepal became a Federal Democratic

Republic in 2008 but it did not create peace within the parliament (Insight Guides, 2014). Today Nepal has a President as head of State, Ram Baran Yadav and a Prime Minister, Sushil Koirala, as head of government (BBC News, 2015). Nepal is still facing major challenges even though development and tourism have flourished after the civil war and the renewal of democracy (Insight Guides, 2014).

## **Population**

In 2013 the population in Nepal was measured to 27.8 million people and the capital Kathmandu has over 1 million inhabitants (Trading Economics, 2015). Lalitpur and Kathmandu municipality are the two municipalities that represent the capital. The case study project is located in Kirtipur municipality south west of Kathmandu (see picture 3) (Ministry of Urban Development, 2014) with a population of 67 000 people (City population, 2011).

Nepal is stated as one of the poorest countries in the world. 80 % of the population live in rural areas and feed on farming but the rough topography with high mountains and hills and tough weather make agriculture very difficult. Around half of the children under the age of five are undernourished due to the lack of food. Because of the poor conditions of infrastructure, roads and Internet many people are very isolated from the developed society and have very limited access to the “modern” world. Over 30 % of the Nepalese have a monthly budget of US\$ 14 per person (Rural Poverty Portal, n.d.).

There are large differences in the welfare between women and men in terms of education, access to healthcare and participation in decision-making. Even though women are responsible for the families and for sustaining the economy and contribute with 60 % of the labour force at the farms, they do not have any influence or power (Rural Poverty Portal, n.d.).

## **Urbanization**

Nepal is steadily developing but still has a long way to go because of the instable governance. Roads are being extended and built to the remote areas. Electricity, cell phones and Internet access are spread through the country, a mobility that was unimaginable a decade ago and has shaken up the traditional ways of living (Insight Guides, 2014). 9 % of the population use Internet today (Internet World Stats, 2012).

As the trend in the rest of the world, Nepalese people are moving from rural to urban areas and urbanization becomes a challenge for all the city planners. People are moving faster to core areas than the infrastructure can manage. Kathmandu Valley is the main area for urbanization with 29 % of the total urban population in Nepal. Small towns are declining, while cities with 200 000 citizens have increased with 5 % the last decade (Ministry of Urban Development, 2014).

According to Ministry of Urban Development, as little as 50 % of the urban dwellings have access to running water. The sanitation system covers 60 % of households in urban areas

while it is around 10% in rural regions. The road system does not have the capacity to hold all the number of vehicles used and there is no funding to maintain them, hence the conditions are very bad. The supply of electricity is limited and as an example there is an electricity schedule in Kathmandu that shows when the electricity shuts down in a certain district for a couple of hours every day. The Nepalese government wants to encourage private collaboration to help develop infrastructure and other urban projects. (Ministry of Urban Development, 2014).

Zoning regulations hardly exist in Nepal. The only things that are regulated are the building dimensions and density, whereas land use is being disregarded. Environmental guidelines are only implemented on larger projects. Waste management on a neighborhood level is not within these guidelines, which would be needed due to the large waste disposal problem all over Nepal. Building Bylaws and regulations are being neglected constantly, which has led to encroached public land and polluted river systems. Public spaces, cultural sites and even playgrounds are being enforced with illegal settlements in urban core areas. Active and effective steps to prevent these issues do not exist (Ministry of Urban Development, 2014).

**Kirtipur**



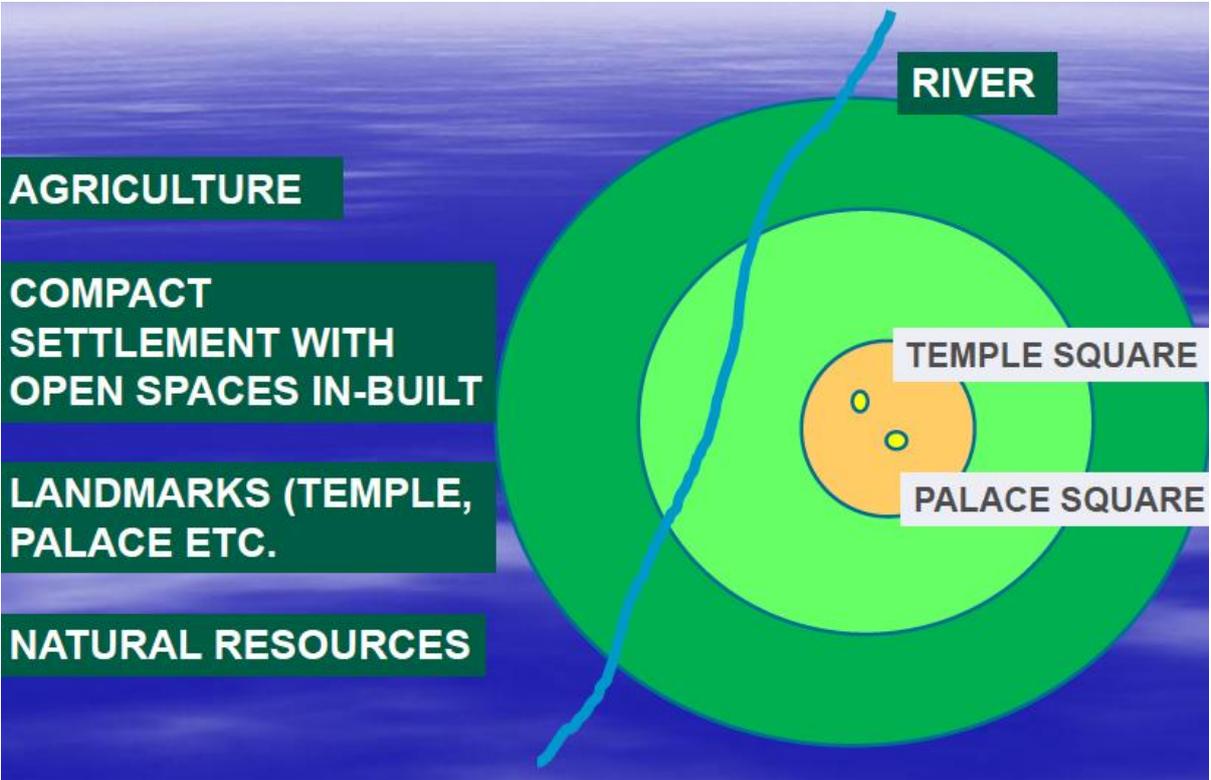
Picture 3: Map of Kirtipur (GoogleMaps, 2015).

Kirtipur, like most other cities in Nepal, has a unique city structure. The picture above is showing where Kirtipur is located in relation to Kathmandu. Because of Nepal’s mountainous topology the cities have been structured and developed in a certain way to handle the difficulties of building and living in those conditions. The cities are often built in a way where the citizens live on the top of the hill where the soil for agriculture has the lowest quality. The lower land surrounding the hill where the soil has higher quality is used for cultivation activities (see picture 4).



Picture 4: Traditional settlement pattern in Nepal (Singh, 2014).

To make it possible for the people living in the city core to have easy access to their cultivation land the city itself is also built in a characteristic way. As the city has developed over the years, new settlements have continued to spread circularly out from the city core (see picture 5). The streets start in the center of the city and continues in straight lines out from the urban area to make the travel distance as short as possible. This generates a certain pattern where the urban area is formed like a circle with streets extending from the city out to the urban borders (CIUD, 2014).

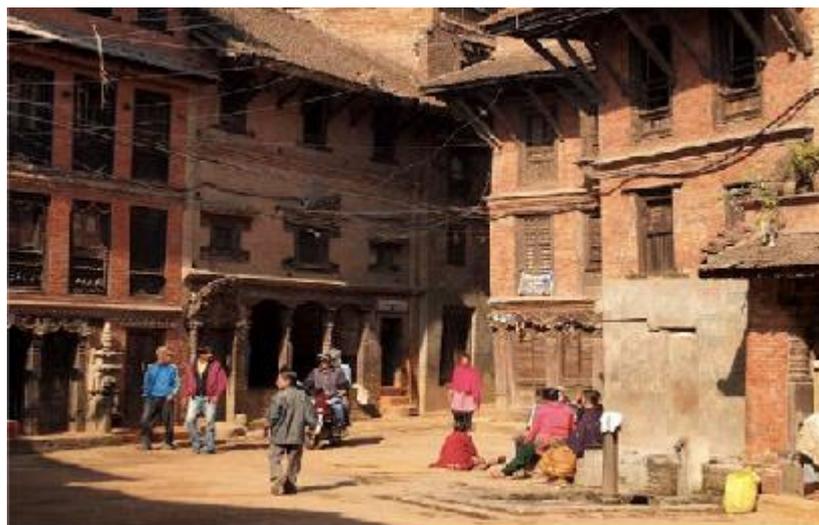


Picture 5: Traditional city settlement pattern in Nepal (Singh, 2014).

Public spaces (see picture 6), such as squares and ponds play an important role for the local citizens in their everyday life. Since their houses are often small with no access to water, the squares serve as a living room for people to get together, relax and socialize. The lack of water in the households makes the ponds very important for several reasons. It is a place where women come to wash their clothes and bath their children. It also has a safety function by supplying the area with water in case of fire. Other elements such as temples, water spouts and so called Patis, which is a resting place usually placed in the squares where mostly the elderly get together to relax in the sun, are of great importance for the everyday life in the cities (Singh, 2015).

In recent years there has been a change in the citizens' way of living. The rapid urbanization has led to a shortage of housing, which has led to encroaching of public spaces with illegal settlements. The buildings are often built with no consideration to the traditional urban design and without concern to safety, which picture 8 shows an example of. Another main problem in the cities is that more and more people have access to cars. The cities are not built for cars and therefore the streets are too narrow and there is no space for parking. The lack of parking lots is another factor that causes illegal encroachment of public spaces. Waste management is another huge problem. There is no proper system for handling the household waste so the waste is just dumped wherever possible, for example in parks, ditches or ponds (Singh, 2015).

Except for these physical changes there is also a mental change that is an important pull factors for these issues. The citizens used to have great respect for their cities, but for the newer generations that are influenced by the Western world through media and Internet the traditional and religious life is no longer as important as it used to be. This leads to cities where waste is dumped all over and the ponds are dried out and instead used for parking lots. Picture 7 shows an example of a dried out pond (Singh, 2015).



Picture 6: Public space in Kathmandu (Singh, 2014).



Picture 7: Dried out pond (Singh, 2014).



Picture 8. Building without consideration of traditional building style (Singh, 2014).

### **Nepal's physical planning process**

The political instability through the years in Nepal has affected the structure within the government in a negative way. As a result there is no clear view on how the process is managed and by whom when it comes to urban development. One thing also makes the planning process complex is the religious background that identifies the country. There are many cultural aspects to have in mind when revitalizing a space or constructing new infrastructure.

#### The planning process' historical background

Joshi<sup>3</sup> stated that there was a ruler in the mountains who controlled Kathmandu Valley 250 years back. The king paid no attention to what was happening in Nepal and instead just ruled after his own preferences. The planning in Nepal was neglected because the king did not understand its importance. There was no clear structure of the city Bylaws and no one taking

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<sup>3</sup> Padma Sundar Joshi Program Manager UN-Habitat, interview the 25<sup>th</sup> of February 2015.

control over the development. All the ruling kings in the country were influenced by England's colonization of India, even though Nepal never was colonized. The western architecture and design started to spread across Nepal and the Nepalese people's knowledge, skills and wisdom were forgotten. Until around 1950, Nepal was a closed country for foreigners and the only contact with the outside world was the trade with China and India.

Nepal started to think about physical planning in 1960 according to Joshi<sup>3</sup> and in 1969 the first plan was established; The Physical Development Plan of Kathmandu Valley. It was developed by support from the UN and was a very thorough plan according to Joshi<sup>3</sup> but, as often in Nepal, it was never implemented. The government never went through with it and started to make decisions suited for themselves instead.

Joshi<sup>3</sup> recalls that from 1969 until now, different department have created many thorough plans but very few have been implemented. That is the reason why Nepal have such a poor physical environment today. For example unorganized settlements spread across Kathmandu Valley, real estates that are not built according to land use plans and poorly organized transportation systems. The government does not take this matter seriously and does not want to put the plans into action. The major reason behind that is the unstable political background in the country. It does not exist locally elected people working in the government that can speak for the citizens and take control of the planning issue on a smaller scale.

### Stakeholders

Because the politics have been so unstable until recently, the different stakeholders responsible for planning are not always clear and they often neglect their tasks. The government in Nepal consists of 26 ministries who are managing on a national level. Those related to planning are; Ministry of Urban Development, Ministry of Federal Affairs and Local Development (MOFALD), Ministry of Physical Infrastructure and Transport, Ministry of Land Reform and Management and Ministry of Agricultural Development (The Official Portal of Government of Nepal, 2015).

The local governance consists of two levels; the District Development committees as the higher and the municipalities and Village Development Committees (VDC) on the lower level. The municipalities and village groups serve the same purpose, but municipalities managing in towns and village groups in the villages (Friedrich Ebert Stiftung, n.d.). To involve citizens in every VDC and municipality there are wards, a subdivision of an authority zone, with citizens' representatives says Pariyar<sup>4</sup>.

Larger projects are managed on a national level by the government, while everything else is controlled by the local bodies says Joshi<sup>3</sup> that consist of 75 District Development Committees (Ministry of Federal Affairs and Local Development, n.d.), 130 municipalities and around 3 600 village groups across Nepal (My Republica, 2014). Ministry of Federal Affairs and

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<sup>3</sup> Padma Sundar Joshi Program Manager UN-Habitat, interview the 25<sup>th</sup> of February 2015.

<sup>4</sup> Sanu Babu Pariyar Senior Accountant Officer Kirtiput municipality, interview the 27<sup>th</sup> of February 2015.

Local Development is responsible for the municipalities' government and management. Ministry of Urban Development is responsible for the urban design and all the technical aspects Joshi<sup>3</sup> is explaining.

As stated before, both the government and the local bodies are good at developing plans for urban and rural development but the problem is that very few of them get implemented. Apparently the responsibility for implementing them is unclear in some cases since different ministries and bodies are responsible for different parts of the planning process. The responsibilities are too spread out to get a solid process. Sometimes the government does not even know who is responsible. One result is that the different agencies want their own interests ranked highest says Joshi<sup>3</sup>. For example the government can limit the funding for a municipality if they are dissatisfied about something in the plan that the municipality has prepared, which in return means that the power lies with the government.

### Informal planning

What makes it hard to organize the planning process in Nepal is the unclear ownership of land. Before, private people simply took the land they wanted to build on. This led to a lot of private ownership and an informal land market in Nepal, which is the reason why the government does not own much land (Ministry of Urban Development, 2014). The Nepalese government is actually one of the poorest governments of land ownership on the globe Joshi<sup>3</sup> explains. They own the national parks and the mountain areas, places where exploitation is not possible. The only way for municipalities and the government to exploit land is to buy land from the people. That has shown to be very difficult and complex because some communities are strong and they fight hard to keep their land. Private owners also do not think they are given a reasonable price for their land, which add more problems. This makes it hard for the government to buy land, which complicates the planning process even more.

Private land tenure was introduced in the Land Act in 1964 and private landowners had to register the land to the state and pay taxes to be the legal owners. The Act tells what rights private tenures have and they have the right to sale, mortgage, donate, inherit, exchange, lease, subdivide and lease their land. Prior, when informal land ownership was not a problem, the state was the only one who could lease, sale or grant the land (Ministry of Urban Development, 2014).

Informal settlement is being handled better now but there are no laws saying how to make private land public again, instead every municipality has their own rules says Shakya<sup>5</sup>. The projects presented in this thesis have had problems with land being public before but have gotten exploited by private persons. What happened was that the citizens went to the municipality to take the land back. They talked to the owner and the only reason why it

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<sup>3</sup> Padma Sundar Joshi Program Manager UN-Habitat, interview the 25<sup>th</sup> of February 2015.

<sup>5</sup> Yogesh Shakya Program Manager CIUD, interview the 3<sup>rd</sup> of March 2015.

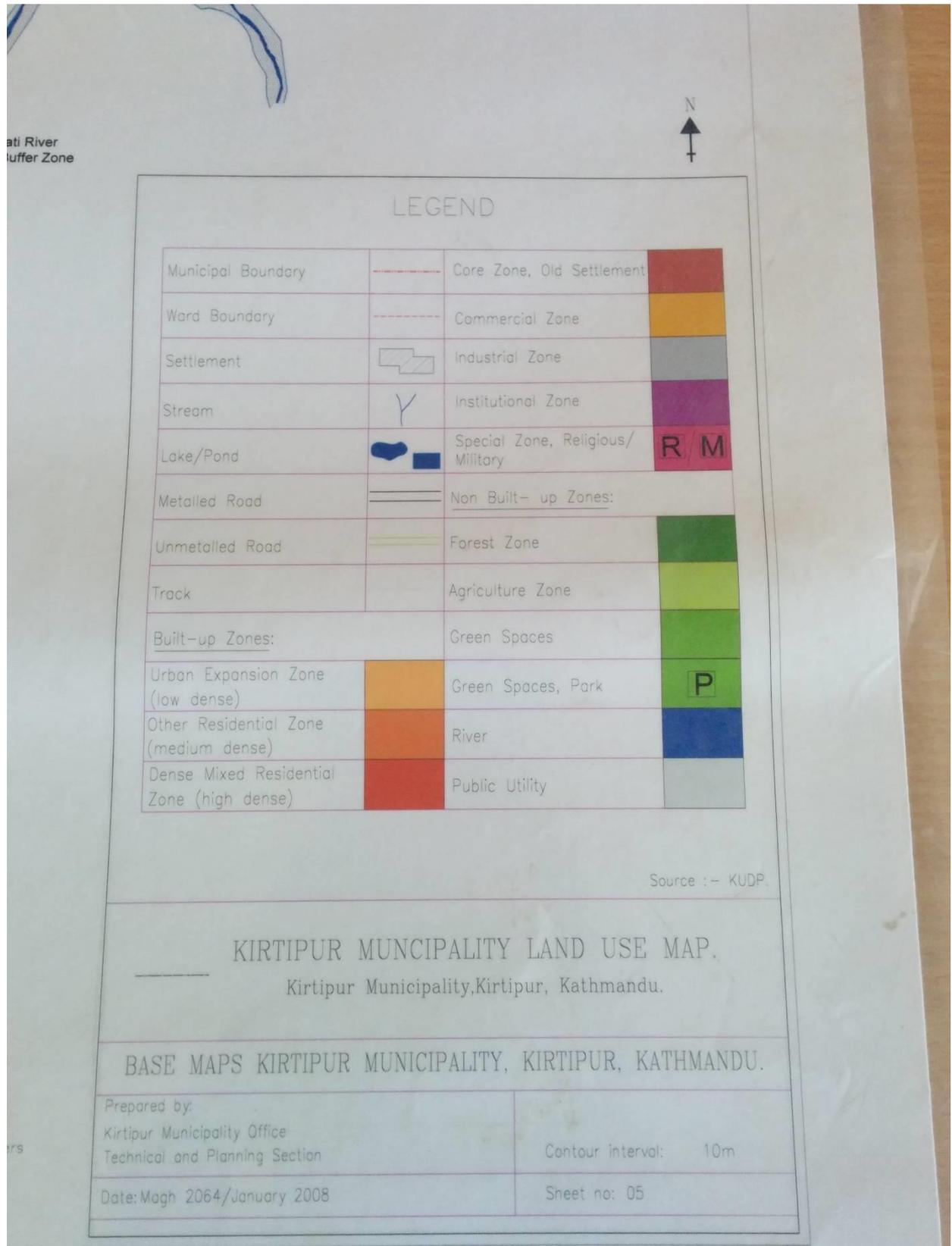
became public again was because the owner agreed to it. That is the only way to make it public at the moment but, in the contract the land is still private.

Shakya<sup>5</sup> explains that the municipality does not have the authority to decide over land. The Survey department at the government has documentation on the land ownership. CIUD are not sure about who legally owns the land in the park project in this thesis. It is used as public space today, but problems can occur in the future if someone else claims the land says Shakya<sup>5</sup>. One example of a negative impact of informal settlement is that one of the public wells in the park has stopped working because of informal settlement that is blocking the pipes.

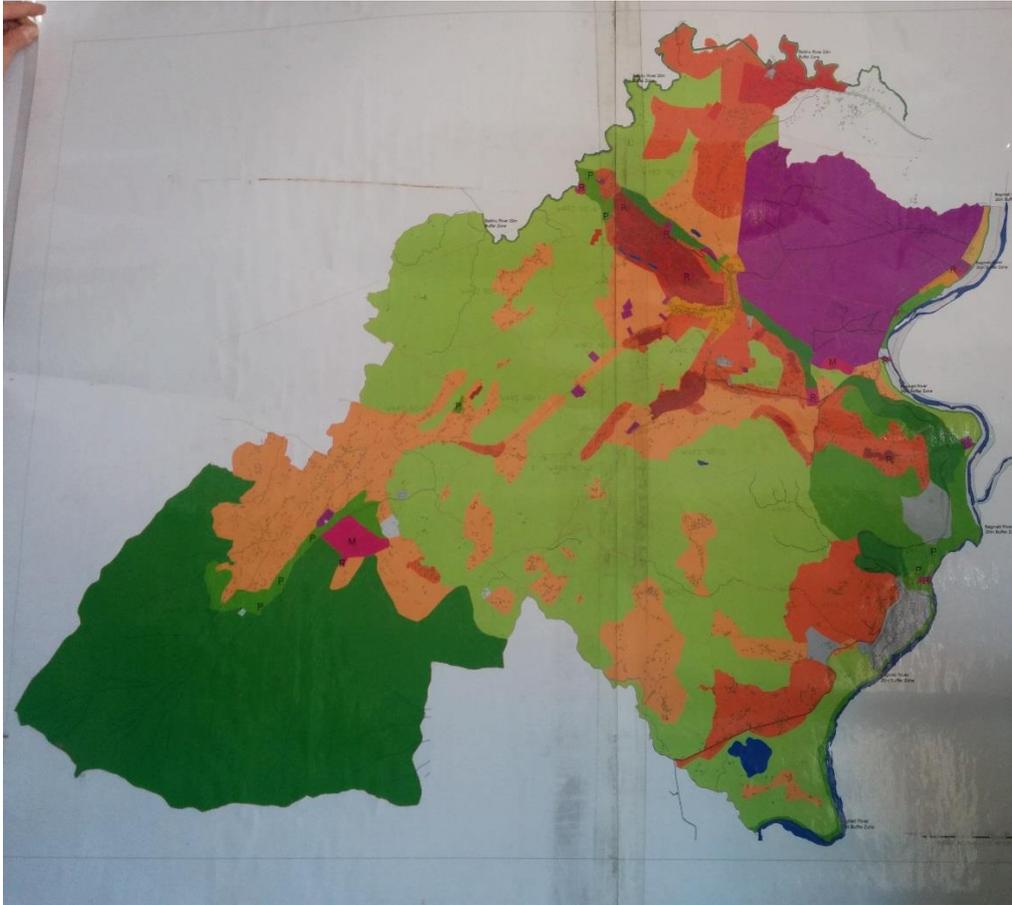
Singh<sup>6</sup> clarifies that all new constructions these days have to get a building permit and in order to get one, the plan has to be approved according to the Building Bylaws. The Bylaws cover the whole area of Kathmandu with building regulations of the different residential sub zones. The trend used to be that after the land exploitation, the landowner would start to build without building permits Singh<sup>6</sup> explains. Only recently the government have realized that this unsustainable system has led to encroaching of public space and too narrow roads etc. and therefore they are very strict on giving out building permits at the moment. The municipalities do not need building approval and therefore responsible for most of the problems of encroaching in Kirtipur. Example of a land use map over Kirtipur can be seen in picture 10 and its legend in picture 9.

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<sup>6</sup> Sangeeta Singh Architect Astra Development Network, interview the 20<sup>th</sup> of March 2015.



Picture 9: Example of the legend to the Land use map in Picture 10, by Kirtipur municipality.



Picture 10: Example of a Land use map of Kirtipur, by Kirtipur municipality.

#### Planning process on local level

Pariyar<sup>4</sup> explains the local planning process and employees within the municipalities are not elected by the citizens. The municipalities' funding comes from the government and the private tax. Approximately 20 % of the funding come from tax money. The budget goes to five different groups, which is mandatory. 10 % must be invested in women, 10 % in children and 15 % in seniors. The remaining 65 % are divided between infrastructure (80 %) and promotion activity (20 %). The total amount of money a municipality receives is according to the area of land and the population within the municipality. There is one exception where the municipality can get extra funding for large projects but those plans have to get approved by the government. Otherwise it is the municipality who decides what projects that are going to be implemented.

The case study project is located in Kirtipur, a suburb south west of Katmandu center and the city is in Kirtipur municipality. The reason why UN-Habitat and CIUD chose Kirtipur was because of the citizens' interest in revitalizing public spaces and heritage sites within the core area says Pariyar<sup>4</sup>. The community commitment is very strong and the citizens want to be involved in the development of Kirtipur. One result is that employees from Kirtipur municipality work closely with the citizens, a strategy that every municipality is supposed to

<sup>4</sup> Sanu Babu Pariyar Senior Accountant Officer Kirtipur municipality, interview the 27<sup>th</sup> of February 2015.

follow but does not necessarily apply because of lack of interest from locals. The planning process that follows is for development of public spaces in Kirtipur.

The stakeholders for urban development in Kirtipur are workers within Kirtipur municipality, members of the wards and local clubs such as women clubs and youth clubs. Every ward in Nepal is constructed in the same way and Kirtipur have 19 wards with one secretary each that controls his own ward. Every year the municipality receives guidelines and a budget from MOFALD which decides how the money is supposed to be allocated Pariyar<sup>4</sup> clarifies. Last year Kirtipur municipality got 160 million rupees (16 million USD) in total, whereof 31.2 million rupees (3.12 million USD) from private tax. For the municipality to know what projects they should invest in they constantly have dialogs with members of the wards and local clubs. They go to the wards and have different meetings with stakeholders, local clubs and committees and discuss problems in the specific area. Shakya<sup>5</sup> tells us that there is a good linkage between the different sectors on the different levels in Nepal because it is easy for someone from a ward to bring their demand to a higher authority.

The municipality have a council with representatives from the wards and local clubs that in the beginning of every year have a mandatory meeting where they decide projects to implement in which ward Pariyar<sup>4</sup> describes. Shakya<sup>5</sup> explains that when they have agreed, the proposal will be sent to MOFALD for inspection, then to the National Planning Commission, that decides the budget for every project. This is the process that links all municipalities to a national level. Furthermore Sing<sup>6</sup> clarifies that it is mandatory for the municipalities to make a periodic plan every three to five years. The plan is a document that presents focus objects and strategies on how to develop the city. As a final step, the plan has to be approved by the community.

The next step in the planning process is to bring in ideas from the citizens and for the municipality to develop a plan for every project. After the first draft of the plan they bring it back to the locals to get more inputs and then the municipality finalizes it so the plan can get implemented. It is mandatory for the municipality to have an agreement with the citizens before implementing the projects. In the study both projects have been planned by CIUD and designed by the architect Sangeeta Singh and according to law, CIUD have to consult each activity with the municipality and the citizens. The municipality supervises them through the whole process (Pariyar, 2015).

Kathmandu Valley's building Bylaws have regulations concerning community open spaces. As an example, for every newly planned residential zone between 2 600 m<sup>2</sup> and 5 200 m<sup>2</sup> (5 – 10 ropanies) it is mandatory for 5 % of the total land to be assured to open space. Within an apartment plot, 50 % of the land has to be public space and 50-80 % within a residential plot, depending on the location and size (Ministry of Urban Development, 2014).

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<sup>5</sup> Yogesh Shakya Program Manager CIUD, interview the 3<sup>rd</sup> of March 2015.

<sup>4</sup> Sanu Babu Pariyar Senior Accountant Officer Kirtipur municipality, interview the 27<sup>th</sup> of February 2015.

<sup>6</sup> Sangeeta Singh Architect Astra Development Network, interview the 20<sup>th</sup> of March 2015.

### Development of public spaces

The interest for developing public spaces in Nepal is very low. On a national level, the reason is that people within the government want to develop rural areas where there are problems with not enough infrastructure, water supply and electricity etc. For investments in urban areas the initiatives more often come from non-government organizations. Because of modernization, people are putting attention on new productions and not on heritage sites and public areas.

In Kirtipur the initiatives to revitalize heritage sites and public spaces never come from the municipality. The places are owned and managed by the municipality so it is their responsibility to invest in these spaces, to keep them in good condition for the local citizens. They do not see the revenue in the development and want to allocate the funding on projects that give the municipality a direct revenue. The two projects that have been analyzed, the pond + the courtyard and the park, have been implemented on initiatives from the local people. This is one way of informal planning. The good thing with Kirtipur municipality is that they try to meet the locals' interests (Shakya, 2015).

### Funding for the pond + the courtyard and the park

In the pond + the courtyard the funding came from the municipality (5 %), UN-Habitat (80 %) and the residents (15 %) through direct labor. The total budget for every project is allocated during the municipal council. The park projected is still developing so it is not yet certain how much every involved group is going to pay. It depends from project to project how the locals will contribute but most of the time they help through construction work (Pariyar, 2015).

## Urban planning tools in Nepal

There are different tools used in Nepal for gaining an efficient land use and development. The three tools explained below are the most common tools in order to structure and develop land.

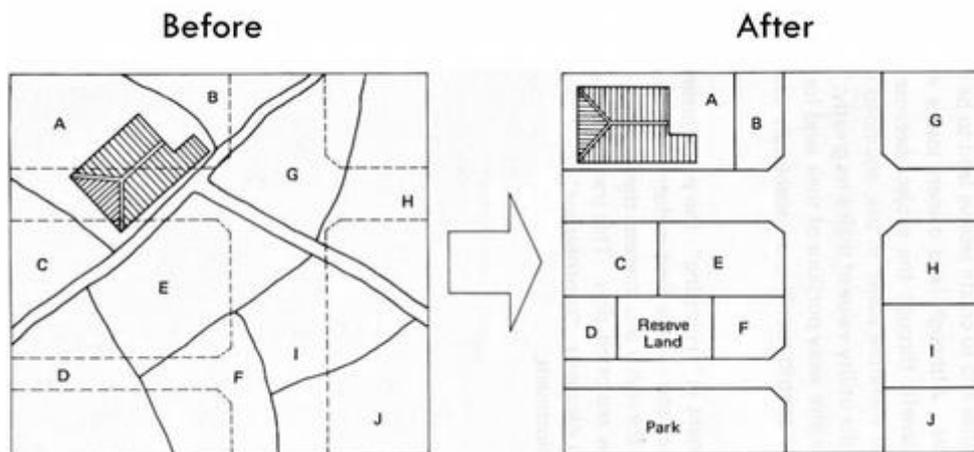
### Site and services

Through the site and services system the land or plot is supplied with basic infrastructure, such as facilities for roads, water and sanitation. The allocated land, which is owned by the government, is then either bought or leased by the residents. The beneficiaries are often provided with a loan with good terms as well as a loan for the construction costs for the house (Chhetri, n.d.).

### Land pooling

Land pooling is an efficient land planning technique that facilitates a sustainable development in the fringe of the city. The object with this method is to assemble small and inefficient land plots into one big plot, provide it with infrastructure such as water and roads and then split the land into reconstructed land and then give it back to the landowners (see picture 11). The action is often initiated by the municipality or government, usually as a step in turning a rural

area into an urban area. It is funded by a service charge for the land tenants and also by dedicating some of the land to commercial activities. So even though the landowners receive a smaller land plot back, it has a more convenient shape and is also provided with infrastructure. A subdivision plan is also developed for the area for a cohesive planning (Chhetri, n.d.).



Picture 11: Illustration of Land pooling (Understanding Land Pooling, 2011).

#### GLD (Guided land development)

Guided land development is a strategy for the government to select in which direction the urbanization should take place. The principle behind the strategy is to provide the chosen land with infrastructure services to encourage private land development in that area. The infrastructure functions as a mechanism to guide the development in a certain direction. The object with this method is to ensure a sustainable, efficient as well as environmentally friendly urban development. The cost of servicing the land is paid by donation of land for the public infrastructure and through a so called betterment tax. This is an advantageous method because it is less costly than traditional land acquisition (Chhetri, n.d.).

#### Revitalization plan of Kirtipur

CIUD developed a revitalization plan for Kirtipur. The objective with the plan is to create a documentation of vital open spaces in the core area and to develop a strategic plan of how to manage the open spaces (Singh, 2014).

#### Background revitalization plan

Kirtipur is a historic city with significant public open spaces, cultural heritages and buildings. These places are now in the need of renovation. The public spaces used to be a center for all citizens in the community to get together and perform cultural practices. There are no activities in many of open spaces today and the spaces are dead and quiet in daytime. Because of changes in the use of the open spaces, many of them are now occupied as parking lots. The ponds, which have once been used as important water resources for washing clothes and firefighting, are today almost dried up. A major problem is the lack of proper management for

the maintenance of heritage and open spaces. The park project is an important part of the revitalization of Kirtipur since it is the only green area left in the city. It is therefore very important that it is getting managed so that it does not get further encroached by illegal buildings (Singh, 2014).

Parts that the revitalization plan is focusing on are:

- Open space improvement
- Tourism
- Open space management
- Pedestrian friendly environment

The main objective of the revitalization plan is to improve the open spaces. An important aspect is the revitalization through physical renovation of the ponds and other water resources. In order for the ponds to get refilled, the rainwater harvesting has to be extended. When the ponds are filled again they can be used as water storage for firefighting which is a vital factor for a safe city in Nepal. A part of the revitalization plan is to maintain wells, waterspouts and other water bodies. One step in the developing of open spaces is to renovate the courtyards. A strategy is also to improve linkages between open spaces, streets and squares (Singh, 2014).

A main focus of the plan is to attract more tourists to Kirtipur. As an old area with a strong cultural heritage it has a lot to offer to tourists that want to discover the “real” Kathmandu. The pull factors of how to attract tourists are the daily life in Kirtipur and the socio culture and traditions. Kirtipur is known for being a city where festivals are held all year around (see picture 12). The festivals are very important for the local citizens and they may last for several days and take place all over the city.

Other important pull factors are the food and the ethnic culture that Kirtipur has to offer. Because the city has many important public spaces, temples, parks and cultural building, the plan is to create a tourist route as a part of the tourism promotion. The route will link these important places together to make them more accessible for tourists. To get a genuine cultural experience there will be home stays available as accommodation for the tourists. This is a unique opportunity to live with the local people to get a deeper understanding for the everyday life and to learn about the culture and beliefs (Singh, 2014).



Picture 12: Festival in Kirtipur (Singh, 2014).

To manage the revitalization of open spaces in order to keep them in a good condition there has to be awareness among the citizens. The plan is therefore to start an awareness generation program for people of all ages and for both men and women. An important aspect in order to obtain a good management is to involve the local citizens from the beginning in the planning and design process so that they are engaged and care for the area. There will also be training and capacity building at various levels within the open space management field (Singh, 2014).

The strategy to promote a pedestrian friendly environment is to create a master plan for pedestrianization of the core area. The plan will designate the core area as pedestrian zone which will be promoted by special incentives (Singh, 2014).

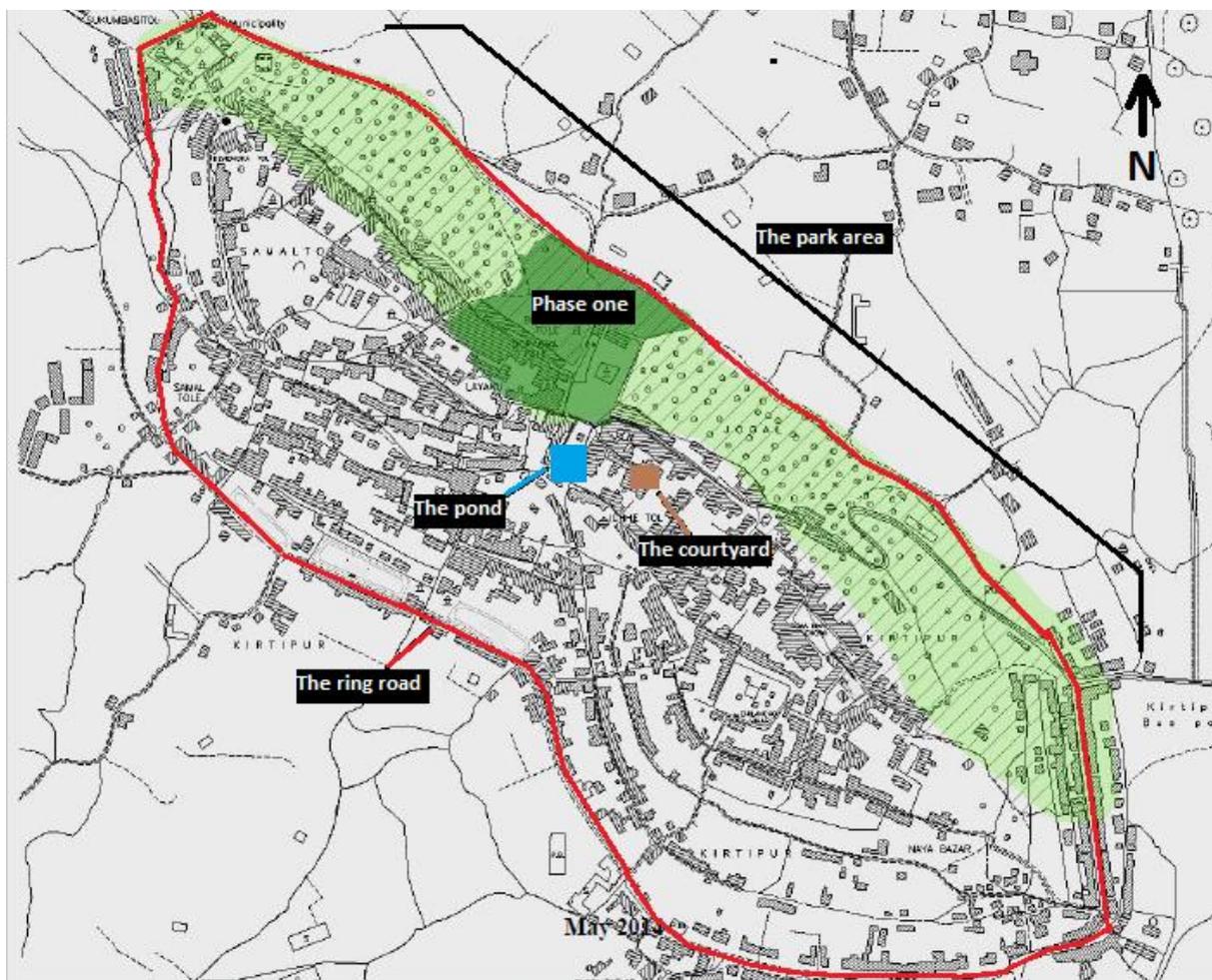
## 5. Case study

Where the different projects are located can be seen in picture 13 below.

### The pond and the courtyard project

The first revitalization in Kirtipur was the pond in the center of the core area. The pond had not been used for a long time due to pollution. The citizens used it as a water source and for washing their clothes.

On initiative from the locals and UN-Habitat, CIUD helped renovating the space and also rearmend a courtyard for the women's group to hold their meetings (see picture 14). All the constructing were done by the citizens, who also got together every Saturday to clean the area. One important element in the revitalization of the pond was the building of the Pati. A Pati is a resting and signature place in Nepali neighborhoods that is often used by elderly people.



Picture 13: Map over Kirtipur core area with the projects marked (CIUD, 2015).

CIUD was responsible for the planning and designing and they arranged several meetings with the local clubs to get the citizens' view on how they wanted to develop the area. CIUD and a few participants from Kirtipur were introduced to Minecraft during this project but they never managed to use it productively.



Picture 14: Women's group in the courtyard.

## The park

Next step in the revitalization plan of Kirtipur is to develop the green area that is shown in the map on the previous page. The area is located in the core of Kirtipur, close to the pond project and close to an important religious temple. The area will be developed in three phases and this case study covers phase one, which is located in the center of the area. Pictures 16 and 17 are photos taken of the area. The majority of the area is covered with forest and there is a path all around the area leading to the center where there is a campfire station as well as a workout bar and small plantations with decorative trees. The inventory map in picture 15 shows a more detailed picture.

The area is now used as a dumping ground. Even though the local community has got together to start a cleaning campaign where they meet once a week to clean up the litter, there is a lot more to do before it could be seen as an actual park. Another issue and probably one of the reasons why it has turned into a dumping ground is the steep topology. Except for a platform in the center, the rest of the park is very steep. The area has great potential to turn into a park for people to relax, play and socialize.



Picture 15: Inventory map of the park.



Picture 16: The green area today.



Picture 17: The view from the green area.

Below (figure 1) is a Gehl analysis conducted over the park to demonstrate how it can be done.

### Gehl analysis

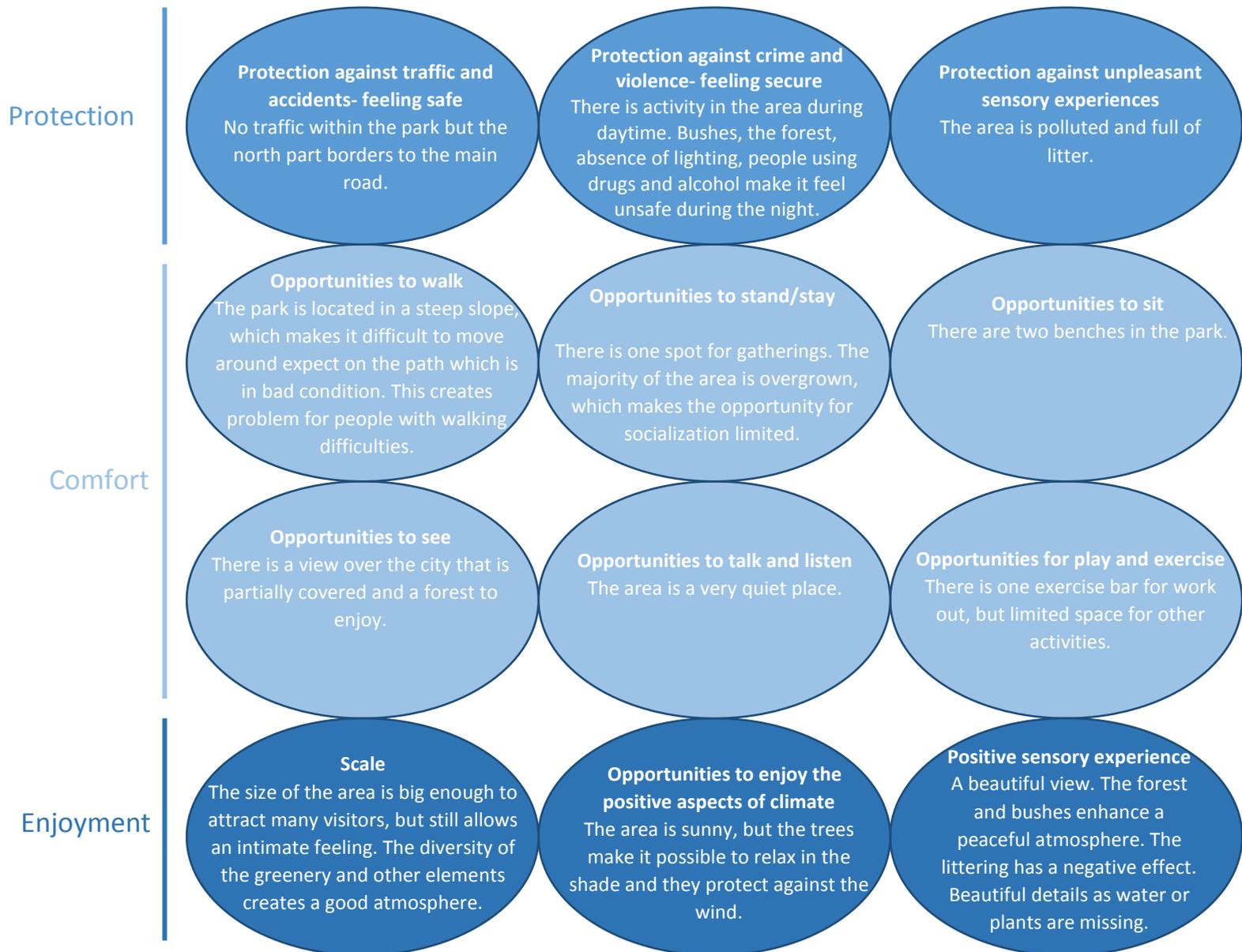


Figure 1: A Gehl analysis over the park

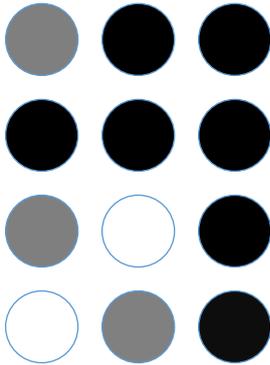


Figure 2. Result of the Gehl analysis of the park.

Figure 2 shows the result of a Gehl analysis of the park. The park is evaluated by the quality criteria. When a statement is considered fulfilled it is marked white and when it is considered not fulfilled it is marked black. Grey means that the criterion is partly achieved.

### **Minecraft workshop**

The workshop was held for three days from February 17<sup>th</sup> to 20<sup>th</sup> in 2015. It was arranged by CIUD together with UN-Habitat, Mojang AB and Kirtipur municipality. 30 youths; 9 girls and 21 boys, attended the workshop.

#### **Presentation day**

The first day of the workshop was a presentation day where the Minecraft participants, Kirtipur's citizens and especially the women's group were invited. Speeches and presentations were held by represents from the involved organizations. The goal with the presentations was to give background information about the Block by Block project, about Minecraft and about other projects that have been completed around the world. A main focus was on public space, where they analyzed and discussed the questions: What is a public space and why is it of such importance to a city? Representatives from UN-Habitat gave their inputs on what to think about when developing successful public spaces. There was also a guided tour around the completed pond project and around the green area that is subject to development.

#### **Minecraft modeling**

Day 2, 3 and 4 of the workshop were dedicated to the Minecraft modeling where the goal was for the participants to present their ideas for the park. Attending stakeholders were CIUD, UN-Habitat and a Minecraft expert: a consultant working for UN in the Block by Block projects.

The participants filled out a form where they answered questions on living conditions, number of smartphones in their family, whether they study etc. A representative from CIUD shared examples on what activities that can be done in a park and in this specific green area. The examples included a coffee shop with free Internet, a meeting hall, railing the stairs and a running track. He showed a map of the green area with different zones of activities and some inspiration pictures of a playground. The Minecraft expert also gave an introduction on how

Minecraft works and what can be done in the game and how to overcome certain obstacles. For example, he said that since there are no bells to use in Minecraft you could put up a box with a sign saying “bell” instead. He also asked the participants what they like with the current park and what they dislike. The answers to what they did like were:

-Silence, trees, open space, peace, cleaner than it used to be, stairs, training bars for exercise, environment, freedom, location and greenery.

What came up when they were asked what they dislike with the park was:

-Toilets, dirt, garbage, poor management, steep, waste and pollution.

The Minecraft expert encouraged the youths to try to be imaginative and creative when designing the space and he highlighted that there are no bad ideas. The youths were then divided randomly into ten groups, with three participants in each, where the groups were supplied with one or two computers or they used their own. Afterwards he showed the basic model in Minecraft, which is a reconstruction of the current green area. Then the participants were free to work with their design and the Minecraft expert answered questions and gave technical support. Picture 18 and 19 are photos of the participants working in Minecraft. When the groups were finished with their models they started working on a PowerPoint to present their ideas.



Picture 18: One group working in Minecraft.

The final day was dedicated to group presentations where all the groups shared their ideas and showed print screens from their Minecraft design. Besides from CIUD and UN-Habitat, both men and women from Kirtipur were invited to listen to the presentations, but just a few men showed up. The women's group from the first day was specially invited. After the presentations were held the audience and participants stayed to discuss their ideas further and the adults got the opportunity to give their inputs.



Picture 19: Second day of the workshop.

### Next step

After the presentations of the designs, the next step was to put together the different models into one final proposal. It was up to the Minecraft expert to choose what should be included in the park, which was based on the most popular ideas and also on the budget. The thought was to take his proposal back to the community, in order for them to come with inputs on what was good and what they wanted to change. After that, the architect was supposed to make technical adjustments to the final design. However, when the community had a meeting together with CIUD about the final design, they did not have the Minecraft design from the Minecraft expert to discuss. Instead, they discussed the ideas based on the PowerPoint presentations from the group's Minecraft models.

### **Interviews with the participants in the workshop**

To further analyze the participants' thoughts about the concept, they were interviewed in small groups, girls and boys divided. Picture 20 shows a photo of a group of boys being interviewed. The questions were slightly changed according to whether they were girls or boys. The interviews started with questions about the pond and the courtyard project, what they thought about it and whether they were involved in the decision making process. However, not much focus was put on that project, since Minecraft was not used. Next

questions were about the green area they are revitalizing and what their visions are. The key questions were about Minecraft as an urban planning tool and the involvement of citizens in these kinds of projects. A summary of each interview is presented below. Every comment is from participants and some alterations have been made to make the message clearer. The women participating in the workshop were also interviewed and since we were unable to communicate in the same language, one of the women's daughters translated.

### Interviews with the boys

#### *The pond and the courtyard project*

The main purpose of the pond is for firefighting, but the most common activity in the area is washing clothes and vegetables as well as using the space for cultural events. They explained that it is mainly women who use it for something productive like washing clothes. In that sense, they think women have more use of the space because men do not use it for anything productively. The boys did not spend time in that area before and they do not do it now either. The biggest problem before was the polluted water because it served as an important water source.

None of the boys were involved in the planning of the project, but if they would have been involved, they would like to add benches, lighting and flowers to make the place more pleasant. The safety was something that everyone commented. The walls around the pond were not high enough before, so that was an important change according to all of the interviewees.

They are very satisfied with the result and do not want to change anything. To keep the place clean and maintained and stop people from littering they thought the community should participate. They think the responsibility should be on the community and community groups but the municipality should stand for the funding of cleaning tools etc.

#### *The park*

A minority of the boys uses the green area today as a hangout spot, and the rest do not use it at all. They do not want to, because of its bad condition. No one is maintaining it and people use it as a dumping ground instead. Their vision is to transform it into a clean and beautiful park with seating and greenery. One group suggested using a part of the park as a parking lot for the increasing number of cars. They do not feel safe in the park now because of the lack of lighting and all the bushes make it unpleasant.

The elements they want to have when they improve the park are:

- A place where both girls and boys can hangout
- Playground
- Football, basketball and tennis court
- Jogging and cycling path
- Relaxing place

- Fire place

One group commented that the expectations are low because of previously experiences in Nepal. Not many projects are implemented and the planning is ineffective.

Because the littering is such a big problem in the park the interviewees were asked if they had any suggestions on how it could stop. One group suggested having a campaign to teach people the negative effects with littering. They also thought that big signs should be put up that say: Don't litter. As for the pond, they also thought public awareness is a solution. Teach people about the importance of preserving the culture and places. Also to fine people who are littering and put up dustbins all over the place.

They were asked if they have any better suggestions on how to present their ideas if not by using Minecraft. They all thought that Minecraft is the best method, but group and community meetings would be a good alternative, because that bring people together and let them talk face to face.

### *Minecraft*

For the Minecraft questions, the participants got to answer whether they thought Minecraft was a good or a bad tool for designing the park. Everyone thought it was a good tool because it was easy to transform the ideas to actual designs. There are no boundaries in the sense that you can build almost everything with square boxes if you have some imagination. It gives a realistic suggestion, bearing in mind that the participants are not urban planners or architects. The visualization gives an idea on what would work in practice, even though it is complicated to design everything with square boxes. Sometimes they wanted to be able to cut the cubes into different sizes and shapes, making circles and drawing by hand.

They felt that some building parts were missing. It would be easier for them if they had a library with elements that could be used in a park. Those elements could be water and common furniture such as a benches and chairs. As an example, one group wanted to put up a donation box, but because there was nothing similar to it, they had to put up a speaker with a sign saying it was a donation box. The challenging part for them was that the area is steep. It is also very time consuming to build a large area with those small boxes.

Combining Minecraft with other methods was something they did not feel was necessary. To get a sense on the gender perspective in using Minecraft and the aspect that it is easier to get boys to participate than girls, the boys got asked how to attract more girls in these projects. They thought the problem was that girls do not play computer games hence they are not interested. The lack of technological skills, and the fact that they probably do not know what about Minecraft, was also a comment from the groups. It is important to show them that it is not hard to use Minecraft, how it can be used and the positive effect about the game. Another comment was that it is a generation problem and that it is hard to predict how long time it takes be until girls play computer games.

Another way of involving people, that are not used computers, is for the participants to work together with their families. One group did not like the idea, because they did not think the family members would be interested. The other two groups thought the idea was good because they have knowledge and experiences different from the youths, which would be smart to combine with the youths' ideas. One participant had used Minecraft for building together with his family the day before and they liked the concept.

Working in groups as they did, was appreciated and they also thought it was optimal to work in groups of three. To improve the dynamic there should have been more discussions among other groups so the participants could hear everyone's ideas before presenting.



Picture 20: Interview with the boys.

### *Involvement*

Even though it can seem obvious that citizen participation has positives effects to the use of the park, it was interesting to see if the interviewees were of the same opinion. They got to explain if they thought the park would be used more when they have been involved in the planning. Everyone agreed that they would probably use the park more, when they got to design it. It is a bigger chance that the park is being preserved, when the project is community based. Instead of littering and destroying, the people will try to protect the area because it is “their” park.

Another important part of citizen participation is the trust they have in UN-Habitat and CIUD to actually go through with their suggestions. Do they feel they are being taken seriously? They understand that everything might not be possible to implement, but they believe that CIUD and UN-Habitat will do everything in their power to use the youth's ideas. One thing that makes them trustworthy is the fact that they have constructed the pond project successfully.

The first day of the workshop, all stakeholders held a presentation explaining for example the current situation in Kirtipur and suggestions of activities in the park. The suggestions can influence what the participants later will design. The question is if that is a positive or a negative? According to the boys, it made them start thinking and creating ideas. It was hard for them to begin to think about how to change the park, when they did not have ideas to work with in the beginning.

Interviews with the girls

#### *The pond and the courtyard project*

Before the pond was revitalized the girls used it for traditional activities like worshipping their gods in the mornings and used the water from it. They were not involved in the improvement of the area. The girls overall expression is that they are happy with the result, even though they miss the old design of the pond, when the water could be seen from a distance and was not covered by a wall. In order to feel safer in the pond, they wish that there would be more lighting.

Today they use it in the same way and they feel that the square is as useful to women as it is for men. They expressed that the problem with littering had to do with the lack of rubbish bins and due to that, people throw their litter in the pond. For the area to stay clean and well maintained it should be up to the citizens to keep it clean and that it is needed to remind people that this square have been restored and it is important that it stays clean.

#### *The park*

Unfortunately the girls feel unsafe going to the park because of the people taking drugs there and also because of the unsafe environment with a lot of bushes and trees. They mostly use the waterspouts located in the area and the pathway in the park to get to the main road. Sometimes they go there with their families for picnics. To make the area safer they suggested that the park should be supplied with security cameras and surrounded by a fence with a gate that would be locked at night.

However, they explained that the major issue with the area is the littering problem. A suggestion they have is that one member in each family, preferably the woman, should be educated in solid waste management. This could be a step in developing the waste management in Kirtipur. When the park has been renovated they would like to be able to play games, sports, dance and spend time with friends there. They also wish that the new park will have a Pati, green space and a forest.

### *Minecraft*

The girls' overall opinion about Minecraft as a planning tool is very positive. They felt like they easily can visualize their ideas and they felt comfortable using the program and that it was good to work in groups of three. They think that Minecraft is a good way of involving youths, but not as good for elderly. Some of the females experienced some technical difficulties, for example installation problems and no undo button. They responded positively to the question whether they think that working together with their families in Minecraft would be good. Since the older generation knows more about the area's history and the cultural values, they could communicate that to the youths, who would take that into account in their models.

In order to get more girls interested in participating in these workshops, they suggested that it would be a good idea to form groups with only girls. They said that since they are often more shy, this could be a good way of making them want to express their ideas. The girls said that they think that all social groups should be represented in the workshop because everyone wants to be part of the development. They are positive about UN coming to Nepal to start these kind of projects because UN have good ideas and methods to get the citizens more interested and involved.

### *Involvement*

The girls believe that the area will be used more, once it has been developed, even though they do not have much hope that all ideas will be implemented because of funding limitations. They feel like CIUD and UN listened to them, but they also think it is important that the local government is onboard to make the project happen. When asked if their design were influenced by the presentations and ideas from UN or CIUD they said that they only got inspired in a good way. They also feel that it is very important with citizens' involvement because it makes the citizens really see the pond or the park as their own area and that they need to take good care of it because of that.

### *Focus female*

The girls felt like Minecraft works equally well for male and female. Even though they enjoyed it much, they felt like the boys might have an advantage because they have more IT skills. They think women's participation will result in more focus on decorations, such as flowers and the garden, as well as on the waterspouts. The girls got an impression that they thought more about the community and focused more on everyone's needs.

They also said that they consider safety more than men do. Because they feel unsafe walking alone in the park, it was important for them to take this into account and come up with solutions, such as adding more lighting. When asked if there is another method that would work better than Minecraft to explain their ideas, they suggested that it might be good to have group meetings where they could discuss and share ideas before using Minecraft.

### Interview with the women in Kirtipur

The women discussed our questions among them a lot but unfortunately we noticed that everything was not translated. The interpreter did a good job but it was hard for her to translate everything. We thought that we were going to get more information from this interview but because of the working condition, the answers are short. Picture 21 shows a photo of the women.



Picture 21: The women's group and us (Maharjan, 2015).

### *The pond and the courtyard project*

Before the renovation, the women used the pond for doing their laundry but because of the bad condition they did not want to be there. CIUD that was responsible for this project got the citizens' ideas during public meetings and the women did not feel like they wanted to have a separate talk only for women. Now they spend a lot of time at the pond and have women's group meetings in the courtyard.

### *The park*

Today the women are cleaning the area during the cleaning campaign every Saturday and worshipping Lord Shiva in the temple. They want to have a decorated garden in the park with a picnic spot and a Pati. They also specified that they wanted CIUD to solve the problem with the scarce water. As for the safety in the park at the moment, it is not good at all according to

the women. They feel unsafe because of the younger people smoking, drinking and taking drugs in the park. There should be strict rules and regulations implemented and also light in the whole area. In order to stop the littering, they were of the opinion that people need to take care of their waste material at home, use the organics as fertilizers and take care of the plastics. They had training that taught them how to reuse plastic but they do not have knowledge how to manage glass and metal.

### *Minecraft*

First the women thought that Minecraft was only a source of entertainment and they did not imagine that the young people could create such design, which they saw. They were very impressed. When asked if they wanted to participate in the workshop they answered that they would like to present their own ideas and merge the ideas with the young people's models. One thing that they would like to add to the youths' models is water sources and their need to be utilized properly. If they did not use Minecraft for presenting their ideas they would like to use the clubs and the women's groups for this. They would like to have group discussions with both older and younger people and also together with the municipality and other organizations. Meetings, where everyone who wants to participate can come and discuss.

### **Interviews with the Block by Block stakeholders**

The following interviews are conducted with stakeholders and experts in this particular Block by Block project. In order to get a broad view about the Minecraft project we interview representatives from UN-habitat, both from Nepal and from the head quarter in Nairobi who came to Nepal to attend the project. We also interviewed the program manager for the project from CIUD as well as the architect responsible for the final design. Also representatives from Mojang AB attended the workshop and we got the opportunity to interview the Director of fun, the woman in charge for their cooperation with UN-habitat. Finally we interviewed the Minecraft expert in order to get his view on the workshop. Through our interview the aim was to learn about their different views on the workshop, on using Minecraft, and their future visions with Minecraft. We also wanted to find out what they think are the strengths and weaknesses with the Minecraft method and what they think need to be developed.

#### Interview UN-Habitat Nairobi 1

(2015-02-19, 2 p.m.)

**Name:** Cecilia Andersson

**Profession:** Manager of public space

Andersson is very positive about using Minecraft because it is a tool that everyone can use, not only youths and it is good to be able to model in 3D. She is also positive about the fact that the community can get involved in the decision making and that the workshops always start interesting discussions among the community. She thinks it should be mandatory to have equal amount of girls and boys in the workshop and they should be mixed in the groups. Girls think more about safety and practical things, such as toilets. Even though the girls are a bit reluctant at first, Andersson thinks they enjoy the game because there is no fighting. She says that an idea

they have is also to let different age groups work in Minecraft, although one problem could be that the youths are shy to express their ideas to the elderly. Andersson does not see anything negative about using Minecraft, except the challenge to make the planners understand how useful the tool is.

We asked Andersson whether they have reflected about the fact that they may affect the youth's ideas by giving examples on design ideas in their presentations. She answered that they only wanted to start their creativity and what could be done in the park, but she says that they have to take this risk into account the next time. When it comes to making the designs adjusted to people with disabilities, Andersson believes that it will be highlighted by the youths anyway. She also thinks it would be a good idea to work with people with disabilities and letting them express their needs in public spaces in order to make sure that there needs are taken into account. When asked what she thinks that Minecraft contributes with compared to other methods, she says that the major factor is how it engages different groups and that it shortens the planning process. You can work faster with visual designing and if you do not use Minecraft there would be more meetings and consultants involved which would take more time.

#### Interview UN-Habitat Nairobi 2

(2015-02-20, 4 p.m.)

**Name:** Pontus Westerberg

**Profession:** Project Manager. UN-Habitat Nairobi.

Westerberg thinks that Minecraft is a successful way of moving the power from those who traditionally have the power in the society; the experts. He says that the advantage of Minecraft is that the people they work with can express themselves freely using something that they understand. Maybe you can express yourself by using AutoCAD, but those programs take years to learn, whereas you can learn Minecraft in just a couple of hours. Westerberg thinks it is important that the participants get background knowledge about urban planning before the model building. At least some briefing or budget frames, so that the expectations do not get too high.

When asked how women and possibly elderly can get more involved Westerberg answered that UN-Habitat is always pointing out that they want 50 % women in the workshop, but they need to push a little harder when it comes to gender balance. Westerberg says that they also have to put more focus on the poorest people, by informing that they are not looking for people with IT-skills, but instead for a representative selection of people living or working around the area. Westerberg thinks that is one of the biggest challenges with Minecraft, to incorporate the very poor people. Westerberg explained that UN-habitat has four mainstream issues that should be taken into account in all of their projects. These are the human rights, gender, youths and climate changes. The rights for people with disabilities fit in under human rights, but the focus has mostly been on youths and gender.

Another challenge, according to Westerberg, is the limitation that the cubes come in the size of 1x1 meter. An idea would be to develop an urban planning library in Minecraft to make the modeling easier, but Westerberg points out the importance of using the original game and not to make alterations to it. If they would make a special plugin with urban planning elements, the next person who does not have this plugin will not be able to see the actual model. When asked about UN-Habitat's visions for the future of Minecraft, Westerberg explains that a goal with Block by Block is also to encourage the municipality to develop their law frames and include an environmental policy. A future plan is also to engage more people in the Minecraft community obtain more communication within the Minecraft world and maybe even built whole cities in Minecraft.

Interview UN-Habitat Nepal

(2015-03-03, 3 p.m.)

**Time:** 15.00-16.30

**Name:** Padma Sundar Joshi

**Profession:** Program Manager. UN-Habitat Nepal

Padma thinks that Minecraft is a very good designing tool because of the way “common people” can express their thoughts, without taking for example elevation and slope into account. He was also very positive about how the Minecraft workshop started a bid discussion among the community. He said that there are some limitation that could be improved in the future, for example that the steep elevation could not be shown in Minecraft and the youths then come up with ideas that cannot be implemented. This could give them false hopes with their expectations raised.

When asked what he thinks about the idea of presenting the budget frame in the introduction Padma answered that it might limit the people's creativity, so he thinks that it is probably a good idea to exclude to budget in the workshop. Padma said that it was not on purpose not to bring all social groups to the workshop but it is difficult because they have to be computer literate to be able to join in the designing. When taking disabled people into account, Padma said that no plan will be perfect for all people and that the community is not that developed to include experts who know what people with disabilities need, in the process. He said that instead they have to do the best with what they have. Padma did not think that the people who were not included in the workshop because of lack of IT skills would feel excluded.

Interview Astra Development Network

(2015-04-06, 3 p.m)

**Name:** Sangeeta Singh

**Profession:** Architect, Astra Development Network

Singh was a little bit skeptics to Minecraft at first because she did not think that young people would come up with good ideas. Instead they come up with interesting ideas that architects might not have considered otherwise. She thinks that the creativity shown in Minecraft is something that cannot be explained just by using pen and paper or by talking to them in a meeting. For example the youths suggested a music area and rock-climbing wall that the

architects have not thought about. She also said that she thinks Minecraft made the youths motivated and interested in urban planning and that it made the youths and women interact within the community. She said that through Minecraft you can change the urban planning method; instead of letting the architects come up with proposals that the community give input to you can go the other way around and show the area to the community and say: do what you want with it.

As an architect Singh takes the Minecraft model and makes some technical adjustments, for example they had to adjust the ideas to the slope and they also added some beautification. If they were to use Minecraft again Singh would still only want to include the youths in the designing and let the rest of the community give their input in meetings. Next time she would like the community to give their inputs earlier in the process so that the youths can include them in the designs.

#### Interview Mojang

(2015-02-20, 1 p.m.)

**Name:** Lydia Winters

**Profession:** Brand gatekeeper and Director of fun

Winters thinks Minecraft is a great urban planning tool because it provides a visualization of the space without needing to look at a drawing and you do not need any other prior knowledge. She thinks a challenge is that the game is taken to places where some of the people have never used a computer before, so a problem is to make sure that people of various ages feel like this is something they can do.

When asked if Mojang have any plans on developing Minecraft in order for it to be used exclusively as an urban planning tool Winters answers that they do not want to do that. She points out that the essence of the game and the power of its simplicity would be lost if changes are made to it and the youths would maybe not want to use it if it is a “weird” version. She says that if they would develop a library with furniture for example and the participants would have to pick between five different benches they would start thinking too much on details and expecting that the final result will look exactly like their models. Winters says that she is blown away by this particular project, by the people in the community and how involved both the youths and the women are. Mojang is very positive about being part of the Block by Block project and they hope that they will do many more projects.

#### Interview Minecraft expert

(2015-02-18, 6.p.m.)

**Name:** Eugenio Gastellum Pons

**Profession:** Consultant Minecraft expert

It was the first time for the majority of participants to play Minecraft during the workshop. To solve technical aspects and help the youths with Minecraft, Eugenio Gastellum Pons who is working for UN-Habitat as a Minecraft expert was present during the whole workshop. UN-

Habitat has had an expert helping the participants on all workshops in their Block by Block project. Pons was interviewed so he could share his thought about this concept.

He works as an IT consultant and does not have any urban planning skills from before. He has been involved in two other Block by Block projects with UN-Habitat. According to Pons, Minecraft is a good tool for designing public spaces because it gives people a better sense on the room they are working in. They do not understand architectural plans that are shown otherwise, to explain the development. Visualizations in 3D are much easier to comprehend. It is the best tool so far to include youngsters, says Pons. It is just a matter of time to involve more women and girls. They are getting more and more involved and interested.

Pons walks around among the groups talking and advising them. He asks questions that make them think and reflect about their impact and if they are including everyone's needs. He is not interfering with their models because it is important that it is the youth's ideas to a 100 %. For example he likes how the participants had the idea that a basketball court also can be used for Badminton.

The youths got two days to design their models and then presented them on the third day. The question is if it is enough time to get usable models. Pons definitely thinks that one day of practice is enough for learning and experimenting in Minecraft in a satisfying way and one day for constructing

Interview CIUD

(2015-03-03, 10 a.m.)

**Name:** Yogesh Shakya

**Profession:** Program Manager

Shakya says that the good part, to his surprise, was the integration and participation from the youths. There would be no other tool that would make youths stay and discuss parks and such things. He says that they tried earlier with meetings and orientations but that it was tough to bring in youths and use their minds in something creative like with Minecraft. Shakya says that there are not any bad things with Minecraft, but a challenging part is that there could be another tool except for this IT tool that lets women be more expressive and creative. Since women are illiterate or semi illiterate he says that they are not good at using computers and technological things, Minecraft is lacking in this area. Shakya also says that whenever they have workshops they try to invite women's groups, youths, elderly, advisory committees and all different parts.

When asked what society groups the participants are from Shakya explained that the majority of people in Kirtipur are lower middle class and that there are no rich people in Kirtipur. The citizens have an old house, they do not have their parents, and they have some piece of land in some part of the town. They are in some way financial secure but not economic vibrant. When asked whether he thinks it is less time consuming to use Minecraft compared to other methods he says; "Yes, a lot". He says that through a regular meeting it is difficult to document ideas,

but Minecraft is a tool that gives a clear picture of the ideas and how it would look like. For next work shop, Shakya thinks that they have to work more on the participation and that they have to involve poor people, people with disabilities and women. Finally he thinks it would be better if the designing lasted for more days.

#### Interview with stakeholders- conclusions

In conclusion all the stakeholders were positive towards the Minecraft method. They were excited about the fact that it lets non planners get involved in the decision making and how it brings the community together. Westerberg from UN-habitat Nairobi points out that it is an advantage that the users can express them self freely by something they understand. The architect Singh was surprised with how good ideas the participants came up with and she liked that it Minecraft has the ability to shorten the planning process. Shakya from CIUD was the most impressed by the interest and involvement by the youths. He said that they have tried to incorporate them before in the planning process, but they have not found a way to get their interests.

When asked what they think is the weakness with Minecraft and what could be improved with the Minecraft they all agreed that it needs to be a gender balance with more girls involved. The stakeholders disagreed on whether to include a budget frame for the participants. Westerberg said that it would give the participants realistic expectations, whilst Joshi from UN-habitat Nairobi said it would limit their imagination. To the question whether Minecraft should develop a library with “park tools” or adding an “undo-button” Winters from Mojang pointed out that the beauty of Minecraft is its simplicity and that it is important not to focus too much details.

#### Questionnaire

The participants got to answer questions regarding Minecraft and the workshop during the second day of the workshop. They were familiar with Minecraft at that point, after working with their models for almost two days. They were asked 13 questions related to our study. They could answer the questions from a range of 1-5, 1 if they disagreed and 5 if they fully agreed. The questions cover whether they have previous experience of Minecraft and how satisfied the participants are with the workshop and their group constellation. Focus is also on how they think Minecraft works as an urban planning tool and whether they feel they can transfer their visions into a Minecraft model. Below are the questions. The figures that show the result of each question can be seen in appendix A. Table 1 presents the mean values of how well the males and females agreed on the 13 questionnaire statements.

- a) I am an experienced user of Minecraft
- b) Minecraft is a good tool for designing public spaces.
- c) I can transfer my vision about the green space easily into a model in Minecraft.
- d) You need computer skills to be able to use Minecraft.
- e) The workshop gave me enough skills to use Minecraft in a satisfying way.
- f) It is good working in groups when using Minecraft.

- g) I felt like my ideas and thoughts were taken into account by the rest of the group.
- h) Every group member got equal amount of time in front of the computer/ being in charge of the key board.
- i) I got enough help from the Minecraft expert.
- j) I enjoyed the workshop.
- k) I enjoyed building in Minecraft.
- l) We got enough time to design our model.
- m) The cooperation within the group went well.

#### Result questionnaire – mean values

	<b>Female</b>	<b>Male</b>
a) I am an experienced user of Minecraft	1,9	2,5
b) Minecraft is a good tool for designing public spaces.	4,3	4,3
c) I can transfer my vision about the green space easily into a model in Minecraft.	4,0	4,1
d) You need computer skills to be able to use Minecraft.	4,6	3,3
e) The workshop gave me enough skills to use Minecraft in a satisfying way.	3,9	4,3
f) It is good working in groups when using Minecraft.	4,3	4,4
g) I felt like my ideas and thoughts were taken into account by the rest of the group.	3,8	3,9
h) Every group member got equal amount of time in front of the computer/ being in charge of the key board.	3,3	3,5
i) I got enough help from the Minecraft expert.	4,2	4,5
j) I enjoyed the workshop.	4,3	4,5
k) I enjoyed building in Minecraft.	4,0	4,5
l) We got enough time to design our model.	3,8	3,6
m) The cooperation within the group went well.	4,2	4,3

Table 1: Mean values of how well the males and females agreed on the 13 questionnaire statements.

#### Result questionnaire

Overall both males and females were very positive to use Minecraft as an urban planning tool, where the females responded with an average of 4.3 and the males with 4.2 out of 5. Both groups enjoyed the workshop as well as working in Minecraft and they thought they could

transfer their visions for the green area into Minecraft in a satisfying way. The questionnaire shows that the participants were not familiar with Minecraft before the workshop, something that the females thought was necessary, whereas the males responded that it was not as necessary. When asked if they thought they got enough skills in the workshop to use Minecraft in a satisfying way both groups responded positive, although the males were a little more positive (4.2 compared to 3.9).

When it comes to their reflections regarding the teamwork the males and females were almost equally positive (>4) about the method to work in a group and they thought the cooperation within the group went very well. The average result of whether they thought their ideas were taken into account by the rest of the group was a little lower; 3.8 for women and 3.9 for men. The result was also lower on the question whether every group member got equal amount of time in charge of the computer; 3.3 for women and 3.5 for men.

### **Minecraft models- result**

All the ten groups held a PowerPoint presentation where they presented their ideas by showing screenshots from their Minecraft model. See example of the Minecraft models in picture 22 and 23.

Their results showed that most groups tried to take all the different groups in the community in consideration. They built up the park in a creative way and included attractions such as sport areas, jogging tracks, picnic areas and an outside theatre. They had the children in mind by building children areas for children to play in. They also thought about the women by including an area for meetings where the women can get together and also by restoring the waterspout for women to wash their clothes by. Their models also included elements for decorations such as flowers and gardens. Most groups also thought about safety with lighting, a guard and railing for the steep steps as well as sanitary facilities such as public toilets and water taps. There were also ideas of having commercial activities in the park where some groups wanted a shop or library. Below are some examples of the ideas that were presented at the presentation.



Picture 22: Minecraft model from the workshop (Maharjan, Rajbhandari and Singh, 2015).



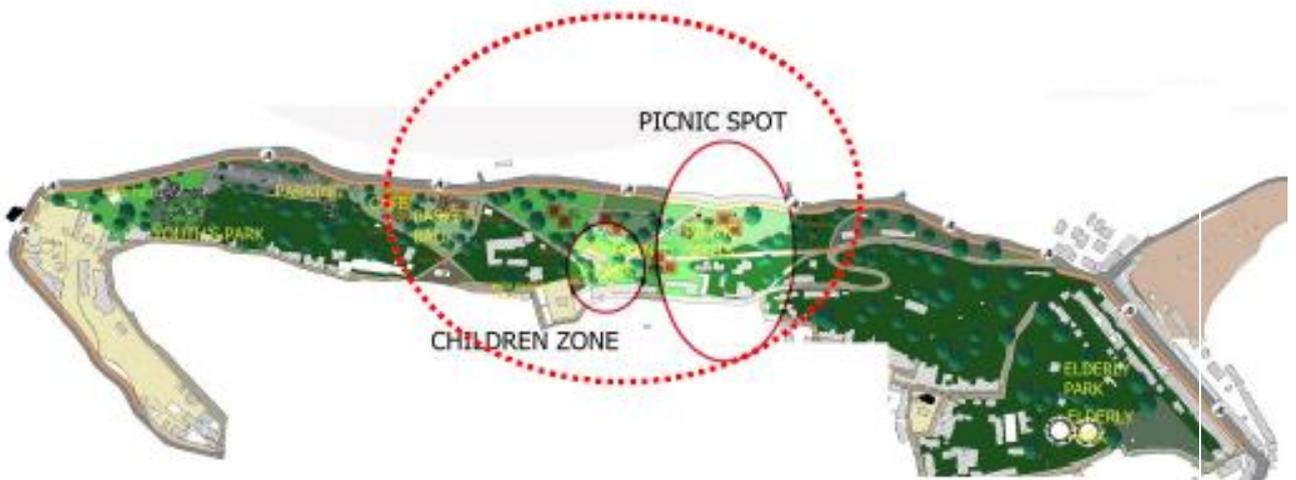
Picture 23: Minecraft model from the workshop (Maharjan, Rajbhandari and Singh, 2015).

## Final proposal

The architect came up with a final proposal for the whole green area. The proposal was made according to the Minecraft-models and by inputs from the community and the local government. Picture 24 below shows a proposal for the three zones and the second map in picture 25 shows a proposal for phase 1, the case study area. It is decided that the green area will be divided into different activity areas. The map shows that the park area in this project will be designated for a picnic-spot and a children's zone. The area of phase 1 does also include parts of the forest and the aim is to make it a friendly place so that it can be used for recreation and for people to enjoy. The proposal also focuses on incorporating decorations and details, such as flowers and plants. Picture 30 and 31 below are illustrations of the picnic and children area.



Picture 24: Final proposal for the park (CIUD, 2015).



Picture 25: Final proposal for phase 1 (CIUD, 2015).

## **6. Analysis**

The main goal with the Block by Block project is to involve youths in planning processes by giving them a more vital role in the society. We see this approach as something very positive because the youths are the future users of the public spaces. As seen in Nepal, the modernization has affected the country greatly, which is something that not all people have adjusted to.

It is inevitable to notice from our time in Nepal that the young generation has a different view on traditions and religion. That was a recurrent fear from the elderly in the workshop, that the adolescents would neglect that in their designs. The youths still see traditions and religion as a vital part in their lives but might have a different approach to it. It does not mean that the young people will forget or ignore that aspect, rather that they probably have more modern solutions.

### **Citizen participation**

We could see from the interviews with the citizens that they were convinced that the park will be used more when they are involved in the decision making. They know what elements and what designs are needed in the public space and therefore it will be more visited. We think it is even more important in low-income countries where public spaces have a more important meaning and use compared to high-income countries. As stated before, the public spaces in Kirtipur are used as living rooms since they do not have the space to socialize and limited access to water at home. As the females commented; the importance of the citizens' involvement is that the inhabitants see the place as their own area and that it strengthens their will to take care of it. This is important because of the littering issue in Nepal.

There are also many more vital aspects around citizen participation and not just the physical designing. The fact that people from different social groups get to meet and discuss these matters, people that might have prejudices against each other was very successful. It is more likely that the community gets stronger and grows with this approach compared to avoiding one and another. However, this was not the method in Kirtipur because everyone involved knew each other in some way and came from the same social class. That was something we saw as a negative thing and will be discussed later. A positive result from the workshop was the interaction between the different age and participant groups. The male and female community members, the municipality and CIUD had interesting discussions with the youths about visions and the result of the park.

Another positive matter that is important for successful citizen participation is the dedication from CIUD. They even spend their only free day cleaning with the people in Kirtipur every Saturday. If the organization and municipality show interest in the locals we think the involvement of the citizens will spread. When something receives positive attention and

respond, like the citizens' motivation to develop public spaces in Kirtipur, it is likely that more people will get involved. We saw the positive enthusiasm when different groups and stakeholders collaborated in Kirtipur, which we think is one of the reasons behind the strong community in the city.

## **Preparations**

The stakeholders in the project UN-Habitat Nairobi and Nepal, the municipality, CUID and the architect held presentations the first day of the workshop regarding development in Nepal, Kirtipur and of public spaces. Representatives from UN-Habitat Nairobi talked about how to develop successful public spaces and what kind of elements are suitable in a park. Their intention was to inspire the adolescents and make them start thinking about the designs.

We asked the youths if they thought it was a good thing that they gave examples. The participants answered that it would have been hard for them to come up with ideas in the beginning otherwise, so the responds were positive. Although, something we thought about when UN-Habitat gave suggestions was how easily one can steer someone's mind with simple suggestions. As an example, UN mentioned a slide for the children in the park and intuitively it is a high risk that the participants design a slide even though it might not be the optimal element for children to play with in Kirtipur.

UN-Habitat had not thought about this when preparing the presentations and said it was more of a way of making them start thinking. It is a very complex thing to know exactly how to inspire in the best way, especially without physiological knowledge. We just want to point out that it is something worth thinking about, what to include in the presentations and what impression they want to leave behind.

The project Block by Block focuses on involving adolescents and highlighting the importance for them to use their free imagination. Except for the influence from the presentation, we talked about introducing guidelines to the youths before they start working in Minecraft. We talked to Joshi and Westerberg about whether to present the budget to the participants or not. Joshi thought it would limit their creativity and that it should be left out from the workshop. Westerberg on the other hand thought it is necessary for them to get an idea on what is possible to implement or not. In this way, the proposals get realistic and no time is wasted.

What we saw from the study was that the youths had realistic designs even though they did not get any guidelines beforehand, like budget and sizes of elements. Of course it would be a good thing to point out that a flying museum and similar designs should be left out, but otherwise we agree on the focus to keep their imagination as free as possible. Later, it is up to the planners and architects to figure out what is implementable or not.

We understood from some stakeholders that the models designed in Minecraft are just a way to show what is needed in a place and do not necessarily have to be the exact design implemented. This is where the professional people play their role in the Block by Block project, i.e. getting all the technical aspects into a real and working design. Winters from

Mojang points out an important function behind Minecraft. It is not meant for the participants to be able to do exact designs because they should not spend time on details. Minecraft is a tool to show the broader picture of what elements are needed in the area. That is why we think it is vital to keep the imaginations as free as possible.

One thing worth thinking about when using Minecraft as an urban planning tool is that some people might trust planners and architects more than letting the citizens do the designing. The Minecraft method is based on the principal that the citizens are trusted to know best what physical designs are suitable for their needs. Some stakeholders pointed out that the architects are supposed to make as few alterations as possible.

What we learned from our study is that another successful approach is to take into account the fact that the citizens are not planners and therefore the designing should be left to professional architects. The important input from the citizens is instead their experiences from the space. What do they like and dislike about the space today and what feelings do they wish the space to bring when it is developed? In that way it is up to the architects to translate the citizens' thoughts, wishes and feelings into physical designs where their needs are fulfilled. In order to know what you want from the developed area and to know what you like and dislike about the existing area, you have to be familiar with it.

As Vindelman from Architects Without Borders pointed out in text box 2, a way to achieve that is for the citizens to conduct their own inventory of the place. The youths mainly look at the existing park as a dumping site. If they were to do a proper inventory they could get a chance to look at the park with new eyes, where they might discover parts or qualities about it that they actually like.

## **Minecraft**

The result from the questionnaire shows that even though almost none of the participants had experience of Minecraft before the workshop, the majority of them felt like they could use Minecraft in a satisfying way. They felt that they learned enough and had enough time to create a model that showed their visions of the new park. This shows that the object of using Minecraft; that it lets non-planners visualize their ideas without access to complicated planning programs, is fulfilled.

Another positive aspect of the Minecraft workshop, that we noticed, was how much the participants seemed to enjoy themselves. It was impressive to see how the youths were so concentrated and really tried hard to come up with good models. Our interviews, questionnaire and our own observations during the workshop indicate that Minecraft achieves its purpose of being a simple planning tool that includes youths in the planning process. The main strength is that it attracts youths to get involved in the planning process in an innovative, fun and effective way.

The participants worked in groups of 3-4 participants each and the Minecraft expert randomly chose the participants. We think that it is important to focus more on how the groups are put

together in order to get a group constellation that includes thoughts and ideas representative for the citizens of Kirtipur. Therefore the groups should consist of equal amount of boys and girls and of people from different society groups. From the form that the participants filled out, we could see that they were either university students or working within the service sector. Since they might have different views on what is important to include in a park and what it should be used for, the groups should be mixed according to this, which is something that was not taken into account. We also think that another important aspect of mixing the groups with both boys and girls is to increase interaction between them, which is limited in countries like Nepal. To enhance the girls' involvement in the society, this is a good way to start and to obtain a stronger self-confidence to talk in front of boys and in public. This again shows the importance of activities around Minecraft and within the workshop.

The participants mentioned during the interviews that one way to improve the Minecraft method is to combine it with an initial group meeting where the purpose would be to brainstorm and discuss different ideas. We got the feeling that especially the girls felt that it was a bit difficult to be creative in Minecraft directly. A way to improve the method is to include some sort of activity to start their creative thoughts before starting the designing.

The Minecraft expert plays an important role in the modeling. Since Pons, the Minecraft expert, held a short presentation on what to think about when modeling a park and by giving some ideas on what to put in it, he had the possibility to influence the participants in their decision making. This is the same example as the presentations on the first day. There was also a risk that, by helping them with their models, he would lead them into a certain path and stopping them from thinking freely. In our interview with Pons he said that he is careful with what he is saying. We think he has the right approach when asking questions that made them think and by asking if they are including everyone's needs.

Since we found out from the group interviews that the participants experienced some technical difficulties. There are some technical aspects that could be improved with Minecraft. The participants wished that there would be a library with elements that were specially built for planning, that contained benches, trees etc. One thing that would make the building much easier and faster is an undo button instead of having to tear everything down when the player wants to change something.

When we discussed changes that would simplify Minecraft as an urban planning tool with people from UN-Habitat and Mojang, they disagreed on making changes to the game. They argued that the beauty of Minecraft is the simplicity and that you have to be creative in order to overcome these obstacles and not focusing on details. Taking these different opinions into account we see the point of using the original Minecraft version without making adjustments to the settings, although we understand the need for an undo button. A part of being creative is to be able to play around and undo something that did not work out and try new ideas.

One of the most beneficial aspects of using Minecraft as an urban planning tool, which we learned during our interviews with the stakeholders, was that it makes the planning process

shorter and more effective. Instead of talking about the problems and solutions, Minecraft lets the involved show precisely what they want in their models. Singh, the architect, commented an important characteristic with the game. The creativity that is shown in Minecraft is something that cannot be shown by using a pen and a paper or by just discussing.

The positive thing with Minecraft is also the ability for citizens to be able to work in a 3D tool, as architects and planners, but not as advanced as for example AutoCAD. To actually let them show their ideas by explaining with reality based models is much easier than with a pen and paper. It also allows the citizens to present their ideas in an inspiring and more understandable way. Getting the idea presented to you in a 3D model is of course more comprehensible than a 2D sketch.

### **Representatives in the workshop**

During our case study we have seen that the aim to attract adolescents in the Block by Block project has been very successful and that Minecraft is an optimal tool for youths. One of UN-Habitat's four mainstream goals is to take youths into account in their projects and this project is a very good contribution.

In the workshop, the participating young people were all from the same social group in Kirtipur and around. They studied or worked and many of them owned a computer. CIUD looked for adolescents with IT skills and they had all been asked to partake through contacts. This shows a weak picture of representatives from the community. UN-Habitat in Nairobi had not pushed hard for a representative selection of participants in this workshop, which is something we want to point out as an important part in order to get the best result possible. Next time, UN-Habitat should have a thorough discussion about the preconditions of participants with the organization that they are cooperating with. The misunderstanding in the workshop in Nepal was that CIUD thought that the youths should have IT skills. This proves that a clear communication is essential.

One thing worth mentioning is that the questionnaire demonstrations that on a scale 1-5, the girls answered 4.6 and the boys 3.3 on how much they agreed on the statement whether it is necessary with IT skills to be able to work in Minecraft in an effective way. However, what Westerberg and Andersson from UN-Habitat Nairobi have seen in other Block by Block projects is that there is no need for special skills. We reckon this is discussible but not everyone in front of the computer has to be able to use it properly, instead they can contribute with their ideas in other ways.

Through our case study we found some weaknesses with the Minecraft method that we think should be taken into account in the next Block by Block project. Some groups in the society were neglected from the planning process. When developing a new park it is important that it is accessible for everyone, which is not the case in this project where there is no focus on designing for people with for example disabilities. When we asked representatives from UN-Habitat about this matter they responded that they were convinced that this would be taken into account anyway by the youths, but we did not see that in the result of this project. We

also believe that it is not sure that young people take this into account when they design and the responsibility should not fall on them either. In order to make a park suitable for people with disabilities you need to have special knowledge in what adjustments and certain elements need to be included. The youths do not have this knowledge and it was not given to the youths in the presentations and therefore people with disabilities were not taken into account in the models. The solution for this could be to invite youths with disabilities or incorporate experts who add elements to the design. The problem, that Joshi explained, is that Nepal as a low-income country does not have either money or access to these expert knowledge that is needed.

Another topic that we pointed out briefly earlier is the focus on the urban poor. Since human rights is one of UN-Habitat mainstream issues where urban poor are included, it is important that they are taken into account in the Minecraft issues. When CIUD only picked out participants with IT skills, the urban poor were automatically excluded. In order to include them, the participants cannot just be a group of friends from the same social group. It is important to find a way to reach out to these people as well. By using a method that easily exclude this society groups is also a weakness in the way that it contradicts one of the major goals of Minecraft; that it should include the citizens in the decision making.

## **Gender**

Our research and the case study of this Block by Block project show that female do have different needs when it comes to the use of public spaces. Through the interviews we saw that the girls thought more about safety and beautiful details than the boys did, which was also proved through our readings. Our gender research shows the importance of letting female be included in the planning process. Because of that, it is important to examine the Block by Block project from a gender perspective. Through our research we learned how important it is to have a gender equal planning process since male and female do have different needs in a public space. We also learned that including females actually makes a difference to the result when designing a public space. One of the most interesting thing that we learned was the fact that a public space that is well designed for female to feel safe in, is also the public space that attracts most visitors.

The first step in including the females in the planning process is that they are present in the process. In this project, there was a misunderstanding when they picked out the Minecraft participants. The goal for UN-Habitat was to have 50/50 % girls and boys in the workshop. Unfortunately, CIUD who got in contact with the participants put more focus on, as stated earlier, IT skilled people, which lead to the fact that there were more participating boys. When we asked in the interviews how more girls could be attracted they said that it would be a good idea for CIUD to come directly to them, to the places where they spend time. It is also mentioned in our literature from Umea municipality, where the involved suggested that one way to attract female is for the stakeholders to come and talk to them in their environment.

We can also see from our study that Minecraft is a good tool for both girls and boys since they both thought that they could transfer they thoughts into Minecraft. This fact should be made

clear when the girls are asked to participate, in order to attract them and to let them know that they are able to do good job in Minecraft. Once the girls are included in the workshop it is important that they feel like they can contribute as much as the boys to the models. The result from the questionnaire showed a higher number for the boys agreed on the statement whether they got enough Minecraft skills in the workshop. A way to solve that problem could be to have one more Minecraft expert that can help with the modeling.

Our research in this study showed us that there are differences in what boys and girls want in a park and what those differences could be. The result in the article from Malmo in Sweden, where girls were included in the designing of a new activity park to make it adjusted to them, showed that girls want activities such as dancing and singing stages. They also put focus on movement within and to the park and on safety issues. Results on what girls want and what they focus on, was also presented in this case study. The groups that included a girl came up with models where there was an outside theatre or a stage. Their models also put focus on safety, such as lighting, a guard house and a railing for the steps. It is interesting to see that girls in Sweden want similar activities and elements when they get to design a park as girls in Nepal. This is something to learn from and consider when developing new activity areas; that there are certain elements that attracts girls and those should always be included in the same extent as the traditional activities that tend to attract more boys.

In order to get input from the older women in Kirtipur, they were invited to the final day of the presentation when the groups presented their Minecraft models. The fact that a discussion started between the youths and the women was a positive and surprising consequence of the workshop. Although, as the architect Singh mentioned, a better approach would probably have been to invite them earlier in the workshop. In that way they could express their ideas to the adolescents when they still are in the design phase and have the opportunities to make alterations to it.

As our study proves, it is very important to meet their needs in designing the new park since they are the group that spend the most time there performing their daily tasks. CIUD said that they tried to invite more women to the workshop, but they did not have the time or opportunity to leave the household and they had no one that could take care of their children meanwhile. Therefore, as our research shows, it is important to find a way to get their input through an approach that is on their terms. For example, there could be a meeting exclusively for women at daytime by the waterspout where they wash their clothes.

### **Key strengths with the Minecraft method**

- It makes the planning process faster and more effective.
- It involves youths in the planning process.
- It is a simple, creative and fun tool for non-planners to visualize their visions in a way that brings out the creative mind to a greater extent.

- It opens up for discussion and interaction between different age and community groups.

### Key weaknesses with the Minecraft method

- Girls are underrepresented in the process.
- Society groups such as urban poor and people with disabilities get neglected.
- It focuses too much on the physical aspects and not on experiences and feelings.

### Suggested methods

Minecraft has shown to be a very good tool for citizen involvement and we believe that the method has also attracted a great number of participants that would not have been interested in contributing in the development of public spaces otherwise. We have detected some weaknesses with the method through our study, but we have come up with some alternatives to improve the negative parts. Below are suggestions that we hope will improve the Minecraft method.

#### Walking tour

To balance the weakness that not all society groups were represented in the workshop, to make the public space safer and to highlight the current condition, we have suggestion on a walking tour. After the presentation on the first day of the workshop we walked with all involved to the green area to take a look at it. We think this is an appropriate time for the tour.

The tour starts with the participants doing an inventory of the space in order to be able to point out what elements they like and dislike and what activities they are performing in the area now. It is a chance for them to see positive and negative aspects of the existing place and for them to know what they want to keep and what makes the place enjoyable now. This is a part that is forgotten when designing in Minecraft because it is only focusing on what you are going to be able to do and not the successful existing elements. The inventory is also a foundation for the Gehl analysis that will be explained later.

As shown in our literature, the most successful public spaces are the safest ones and therefore the security is essential to include when developing a new area. For the space to be gender equal our tour involves a safety

#### Example of a role play card



Picture 26: Older man resting in public space (Old man, n.d.).

Glenn, an 85 year old man who has had problems with his hip for a few months now and has to walk with a stick. Picture 26 is an example of an old man He also has bad sight so during dusk it is harder for him to see when he is outside. Even though it is a struggle for him to walk in the park because of the uneven surface and because of his bad sight, he loves to take a short walk in the park after dinner. I wonder what Glenn wants to improve about the area for it to suit his needs?

Text box 3: Example of a play card

analysis. When the participants are walking around they should think about where they feel most safe and the cause behind it and where and why they never visit a certain spot due to fear. We think it is important to include the question “why”. If you think about why you feel safe in that area it is easier to come up with a solution to your design or you can figure out what is missing in order to make the place feel safer. One way is to mark the different safe and unsafe spots on a paper to make it easy to transfer it to Minecraft later. This can also be done during dusk or dark to make the feelings and the experience easier to relate to.

In order to compensate for the absence of the society groups such as urban poor and people with disabilities in the workshop we think a role-play during the tour would help including elements needed for disables to visit the public space. Our suggestion is that the youths or other involved get to imagine another persons’ life while they are walking around. For example some people can imagine being in a wheelchair when they are exploring the area or as an 80 year old man with a cane. They can also put themselves in a situation being very poor and what special needs that must be met in the place because of that.

For men and boys to understand the gender issue it can also be good to imagine how a 15 year old girl would feel when she is walking around in the area at night or when the place is empty of people. Role-play cards can be handed out to the participants so it becomes easier for them to imagine being another person. Text box 3 and 4 are examples of how the role play cards could look like. Of course it would be optimal if people from every society group were represented in the workshop, but that is hard to achieve. This is a way to compensate the absence and we think it will have some positive impact.

#### Example of a role-play card

Sabah is a ten year old girl who loves to fantasies about the world and the space. She often finds herself lost in her thoughts and forgets about time and place. It has happened a few times that she has been walking around for hours and realizing when it is starting to get dark that she is far away from home. Then she has to run home so that no one gets worried. The fastest way to get home is to cross a square but because of the unpleasant people hanging out there at night she does not feel safe walking that way. What can be changed for her to walk there every time of the day and feel safe?

Text box 4: Example of a play card

#### Gehl analysis

Since we discussed earlier that it might be some difficulties for the citizens, who are nonprofessional planners, to know how to design a park, we wanted to find a way to improve the method by overcoming these barriers. Therefore our suggestion is to add a group meeting session where the Gehl analysis is used. Before the designing part in the workshop the groups would conduct a Gehl analysis of the area. The strengths we have seen with a Gehl analysis is that it evaluates the quality of the existing area and it brings out feelings, needs and experiences you get from the existing place.

By looking at the place in this way it could be an eye opener into knowing what you want from the future area. Because by detecting what you actually like and dislike by the existing place, you have a better idea on how you want to improve it. The Gehl analysis encourages the participants to realize what the important factors are, in order to want to spend time in a public place. It gives the user a broader view by taking away focus from the physical elements and instead focusing on feelings and experiences.

Another aspect that we think can improve the Minecraft method, especially for the girls because they mentioned it during the interviews, is to brainstorm and discuss ideas before starting the designing process. This is also something that could be solved by the Gehl analysis. Conducting the analysis makes the group member share their experiences and ideas, which will likely start their creativity in a better way, instead of beginning directly in Minecraft. What the Gehl analysis brings out, compared to a regular group discussion, is that the groups have focus points to discuss around that will give them new ideas and inspiration.

Practically, our idea is that it can be implemented by giving each group a Gehl-analysis sheet, for them to work with. The groups sit together and discuss the 12 criteria within the three focus areas: Protection, Comfort and Enjoyment that are important to highlight when evaluating a public space. In conclusion we believe that the Gehl analysis will result in the groups making more elaborate models that incorporates innovative elements and interesting designs.

Our hope is that these additional methods can raise the imagination and get people to understand other's situations. Hopefully this will add significant details to the designs that will make the public space more suitable for everyone. The tour can be adjusted after what needs to be achieved and we understand that not all steps are suitable for every workshop.

### **Final comments**

We think UN-Habitat's future plans of Minecraft and the idea of increasing the cooperation and communication between Minecraft projects worldwide through a Minecraft community sound very exciting. It is interesting to see that UN-Habitat has greater goals with the Minecraft method and that they want to link it to a larger city context.

Our focus on gender equality and how to increase female participation is only one part that we think could be investigated even further. UN expressed that they thought would be interesting to investigate further is the power relationship within the local community and the effect of giving power to young people, which is Block by Block's concept. Another future suggestion of research within this field is the physiological aspects around citizen participation contexts. How much information should the participants get before starting in Minecraft and what is the effect of the influence? An alternative way of study the Minecraft method would be to analyze and compare one project that has used Minecraft with a similar project that has not used Minecraft. This might give other aspects of differences, advantages and disadvantaged. Additionally it would be interesting to analyze how to best arrange the workshops and group

constellation to get the most equal public spaces for all society groups. It would also be interesting to try our suggested methods and see if they make any differences and how they can be developed further.

Finally, we would like to send our thoughts to the victims of the earthquakes in Nepal. It hurts to see how many lives were taken and how much of Nepal that was destroyed. We are aware of that this project will probably not be possible to implement since Kirtipur needs to be rebuilt but we hope that it will be possible in the future.

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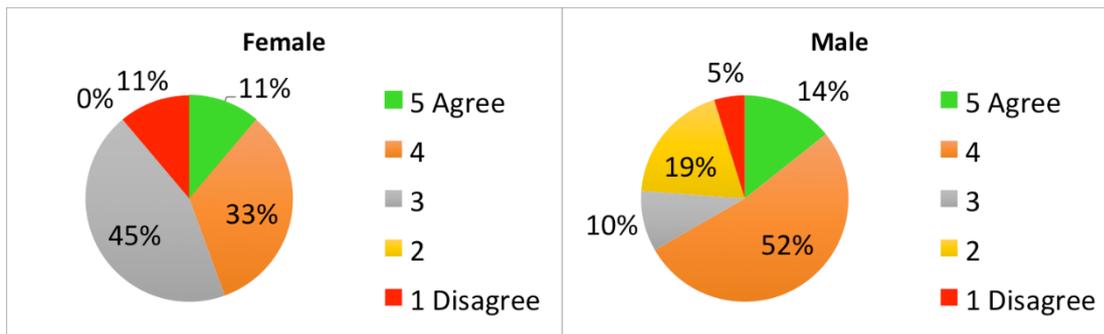
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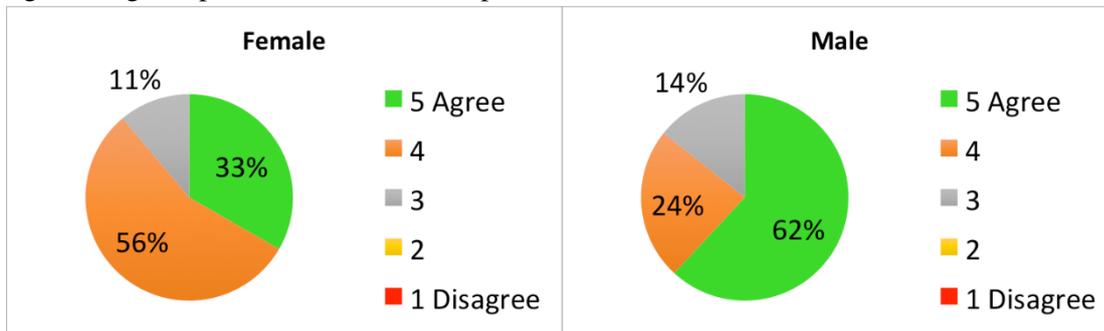
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## Appendix A

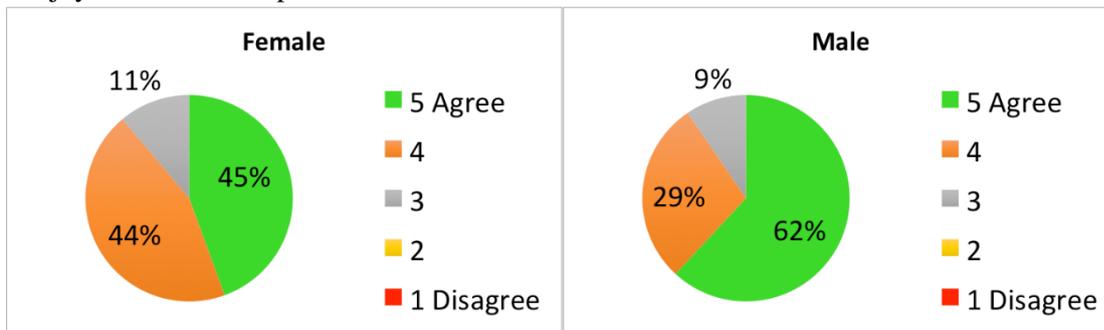
Every group member got equal amount of time in front of the computer/ being in charge of the key board.



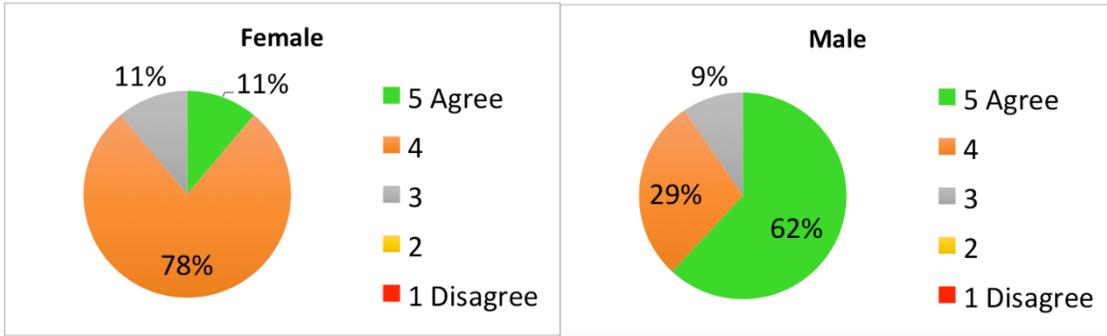
I got enough help from the Minecraft expert.



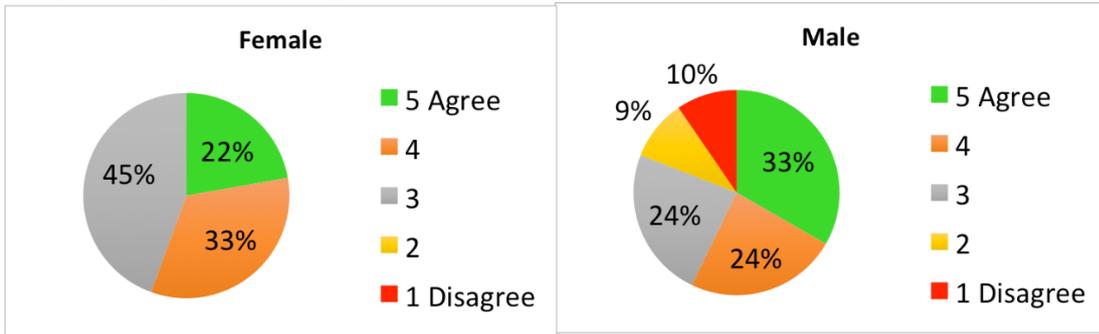
I enjoyed the work shop.



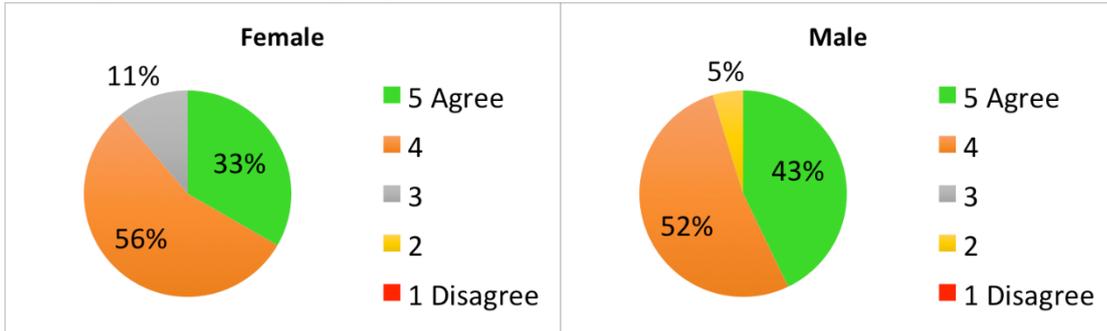
I enjoyed building in Minecraft.



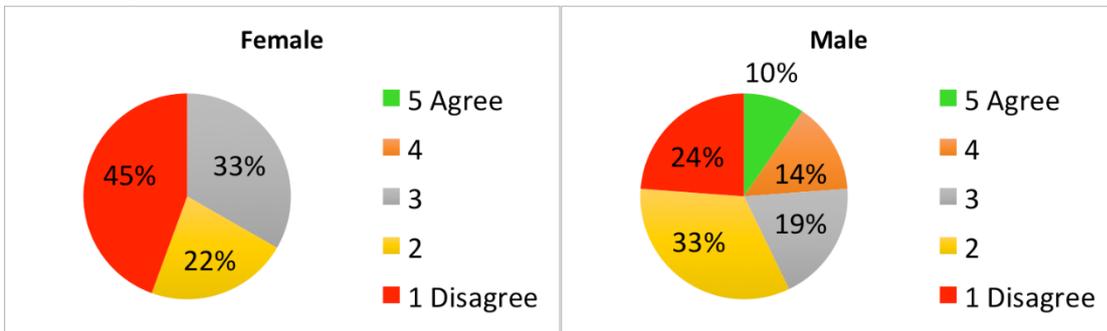
We got enough time to design our model.



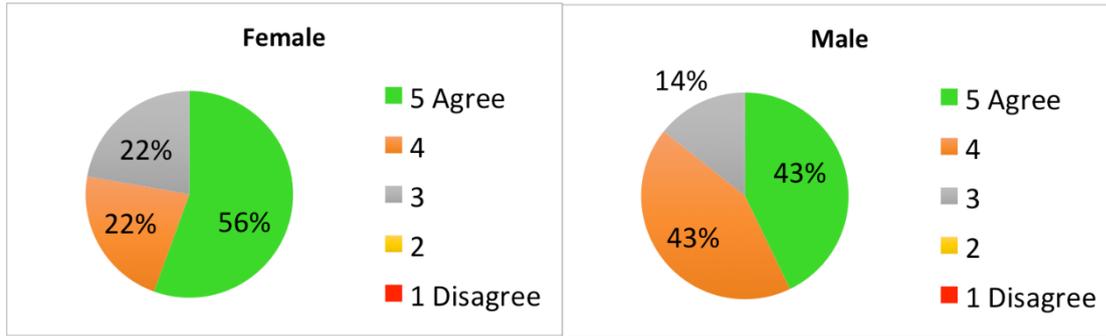
The cooperation within the group went well.



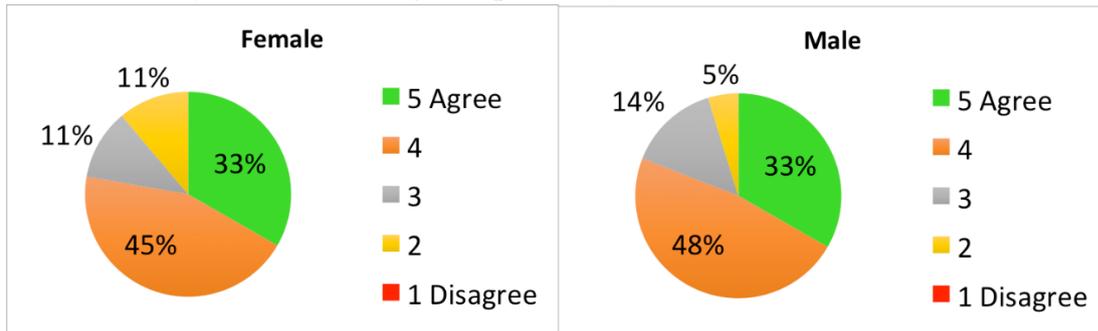
I am an experienced user of Minecraft.



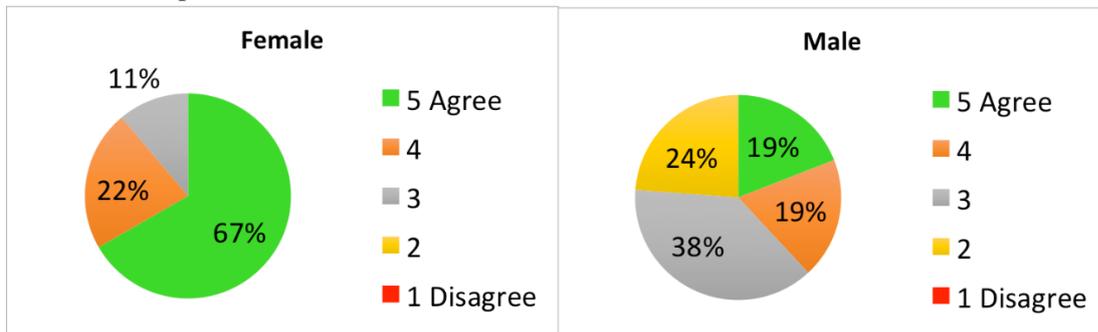
Minecraft is a good tool for designing public spaces.



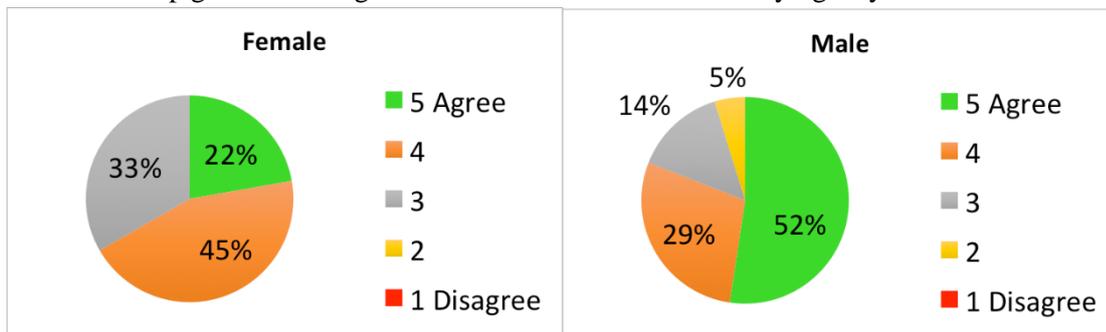
I can transfer my vision about the green space easily into a model in Minecraft.



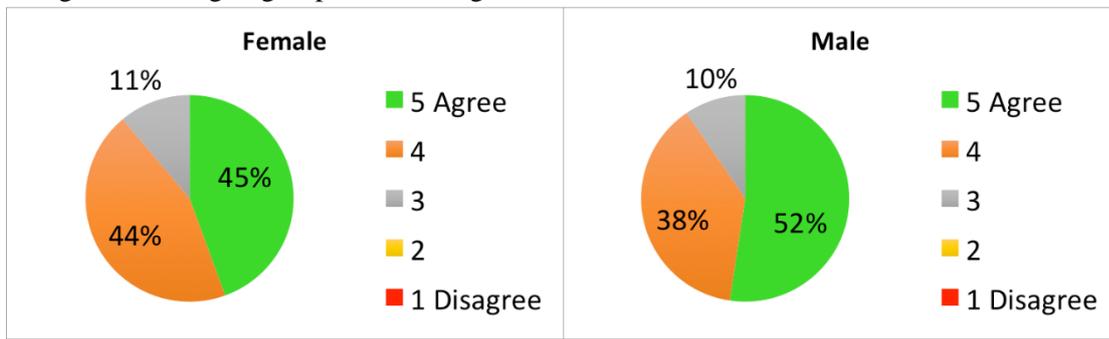
You need computer skills to be able to use Minecraft.



The work shop gave me enough skills to use Minecraft in a satisfying way.



It is good working in groups when using Minecraft.



I felt like my ideas and thoughts were taken into account by the rest of the group.

