

_interdisciplinary seminar

January 18th 2011
S24, NTNU, Trondheim
12.00 - 16.00

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The architecture students
The civil engineering students
Marit Valen
Sveinung Sægrov
Hans Bjønnes
Studio Tacloban

06_thoughts and comments

01_initiative

The idea of an interdisciplinary seminar came early in the work with the preliminary project. We realised that our professional expertise was limited when it came to certain parts of this project. With an interdisciplinary seminar we wanted to gather both engineers and architects at the same table, get professional input and exchange experience.

Week two started with booking of room, e-mailing and calling the potential participants and sending reminders to get confirmations on attendance. We put together a program for the day. First, there would be an introduction from the architect and engineering students, and then short presentations from the different guests. The day would end with a discussion.

The aim for the day was to focus on the different challenges and possibilities of the project and get inspiration from other projects both technical and cultural.



02_people involved

Ole Møystad

Main supervisor for the group. Professor II at Department of Architectural Design and Management, NTNU

Svein Bjørberg

Initiator for the project, supervisor. Professor II at Department of Architectural Design and Management, NTNU

Steffen Wellinger

Supervisor. First assistant professor, Department of Architectural Design and Management, NTNU

Ingrid Almli, Mette Undeland, Jørgen Frønes

Civil engineering students, NTNU

Marit Støre Valen

Associate Professor, Department of Civil and Transport Engineering, NTNU

Sveinung Sægrov

Professor, Department of Hydraulic and Environmental Engineering, NTNU

Hans Christie Bjønnes

Professor, Department of Urban Design and Planning, NTNU

Trond Hegvold and Ivar Tuttøren

Architecture students, Initiators of the project Studio Tacloban

03_program



Program tirsdag 18.januar, rom S24

12.00 - 12.20: Asmaragruppen arkitekt

12.20 - 12.35: Asmaragruppen bygg

12.35 - 12.50: Marit Valen, Institutt for bygg, anlegg og transport

12.50 - 13.10: Sveinung Sægrov, Institutt for vann og miljøteknikk

13.10 - 13.40: pause

13.40 - 14.05: Hans Bjønnes, Department of Urban Design and Planning

14.05 - 14.25: Studio Tacloban, arkitektstudenter

14.25 - 14.45: Ole Møystad, Institutt for byggekunst, prosjektering og forvaltning

14.45 - 15.00: pause

15.00 - 16.00: diskusjon



04_notes

Mette - working with unplanned

Ingrid - working with National Heritage

Jørgen - working with private/governmental financing

Marit Valen

The students will benefit from this project both professionally and culturally. Keren, Eritrea is a twin town with Trondheim, trondheimkeren.wordpress.com. We should try to get a meeting with the board, contacts: Erik Dahl and Jan Bojer Vindheim.

A phd on Norwegian relations in Eritrea is done at the University of Bergen.

Sveinung Sægrov

Water is an important issue almost all over the world. Eritrea has enough water but has a problem with gathering and storing the water they get.

Developing country: 10liters/person/day

Industrialized country: 140 liters/person/day

70% of hospital beds in Africa is people sick from water-borne disease.

End Poverty 2015 project should be looked in to.

One main goal in addition to secure water sources is to secure tenure.

Our university had visitors from Keren last year.

When the water supply is not continuous through the pipes and stands still the result can be polluted water since the pipes can absorb pollution. This makes people sick.

Many places drainage runs straight into rivers without any purification.

An example with water supply and sanitary solution in a township in Cape Town.

The hydrologic cycle, access to fresh water, can this be used in our projects?

The aim is to gather water and store it in the ground.

Waste water systems can be solved locally, rainwater can be infiltrated but it needs areas to do this. Green roofs can be one way. Planning how to deal with storm water is also an issue that needs consideration.

Norwegian Church Aid has water projects in Eritrea.

Separating black water and grey water locally and then re-using the grey water. Ex Windhoek, Namibia where there are projects where they drink wastewater.

Separating water can also be a design parameter. Building biological solutions instead of normal pipes for the black water, re-use grey water locally. Show with one example that can be implemented several other places.

Surface water is an important part of urban planning: where can a flood be led through a city?

Hans Christie Bjørnes

Urban ecological planning

Remember that unplanned is also planned, just by other people than governmental, ex neighbourhoods, target groups.

What kind of Muslims are there in Asmara and the unplanned city, and what consequences does this have culturally, how do Muslims look at water?

Encourages us to work locally, meet people and let them tell their stories.

An important method is SWOT analysis, Strengths, Weaknesses, Opportunities, Threats. This can be done in three steps:

1. Our own analysis,
2. Analysis done with other local students,
3. Analysis done by local inhabitants

Take a look at the Action Aid webpage.

What we can contribute with is a new perspective on alteration and with expertise, premises for underdevelopment needs change.

How can urban ecology be used as a theme?

Ex. Local solutions to sanitary infrastructure in urban Kathmandu, transforming neighbourhoods, diversity.

Territorialism, How do you proceed? What is the “glue” in the neighbourhood? The urban spaces has a social stratification, “building neighbourhoods within”, drafting a development project.

What are we doing that at a later stage can have a strategic agenda?

Interesting book: Mongrel city - “kjøterbyen”

Understand the city as a melting pot

The section of a city, formal vs informal, the informal in the formal, who lives there?

Approaching the females, make the most of us being many women.

Studio Tacloban

Building a new study centre, Tacloban, Philippines

Streetlight, an organization already established in the Philippines, rents the site and needed help from architects.

Takes time to build trust

60% of the children in the slum in Tacloban has a place to sleep, but during the day nowhere to stay. The project is to build a study centre that will provide breakfast, lunch, school, help with homework, handing out school uniforms.

Help to help oneself, not development aid.

Consider what the agenda of the city planners from the Department of Infrastructure is, this can be complex cooperation.

Remember that what you do has spin-off effects, learn instead of instruct, enhance the self-confidence the locals have for what is theirs, local materials, know-how, teamwork.

Workshops can be a good way of getting to know the locals, ex children's dreams of their own future. Work with models! This brings more enthusiasm.

Maybe the slums are more socially stimulating than how we live in Norway?

Do not problematize, look for opportunities.

Discussion:

What are we planning to get out of the trip to Asmara in February, how do we use the time we have in the best possible way?

Prepare a working hypothesis.

We know they need a place for workshops.

Create an idea of a brighter future, a dream for the future, working hypothesis.

05_selected slides

A few from the architecture students



_asmara

Seminar
18.01.2011
Kari Klaveness, Line Tharaldsen, Kjersti Os Alachisen,
Silje Hayem Amundsen and Ane Nesje

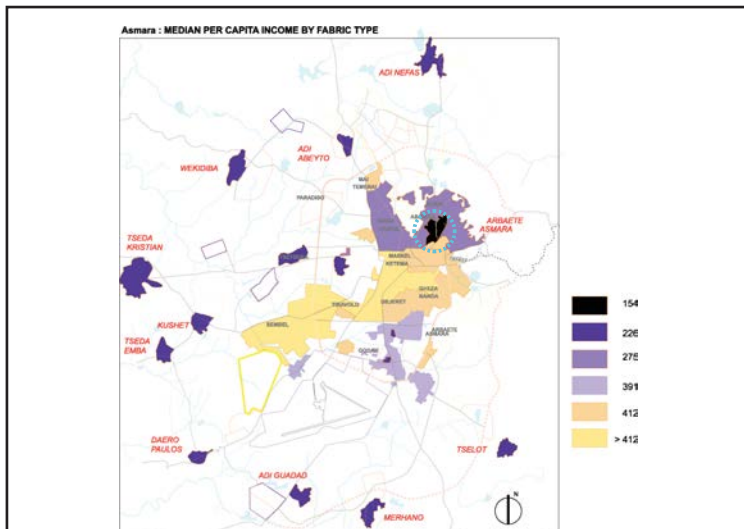


Fig. 2 DEFICIENCIES IN WATER SUPPLY IN DENSEST NEIGHBOURHOODS

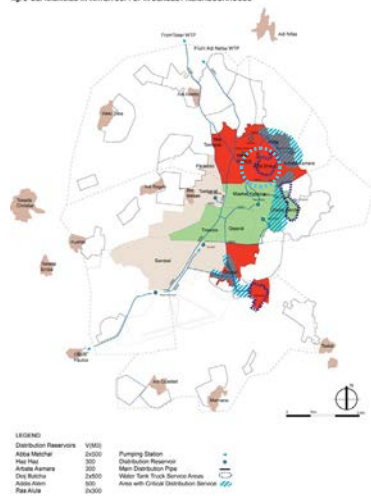
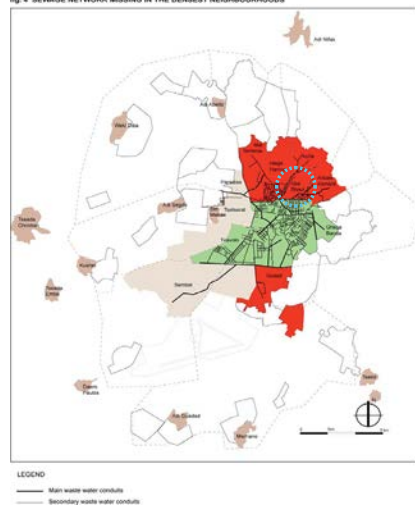


Fig. 4 SEWAGE NETWORK MISSING IN THE DENSEST NEIGHBOURHOODS



different bus areas

Based on Google Earth pictures of Asmara dated Apr.12 2009

Why is this interesting?

It is very difficult to get an overview of where the buses in the area leaves from or are parked at what time. There are four different parking places, but still a lot of buses in between these.

01_the large plain - where DOI expressed a wish to make a new large bus terminal. This is where the long distance buses park today. The plain is lightly sloped and the northern part is one level up with a 2,8 m difference. The cover is gravel and in the rainy season it becomes a mud-pit.

02_mixed parking - an area where parked cars, buses and other vehicles are mixed with moving vehicles in a complex situation that is difficult to follow as well as dangerous to move around in as a pedestrian

03_the roof - this is a bus terminal for short-distance buses mainly going to Massawa and the coast.

04_the minibus terminal - this square is a home to an array of minibuses and cars



vehicles

Based on Google Earth pictures of Asmara dated Apr.12 2009

Why is this interesting?

Number of buses parked both in designated and un-designated places
Few vehicles actually driving, but many are parked, because of high petrol prices?



bus terminal and adjacent functions In relation to the terminal functions there might also be a need for other services that may improve the area. We would like to look into functions such as:

- service for vehicles
- sanitation centre
- waiting areas for bus drivers and for travellers
- restaurant
- marked
- bank
- post office etc.

The different services can be gathered in one or several buildings. It will be important to find strategic placements, and to think about how the area can be developed in phases.

details Being three will also give us the opportunity to zoom in on different details during the project period. This includes furnishing, vegetation and materials.

how We need to limit the project in several ways. The Department of Infrastructure has already done some analysis of the situation, and we will use these as a foundation for our project. They clearly expressed that they had no desire to move the local buses from the market area towards the location of the long and medium distance buses. A great deal of the passengers going to and from the city centre are heading for the market, and its proximity to the buses is essential. In addition, there are plans to rehabilitate the market area in collaboration with the European Commission. We therefore choose not to look at this area.

We will not look for other locations for the bus terminal. The buses are an essential part of the area, and a generator for the buzzing street life. Locating a new bus station within this area will be a condition for the project.

We wish to encourage the activities that already exist in the area and try to keep the positive atmosphere. To do this we need to look at how different solutions can affect the area. We picture two scenarios; we keep the fragmented plan of today's bus area, where the bus stops are separated between local, mini, near-regional and far-regional buses. Or, we unite and concentrate the area of bus activities.



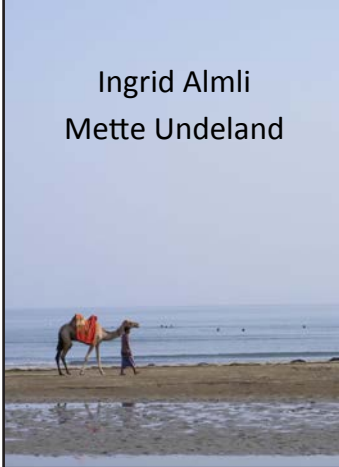
main bus area



A few from the engineering students

Presentasjon av masteroppgave

Ingrid Almli
Mette Undeland



Eritrea, Asmara

05.11-14.11.2010



- Fra NTNU
 - 3 studenter fra Bygg og miljøteknikk
 - 5 studenter fra Arkitekt
 - 2 professorer
- Department of Infrastructure, Asmara



Unplanned city

05.11-14.11.2010



- Italienske byplaner tok ikke hensyn til lokalbefolkningen.
- Tvunget til å bo sammen i det nordlige Asmara i det uplanlagte området.
- Vanlig å skille ulike raser i byplanlegging.

Aktuelle problemstillinger

- Klassifikasjon av ulike deler av unplanned city
- Sosiale møtepunkt – hvilke behov, hensyn til bl.a religion, plassering?
- Utbygging veier med plass til ambulanse og evt. vann/avløp - plassering?
- Byggeteknikker under vanskelig forhold
- Tilstandsanalyse av bygninger, eks: restaurant

Eritrea, Asmara

05.11-14.11.2010



National Heritage, verneverdige bygninger

Asmara holder en av verdens største samlinger av bygninger bygd innen en variasjon av ulike modernistiske stilarter innenfor sine bygrenser

På grunn av Eritreas unike historie er disse byggene i dag nesten urørt, men i forfall



Eritrea, Asmara

05.11-14.11.2010



National Heritage, verneverdige bygninger

- Cultural Assets Rehabilitation Project, CARP
- UNESCO
- Historisk perimeter
- Prioriteringer for Asmaras utvikling



Eritrea, Asmara

05.11-14.11.2010



Workshop Asmara/Eritrea

1. aman./Inst. Leder

Marit Støre Valen

(marit.valen@ntnu.no)

Institutt for bygg, anlegg og transport



Vennskapsbyen Trondheim- Keren

- <http://trondheimkeren.wordpress.com/>

- VENNSKAP TRONDHEIM-KEREN
INVITERER TIL ERITREA-KVELD MED
ÅRSMØTE

tirsdag 2. februar 2010 kl.18.30-21.00

i Rådhuset (Munkegt 1)

PROGRAM:

AVFALL OG MILJØ I KEREN

Jan Bojer Vindheim, Lars Volden og Aage Heie

viser bilder og forteller om sin reise i november for å utrede hvordan Keren by skal takle sine avfallsproblemer





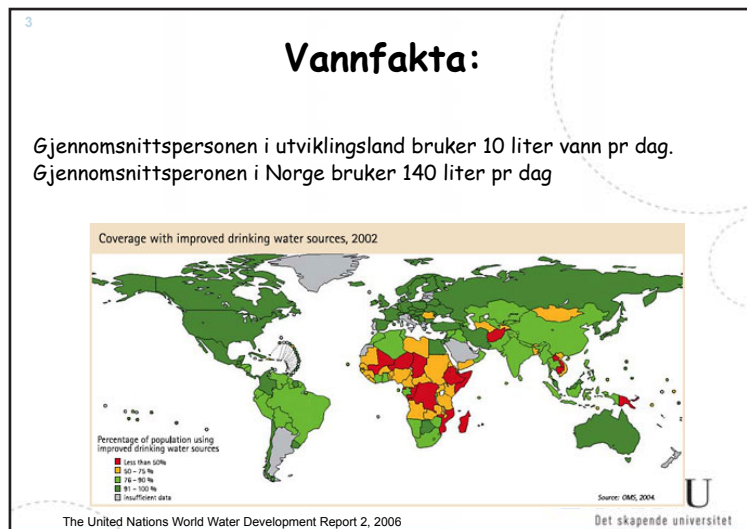
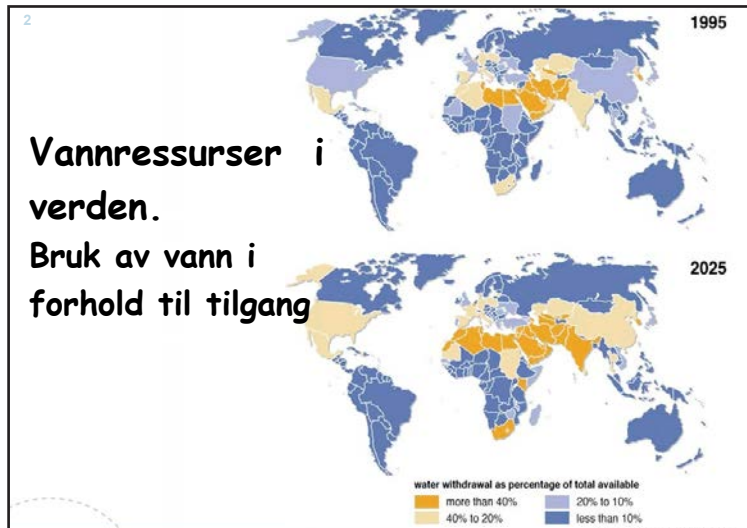
Misjonsprosjekt i Heimdal menighet

- Heimdal menighet - støtter en døveskole i vennskapsmenigheten i Keren

[#top](http://heimdal.kirken.trondheim.no/index.php?c=19&kat=Misjon&p=35)

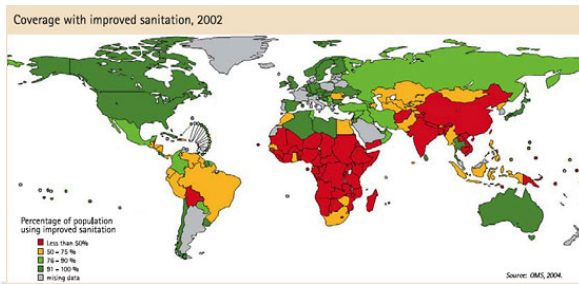
- Kontakt; Heimdal Menighet
- Telefon 72 59 20 50 eller

- Dr. grad i Norske relasjoner til Eritrea <http://www.ub.uit.no/munin/bitstream/10037/598/1/thesis.pdf>



Vannfakta:

For å møte internasjonale mål for sanitærtjenester må i gjennomsnitt 140 millioner mennesker få tilgang til slike anlegg pr år inntil 2015, sammenlignet med 85 millioner mennesker som fikk slik tilgang mellom 1990-2002,

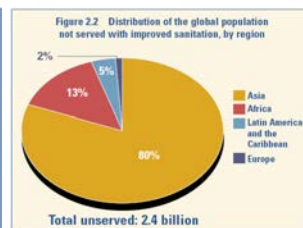
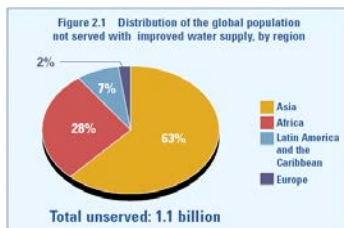


The United Nations World Water Development Report 2, 2006

Det skapende universitet

Vannfakta:

- Mer enn 2.6 milliarder mennesker- 40% av verdens befolkning - mangler grunnleggende sanitæranlegg, over 1 milliard mennesker bruker fremdeles usikre drikkevannskilder
- Framtidsstudier for 2025 indikerer at antall mennesker som lever i områder med vannstress vil øke til 3 milliarder, en seksdobling. I dag lever 470 millioner mennesker i områder med avlorlig vannmangel



WHO/UNICEF, 2000
IWA, 2006



"Millennium Declaration" fra år 2000:

Pledge: "spare no effort to free our fellow men, women and children from the abject and dehumanizing conditions of extreme poverty."

Target – fulfill 8 goals by 2015:

•Goal 7: Ensure environmental sustainability

- sustainable development
- greenhouse gas emissions (climate change)
- reduce biodiversity loss
- water and sanitation



"We need to recognize that access to clean water is a fundamental right".

VISION 21 Report: the aim by 2015 to reduce by half the proportion of people without access to sanitation and access to adequate quantities of affordable and safe water, and by 2025 to provide water, sanitation, and hygiene for all

(Second World Water Forum, The Hague, 17-22 March 2000)

In 2002, the UN Committee on Economic, Social and Cultural Rights affirmed that 'sufficient, affordable, physically accessible, safe and acceptable water for personal and domestic uses' is a fundamental human right of all people and a pre-requisite to the realization of all other human rights.

8

The Millennium Development Goals for drinking water

TARGET

Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation

- 2/3 av tiden er gått
- blir målene nådd?
- hvordan er utviklingen nå?

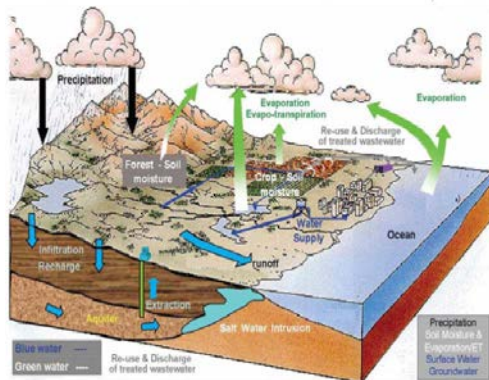
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Vann og sanitærløsning i township utenfor Cape Town



11

Den hydrologiske syklus



The United Nations World Water Development Report 2, 2006

12

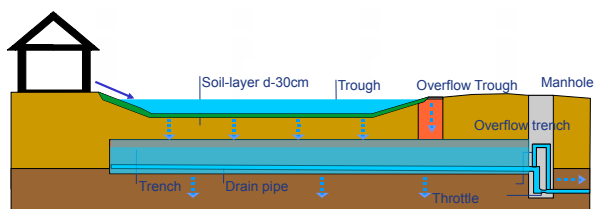
Eksempel fra Hoppergarten, Berlin (H Sieker)



13

Teknisk løsning for lokal overvannshåndtering

Hoppergarten, Berlin, H Sieker

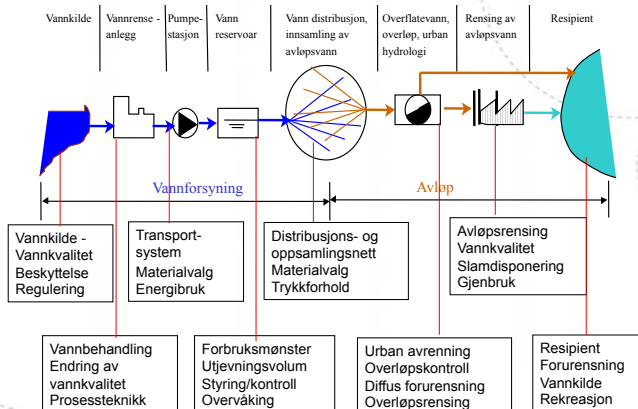


NTNU
Det skapende universitet

www.ntnu.no

14

Vann- og avløpssystem



URBAN ECOLOGICAL PLANNING

at
Department of Urban Design and Planning
Faculty of Architecture and Fine Art
Norwegian University of Science and Technology
(NTNU)

Hans Christie Bjønness, Prof.
Hans.C.Bjonness@ntnu.no

Key areas of UEP

- Build on *communities strength* in an integrated area based approach
- Address *urban poverty* – and inequality in class, caste and gender – and work towards right based livelihood improvements
- Contribute to *knowledge* behind urban change
- Explore the *interface* between equity, environmental sustainability and civil society in strategic action for access to services, livelihood security and area upgrading.

URBAN ECOLOGY

- Urban ecology is fundamentally *value – laden*; in search of ballance, equity, and improvement
- The study of urban ecology is both *process oriented and system based*; it is about process of *transformation* and complexity of relationships
- It is not driven by a desire for "development", but rather by need for real and *postive change*

Ref.: Bjønness, Hans C. and Corneli, Janne(1998) "Urban Ecological Planning and Revitalization: A New "Frame of Mind" in Planning Education in Developing Countries" in UNCRD's Journal: *Regional Development Dialogue* Vol. 19, No 1, Nagoya, Japan

URBAN ENVIRONMENTAL MANAGEMENT (UEM)

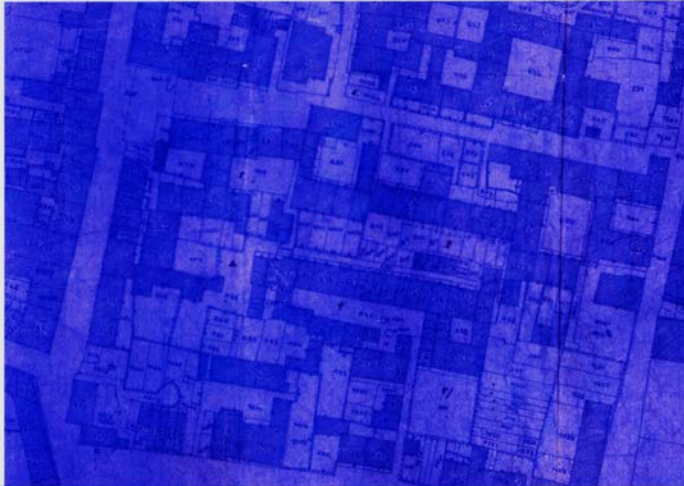
- UEM aims at carrying out one environmental improvement task in *all* localities
- UEM focuses on universal, rational solutions on technical questions decided mainly by technicians
- UEP works for a science model

URBAN ECOLOGICAL PLANNING (UEP)

- UEP addresses all social, economic and environmental tasks in **one** locality
- UEP targets place specific, creative solutions in accordance with people's strength, priorities and decisions
- UEP is culture and resource oriented



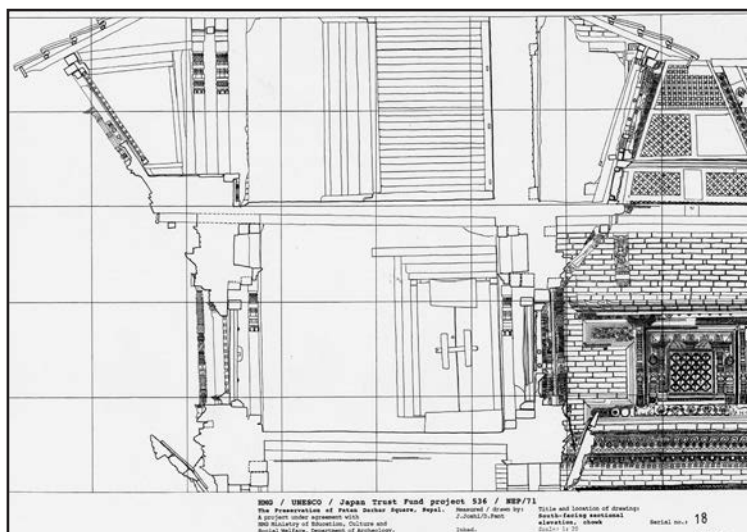
...transforming neighbourhoods



The Principle of Territorialism

1. **Different forms of social integration** sensitive to local needs and institutions, cultural traditions and practices and how to sustain it.
2. **Resource, technology and skill links** contrasting functional and territorial perspectives
3. **Land, land-use** and relationship between society and the way they organise **land tenure- and ownership**.
4. **A regional framework of territorial links** (nature and cultural regions).
5. **"Space of flows"** of the global network society rooted in the territorial **"space of place"**.
6. Qualitative assessment of **built environment and publicness of open spaces**.

Focus: Addressing traditional and fragmented societies through their main territorial strengths at different levels.



How to start on site?

Working in a developmental context

- Approaching the positive strengths and weaknesses and external opportunities and threats (SWOT) of the neighbourhood and/or target group(s)
- *Drafting a development project* (LFA) as a common platform for intervention and starting to discuss developmental focus and approaching sustainable livelihood projects
- Addressing first the local, short term *practical agenda* and looking for the link with a *long term strategic agenda*

On site study method: Action planning

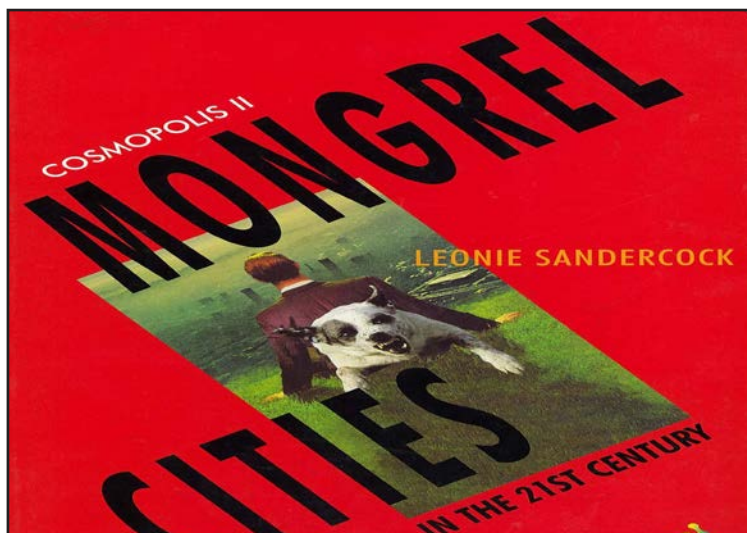
- Direct observation (looking / sketching)
- Identifying entry points (children, women, schools, community heads, iman, elected officials, professionals)
- Semi structured interviews (listening)
- Measuring, learning
- Resource surveys
- Prioritising
- Brainstorming
- Diagramming
- Mapping and modelling
- Gaming and role play
- Group work and intermixing

Sustainable Livelihood Analysis

- Addressing vulnerability context
- Building on livelihood assets within human -, social -, physical -, financial - and natural capital
- Improve livelihood context

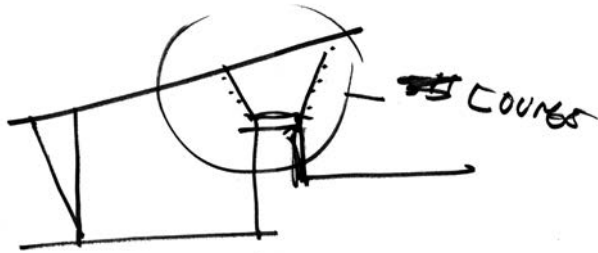
A “checklist” for sustainability concerns for Human Settlements:

- 1. equity and social inclusion
- 2. environmental protection / sustainability
- 3. civil engagement / local governance / democracy / empowerment
- 4. local skills and employment
- 5. local / global relationships
- 6. cultural heritage continuity / quality of the built environment
- Improved from UN (1995)
- - *“Draft Statement of Principles and Global Plan of Action”*, Preparatory committee for the United Nations Conference on Human Settlements (HABITAT II), Nairobi March 13, 1995
- and European Commission (2003)
- - *“European Common Indicators. Towards a Local Sustainability Profile”*,
 - Rome: Ambiente, Institute of Research, December 2003.
- http://www.europa.eu.int/comm/environment/urban/pdf/eci_final_report.pdf



Shahjahanabad





BUILDING A NEW STUDY CENTER
for streetchildren in Tacloban, Philippines

studioTACLOBAN









06_thoughts and comments

While planning the seminar, we were all quite unsure about how the participants would contribute and if they would find it exciting. To our great luck, both teachers and students seemed very interested in our project. We also felt that they had taken the time to look into our specific assignment and that they gave relevant lectures and could contribute in discussions. It seemed that everyone were positive about the seminar, and maybe even made some new contacts them selves.

A great output from the seminar was that we now have connections to several professionals that already know our assignment and problems concerning it. It will be easier for us to contact them for more specific questions later, and they all expressed an interest in following our further work.

Marit Valen told a bit about how the project originally started with Svein Bjørberg as a big contributor. To suggest some master thesis projects was the quickest way to get the ball rolling, and start with the collaboration with the Department of Infrastructure (Dol) in Asmara. In some ways it is good to hear that we are small pieces in the bigger picture, and that this collaboration will not end with us. We have discussed a great deal about what will happen after we deliver our projects, but knowing that there might come someone after us that can continue what we have started, gives the project a bigger meaning. This also shows how important it is to make projects that Dol find possible to carry out.

The lecture held by Sveinung Sægrov has inspired us to connect our projects more closely to the issues concerning water management. He showed us how important these things are in a bigger picture, and also easy ways of solving these problems by taking local measures. The solutions are specifically technical, and learning more about this will be very relevant knowledge for us in later projects also in Norway.

Hans Bjønness focused on methods and how we should try to get connections in the local community, especially with the women there. We have a good col-

laboration with the Dol, but we should also be aware of that we have some advantages from being seven girls when it comes to connecting with women. We should not only rely on the information given to us by Dol, but also find people that can give us other input on our projects.

It was very inspiring to see all the physical objects the boys from Studio Tacloban had managed to build together with the local community in Tacloban. They showed how what you do can have extended effects in positive ways, and the importance of learning, not teaching. Our project will in some ways be quite different from theirs, but their thoughts concerning roles are important to discuss. Our collaboration with Dol will present several challenges concerning the roles we get or take in this process. How we present our projects when visiting Asmara in February will be of big importance to how we will be judged. Being open to comments and new suggestions, and not putting our selves in the role as the professional with all the answers, will be very important. We need to create a common platform for discussing our projects, and work together as a group towards a common goal. Giving them the feeling of ownership in our projects will hopefully ensure that they do not end up in a drawer after we have left.

When it comes to the students from civil engineering, we can now begin to look more actively at how we can work together. We should discuss what we wish to gain from this collaboration and how to get there.

To sum up it can be said that we absolutely feel that we have gained a lot by arranging this seminar, both in knowledge and by getting new contacts. Hopefully we will manage to take advantage of this in our projects, and make them even more robust and relevant.

