

The
COMMUNITY MAPPING
for Housing by People's Process
Handbook





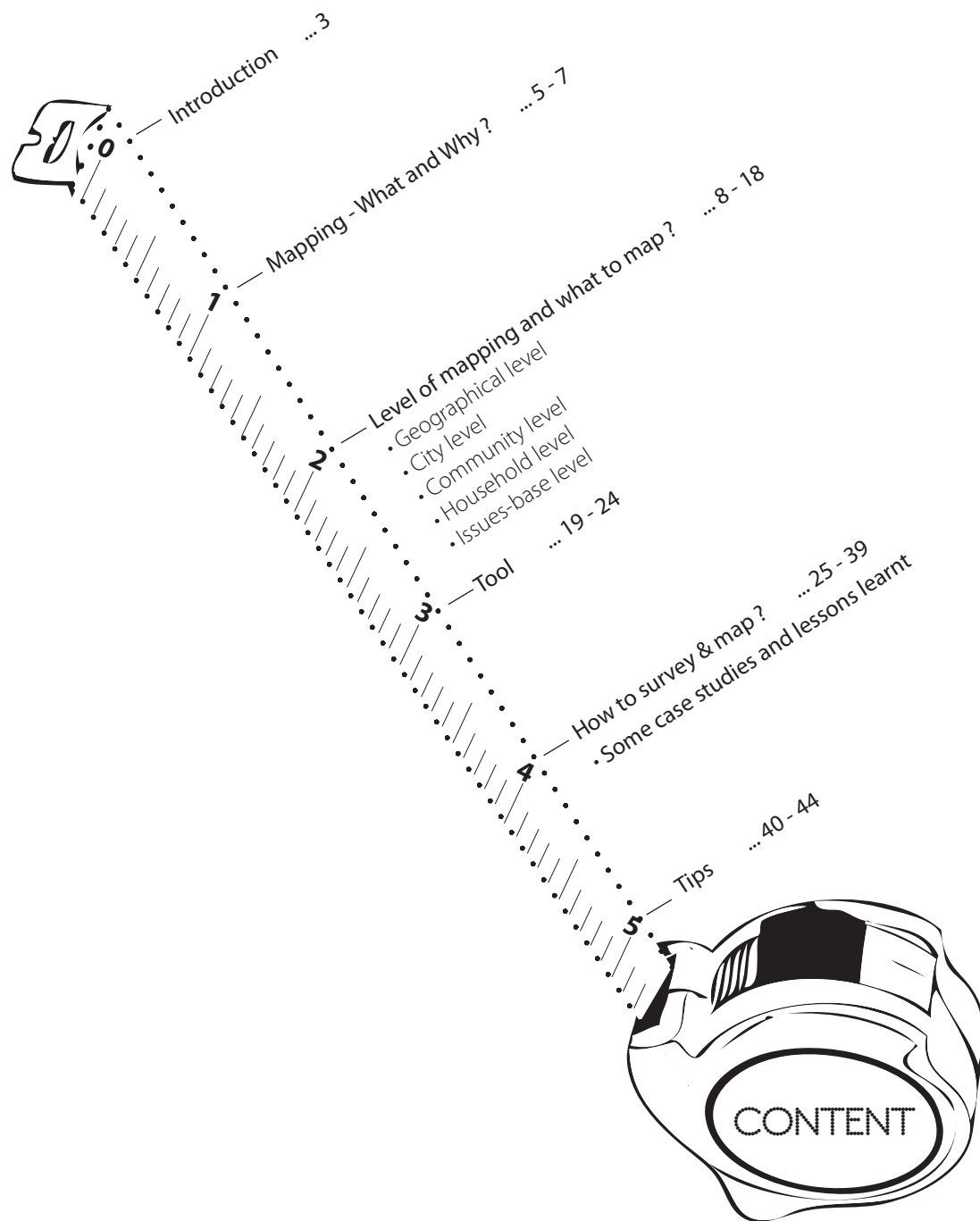
INTRODUCTION

"Community Mapping" is one of the processes in housing by people. It aims to create learning and understanding between community people themselves, and with the supporting agencies, as well as government officials, with regard to both physical aspects and more intangible matters such as social organization, culture, and the beliefs of people.

Community mapping is also meant to create collective knowledge and experience amongst people through the process of participation – learning and doing together. Once community people know the process and realize that they are the "subject" and the "key actor" of their mapping, they can do it without social organizers.

This community mapping handbook is one in a series of ACHR Handbooks for housing by people, to be published throughout 2011. We are making an effort to compile the accumulated knowledge and experiences of our friends in the ACHR coalition. These publications will collate case of studies of CODI and ACCA projects in Asia and the Pacific, in order to make a simple handbook for community members and relevant agencies.

ACHR Secretariat
Bangkok, Thailand
January 2011

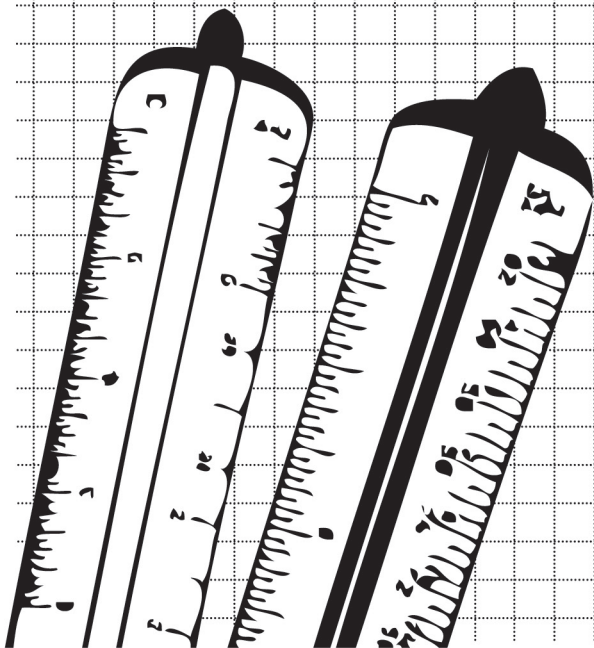




Mapping - What & Why ?



Mapping is a tool for building a community's understanding of where they live, and community mapping is a process for people to come together and to understand, by working together, what their possibilities are for building a better community.





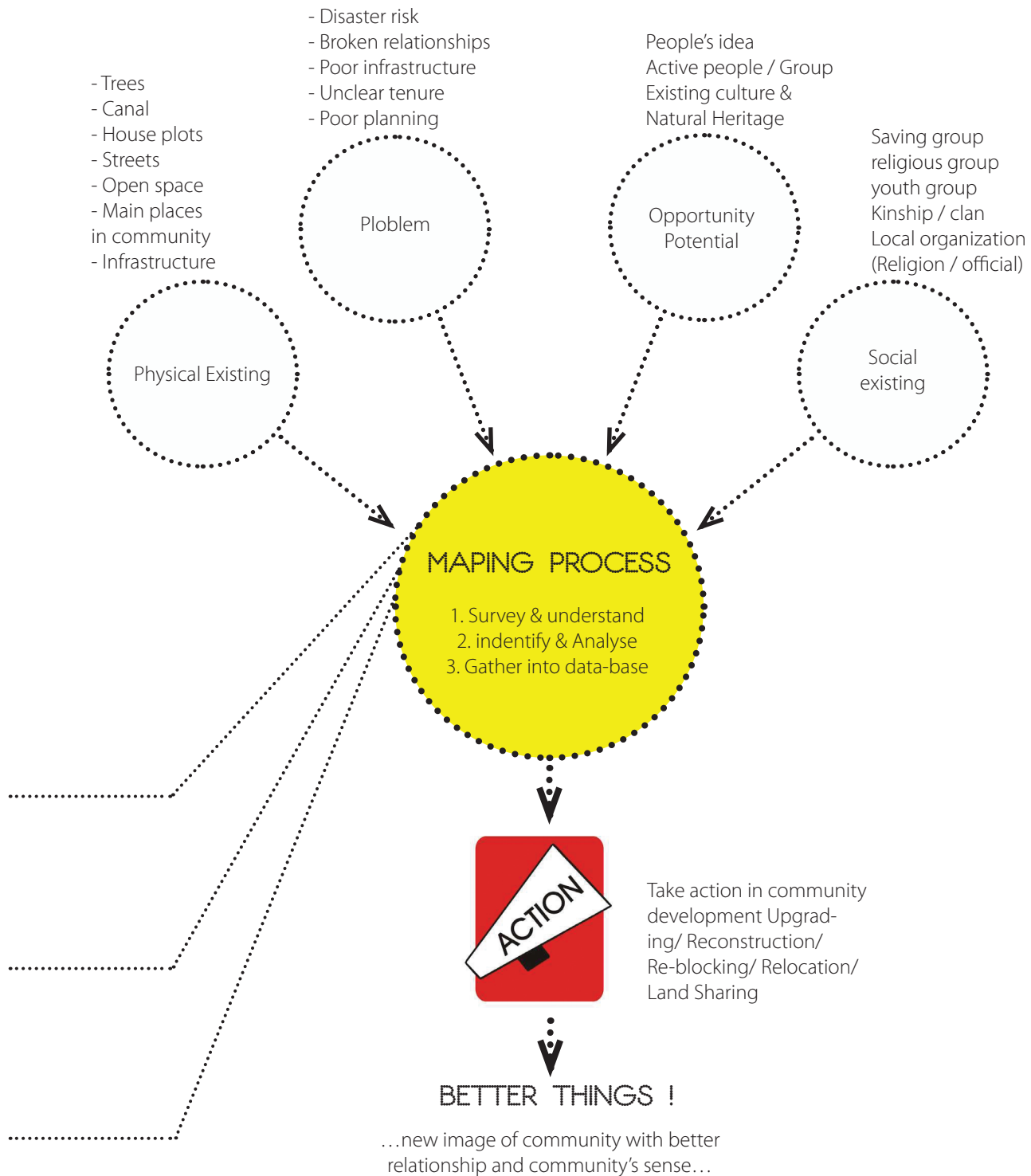
Mapping - What & Why ?

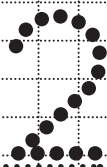
Mapping is the one of several tools available to help people in a community to jointly gain understanding and carry out planning, using the mapping process.

..... **1** To **survey and understand** the community together, looking at the relationship between the things being mapped, such as houses, canals, trees, roads, and important areas in the community, as well as intangible values.

..... **2** To help all community members to **identify and analyse** various matters: which things have potential in development planning, such as resources, where and what are the problems needing to be solved, such as land tenure, poor housing, insufficient infrastructure.

..... **3** To **gather information** into a simple database and a map, which can be used for community planning purposes – including peoples savings, healthcare services, community welfare, and disaster mitigation.





Level of mapping and what to map ?

We can map all things to make our community map, but the things that are really needed are the things that make our community better. Map the things that are valued by everyone in the community.

Level of mapping and what to map ?

Mapping can be done at any scale, starting from the housing level to geographical level. It can be focused on any issue, like housing, community problems, land tenure, people's history, even cultural and natural resources.



Geographical level

Mae-wang basin, Thailand
Koh Mook's island, Thailand



City level

Bharatpur, Nepal
Ayutthaya, Thailand



Community level

Muanvivatu, Fiji
Kalaetapae, Thailand
Salayani, Nepal
Community of Khawmu's network,
Myanmar



Household level

Panthaklin saving group community,
Myanmar



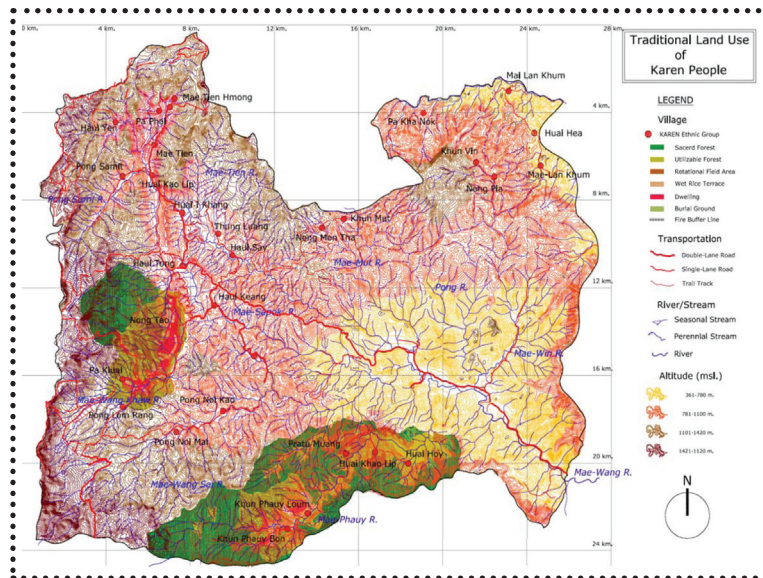
Issue-based level

Livelihood and life support's web, Nepal
People's history and idea for upgrading, Thailand

Scale of Mapping level

Big

Small



What to map ?

- Koh Mook's Island, Thailand*

What to map ?

- Local problems
- Community settlements
- Community forest area / boundary
- Road linkage in island
- Ports
- Bays



City Level

This mapping level gathers information like the location of communities, and their links to various modes of transportation. This map aims to identify and analyse all issues at a city-wide scale, and see how the city's different components, especially the informal settlements, function together as a city.

What to map ?

- City development plan
- Logistic
- Resources (Cultural/natural)
- Community
- City Node
- Market
- Temple
- Important places
- River bank
- Vacant & possible land for community housing



Bharatpur, Nepal

This city-wide survey map depicts the location of 19 squatter communities out of 54 communities (red color) which are squatting alongside the National Park. Why? Because the space is available and can provide natural resources, like timber and agricultural land for these communities who came from rural areas.



This mapping process gathers information on infrastructure at the community level, to capture community characteristic and the sense of community, alongside basic problems like insufficient infrastructure, future possibilities and peoples' ideas.

What to map ?

- Settlement history
- Land owner
- Family member/family head
- Number of children
- Water supply
- Toilet
- Electricity
- Canal/drainage
- Community forest
- Main road
- Open space/ ground
- Community boundary
- Occupation of each family
- Amount of saving
- Prioritized problems



Muanivatu, Fiji

This community mapping process was conducted by a Fijian women's group, taking one day to collect information and discuss about community characteristics, problems, and prioritizing problems to be solved.



Kalaetapae, Thailand

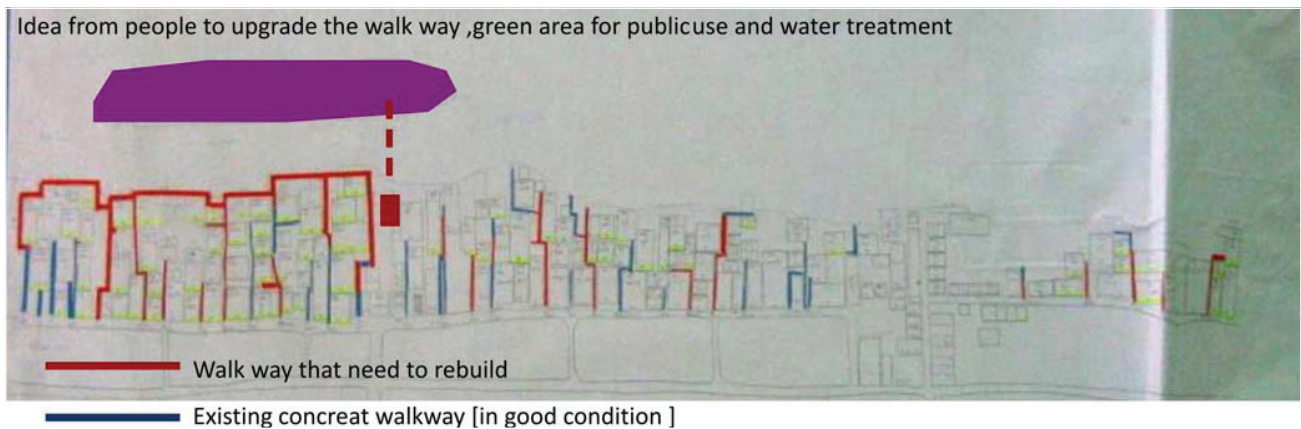
This mapping aims to find possibility of walkway upgrading by people, people

What to map ?

- House's plot & No.
- Basic infrastructure existing
- Poor infrastructure needed to be improved.
- Idea of the openspace planning



Idea from people to upgrade the walk way ,green area for publicuse and water treatment



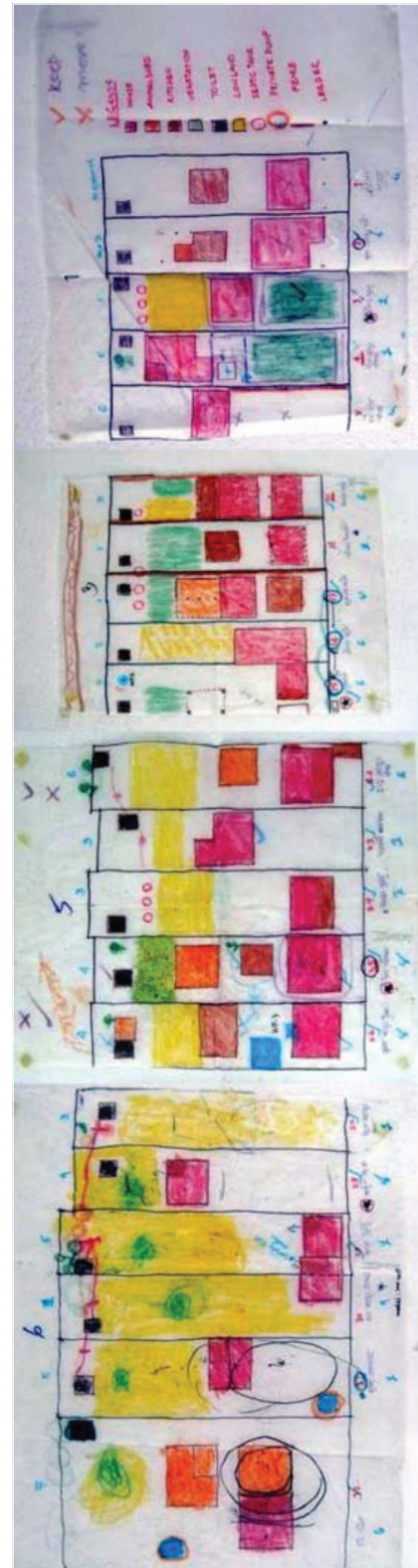


Salayani, Nepal

Mapping was done by people in subgroups (a total of 6 subgroups, totaling 31 households). This mapping process tried to build a mutual understanding between community people and the relevant agencies about how people live together as a community, as well as how each family uses resources from the community forest to sustain their lives.

What to map ?

- Houses
- Kitchen
- Community forest
- Vegetable plots
- Toilets
- Animal Sheds
- Water hand-pump
- Drainage





Community of Khawmu's network, Myanmar

This map is drawn by people who are living in rural areas of Myanmar, who were affected by Cyclone Nargis. By the process of mapping and discussion, this led to an understanding of their livelihood situation, and how a serious disaster made them become landless, and possible solutions such as land banks for landless farmers, and a knowledge center for organic farming.

What to map?

- School/Temple
- Farm land/Field
- Water resources / fish pond
- Market
- Irrigation channel
- Houses/Cluster
- Communal land
- Landless families
- Minimum land required per family





Household Level

This mapping process captures how people live together as a family: the type of mindset, culture, life-style, and economics of people, the knowledge that makes their household.

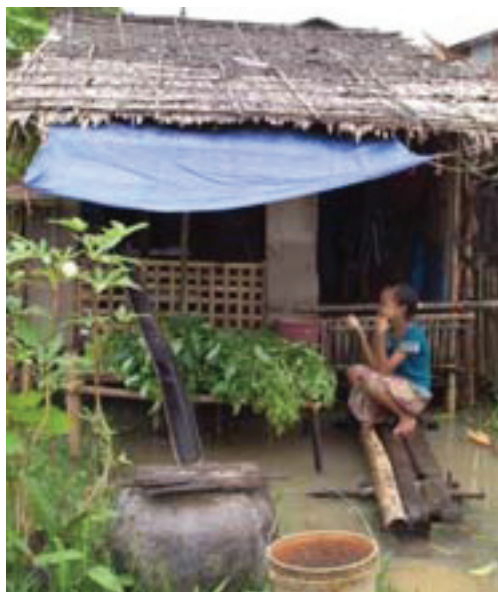
What to map?

- House Components
- Toilet, Garden, Animal Shade, Household Infrastructure, Water Pump
- Space Utilization
- Living Room
- Sacred/ Ritual Space
- Bedroom
- Surrounding area
- Canals
- Roads
- Farm



Panthaklin savings group community, Myanmar

We can get an understanding of peoples' housing by asking them to draw their "dream house", then making a space for them to share their dreams. This drawing shows how their beautiful dream house looked, with a big tree creating shade, an ancestral shelf facing the east, a separate toilet and animal shed, the house on stilts for flood protection, with a vegetable garden and common space at the front of the house.





..... Issue-based Level

Apart from the different kinds of mapping level, from large scale like geographical level, to the household level, mapping processes can be focused on any issue: livelihood and life support web mapping, people's history mapping, location of resources (both cultural and natural) mapping, economic, or mapping of people's ideas, and community mapping

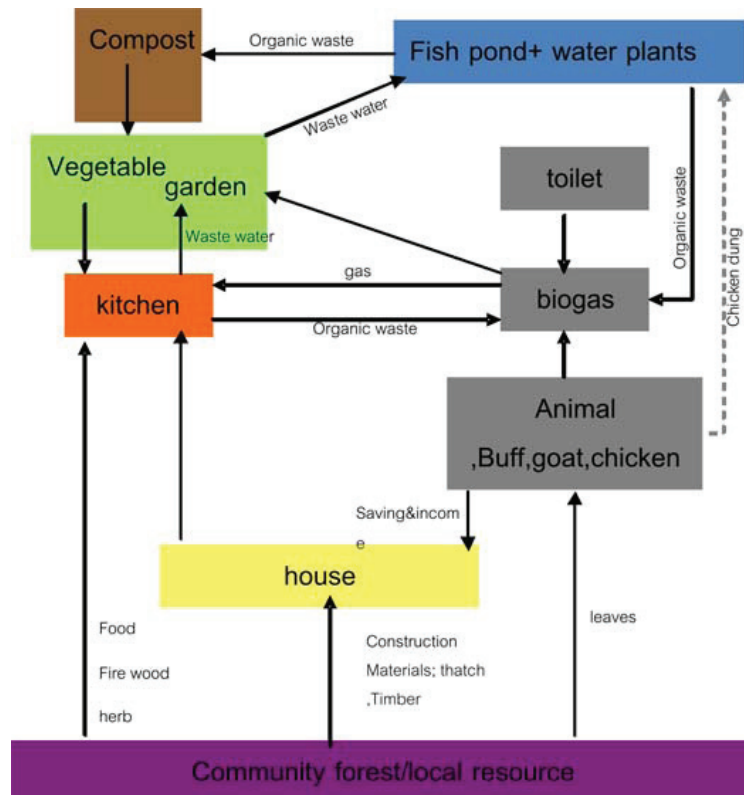
What to map ?

- Livelihood and life support elements, and how each element sustainably links together in the input/output line of resource use.



Livelihood and Life support's web, Nepal

This mapping represents the web of resources' usage of people and how it link together. We profoundly understand when we build new-people housing, we will keep these all component exist as economically.



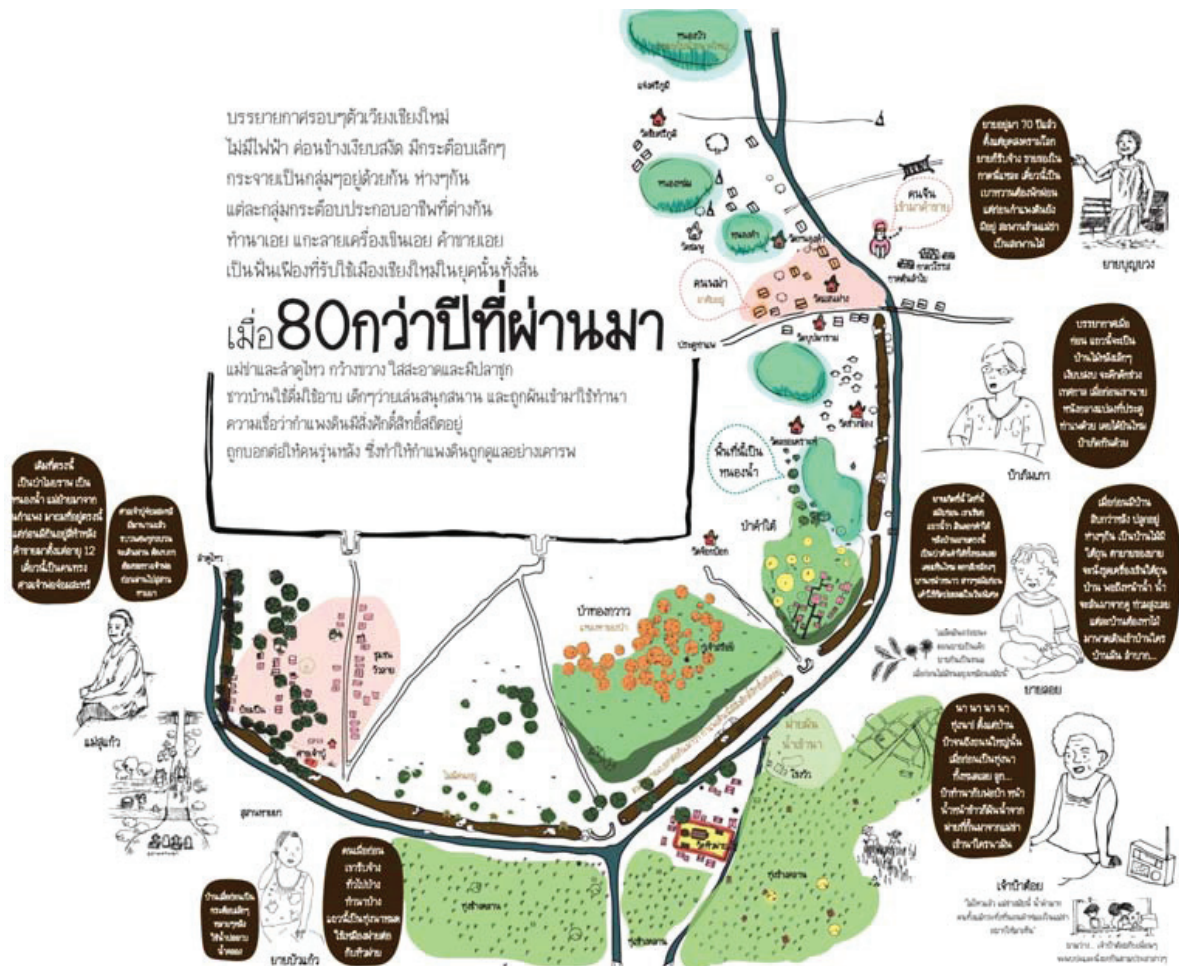


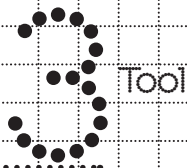
People's history and ideas for upgrading, Thailand

This mapping process represents the sense of community, historical place and memory, because of the site's recent changes, a historical canal which is now a sewage canal for the city. This map shows the good ideas and some initiated projects of community people to improve the condition of the canal.

What to map?

- Oral History and individual memory in the actual place
- People's ideas and initiatives done by the community





“ We use rope as a meter-tape, and we can use our body measure all such things ! ”

Basic survey format

The survey format can be prepared along with the mapping process (before/in between/after), depending on the situation and context. The survey form includes summarized information that cannot be represented on the map, such as household numbers, population, amount of savings. There are basic survey formats for both city-wide surveys and community surveys.



City-Wide Survey Form

City Name: _____

Location: _____

Date of Survey: _____

Recorder: _____

Brief about city: _____

No.	Community Name	Household No.	Population	Aged	Land owner	Basic Infrastructures					Other problems	Possibility & solution
						Water supply	Electricity	Toilet	Road	Drainage		

City-Wide Survey Form

City Name: _____

Location: _____

Date of Survey: _____

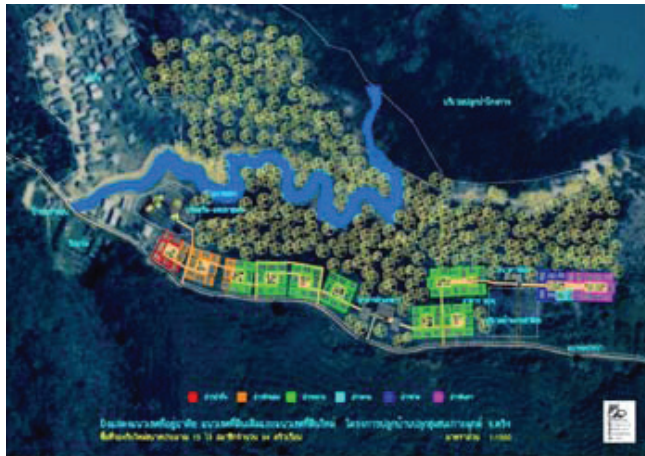
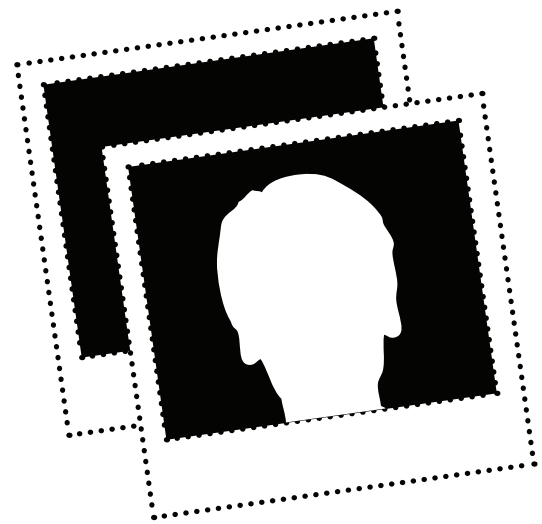
Recorder: _____

Brief about city: _____

No.	Community Name	Household No.	Population	Aged	Land owner	Basic Infrastructures					Other problems	Possibility & solution
						Water supply	Electricity	Toilet	Road	Drainage		

Basic map / old picture

Basic map and old picture is used as basic reference; such as location finding, locality landmark, area boundary and vicinity, logistics and transportations, in beginning of mapping process. Detailed maps like city plan or master plan for development, or resources map also important to have because it give a direction of city plan and available resource to use and conserve. Normally such existing map can get from local offices and authority. In case it is hardly to find, free satellite map from internet also the easily way to get.



Basic survey format

The survey format can be prepared along with the mapping process (before/in between/after), depending on the situation and context. The survey form includes summarized information that cannot be represented on the map, such as household numbers, population, amount of savings. There are basic survey formats for both city-wide surveys and community surveys.



: Measuring tape usually used for measurement.



: Sometime the work space could be used for measuring and visualizing. In this case, people used flooring tiles (30 x 30 cm.) for space visualization and to make arrangements for their house design.



Camera

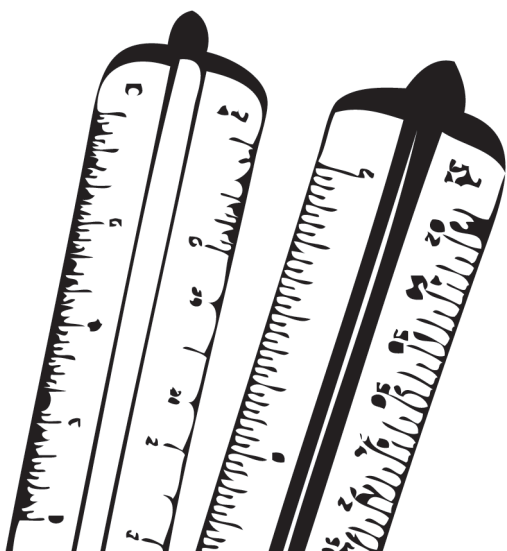
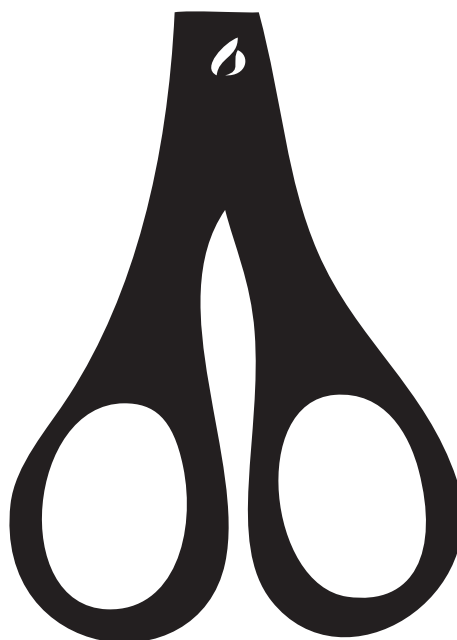
A camera is used to record pictures of elements and places during the mapping process. Things to be recorded include problem spots, important places, places with potential, existing community elements that could be used in upgrading ideas.

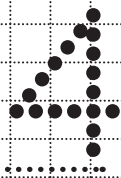


: Pictures can tell many stories and show the things in community in a different angle. We used recorded pictures to start the discussion.

Stationary

Plain paper or flip chart, graph paper (whereby one square can represent 1mx1 m.), color pen and pencil, sticky tape, glue, scissors, calculator, cutter, color paper, Plasticine clay, note pad.





How to survey and map ?



“ Doing right away is better than giving principles and explanations: once we do then we learn, we make mistakes and we re-learn. ”

City-wide surveying and mapping

1. Case from Bharatpur Municipality, Nepal

Aim

- To understand overall situation and summarize the number of informal settlements in Bharatpur Municipality together with community representative and government officers and working agencies.

- To prioritize the need from people's side by small upgrading, and identify way forward for the pilot project initiation that could be impacted for all.

Step by Step

1. Prepare map and city profile (in this case prepared by municipality)
2. Identify the informal community and settlement into basic city map.



: Community representative are mapping basic information about their community into the city map.



: Meeting at the municipality office to show the importance of the mapping process in the housing by people project.

3. Organize participatory mapping by inviting 8 representatives from each community to be in process.

- Each community group comes together and draws their community layout, showing all the amenities available, identifying their community in the base map.
- Add more information: number of households, number of household members, land ownership, details about accessibility to basic services.
- Present their community to the other gathered communities, learning together and sharing common problems, potentials for development.
- Refine the information into an informal data-base at the city level.
- For detailed mapping of each community, this was done later by the active youth group, community architects and local development agency, in each community. By assisting in the initiation of the mapping process, the interaction between the networks of communities, helped them to understand their situation and that of others, and intensifying the city-wide approach for future housing development.

Tips

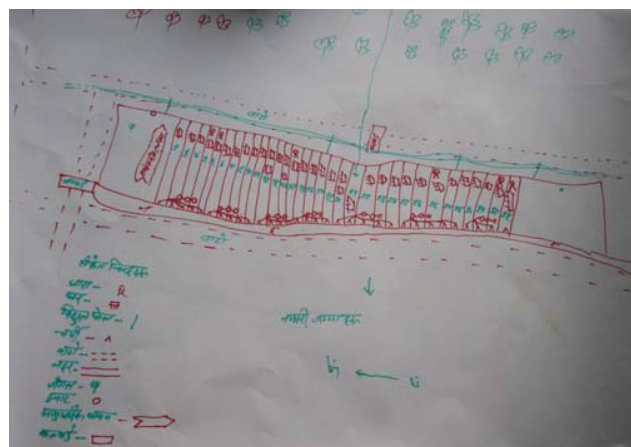
- Selection of a group of representative for city-wide mapping is the crucial stage. Those selected should know their community well, and should be both men and women.
- Youth group can be the important and active group to do the ground work.

Outputs and Impacts

- Establishment of a management committee for the Slum Upgrading Forum, including community networks and government representatives together as the key actors.



: Each group of community representatives drew their community map and shared their stories and problems.



: An example of a community map during the city-wide mapping workshop. Then the surveying and mapping team went to the community to collect detailed information on each.

2. Case from Ayutthaya, Thailand

Aim

- To form a people's network through the mapping process
- To understand the overall informal settlement's situation, as well as upgrading possibilities.

Step by Step

1. Prepare basic city map and city-wide survey form
2. Organize the surveying groups to conduct the survey, with each area/community sending a community representative as a host for the surveying process.
3. Present and share the information of each community and discuss community history, number of households, land status, area boundary, and community problems of each.
4. Put information (likes community pictures, community locations and names) together into the city map. Identify land ownership of each community by categorizing it into different colors on the city map.
5. Summarize all information into a city-wide survey table and distribute it to all communities.



: During the process of data forming, recorded pictures from each community gradually were included in the city map.



: The mapping team, consisting of men and women from the community, during the process.

After conducting the surveying and mapping at a city-wide scale, there is community surveying and mapping to collect detailed information on each community. This applies the same process and pattern of city scale in communities. Side by side, in the mapping process and discussion, the architect also can provide possible solutions for housing implementation by learning and understanding the mapping and discussing the output.



: This city-wide survey map shows locations of informal communities with number of households, history, problems, the land owner, and also the housing solution of each community.

Tips

- The role of the development agency is to organize the platform for people to work together (people-community-network) and asking open questions rather than providing the answers, such as "how do you explain your community"; "what kind of elements should be mapped for outsiders through the map?"
- After the mapping process, it is important to organize the discussion session, make it open for all people and stakeholders to discuss problems and possibilities.
- Working groups should be sub-divided into small groups (around 3-8 persons a group) who better know about their communities, and it can be started with one active person per group. Later it should include other representatives such as youth, women, and especially the poorest.



Outputs and Impacts

The result of the mapping process is not only all the datasets that were formed, but also people's networks which came together to categorise the common problems and a same time form a group that will stay together in same community in the relocation project.

กลุ่มที่ใช้วิธีการก่อสร้างใหม่ทั้งชุมชน(RECONSTRUCTION)
อาคารสงเคราะห์

กลุ่มอาคารสงเคราะห์
เมื่อการก่อสร้างบ้านใหม่เสร็จสิ้นแล้ว กลุ่มอาคารสงเคราะห์จะนำข้อมูลที่ได้จากการสำรวจชุมชนไปใช้ในการวางแผนการปรับปรุงชุมชนและขอเงินอุดหนุนจากภาครัฐ 200 ล้านบาท 40% โดยตรงจากเงินภาษีเงินได้บุคคลธรรมดาและ 60% จากเงินอุดหนุนจากภาครัฐ 40% ทำให้อาคารสงเคราะห์มีความมั่นคงและมีความปลอดภัยในการปรับปรุงชุมชน

เจ้าของที่ดิน กรมธนารักษ์
ขนาดชุมชน 66 ไร่
ขนาดที่ดิน 22 ไร่

มีชุมชนในถิ่นที่ชาวบ้านร่วมกันเขียน

การมีส่วนร่วมในการออกแบบชุมชน

รูปตัด มัธยม1 มัธยม2 มัธยม3

แนวทางการปรับปรุงชุมชน รูปแบบการก่อสร้างใหม่ทั้งชุมชน(reconstruction)
จากบ้านที่เก่าแก่และชุมชนเก่าทำการรื้อถอนและสร้างใหม่และสร้างบ้านใหม่
ทำเป็นชุมชนใหม่และมีความปลอดภัย ซึ่งเป็นการพัฒนาชุมชนให้มีความปลอดภัยและ
เป็นที่ยอมรับของสังคมและมีความปลอดภัยในการอยู่อาศัย

จำนวนบ้าน 64 หลัง
ราคาต่อหลัง 70,000 - 80,000 บาท
ราคาที่ดิน 4.88 ล้านบาท

มีชุมชนก่อนการปรับปรุง

มีแผนการก่อสร้างใหม่ทั้งชุมชน (Reconstruction)



: The mapping process also stimulates the sense of community about community upgrading.

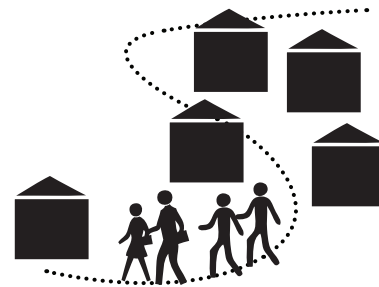
Community Mapping for Housing Development

1. Case: On-site Upgrading

Step by Step

1. Walking Tour in Community

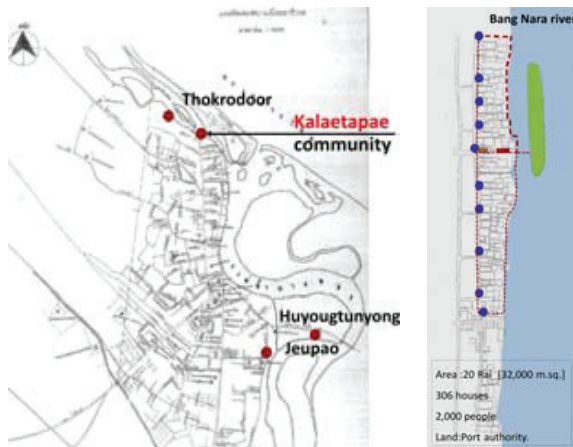
the process aims to stimulate community people in upgrading, and make people see their community holistically.



: Normally mapping and surveying starts with walking around the community with some active groups (saving group, community builders, and affected persons) to find common problems and the starting point of mapping.

Tips

- Walk in a small groups
- Each group should have basic community map that along walking people can take note or map.



: In this upgrading case from Narathiwat, there are four informal settlements on Port Authority land. During the mapping process and overall discussion, the community network chose Kalaetapae as a pilot project to show the Port Authority, because Kalaetapae is the oldest settlement and the community was ready to start upgrading.

2. Draw the community map

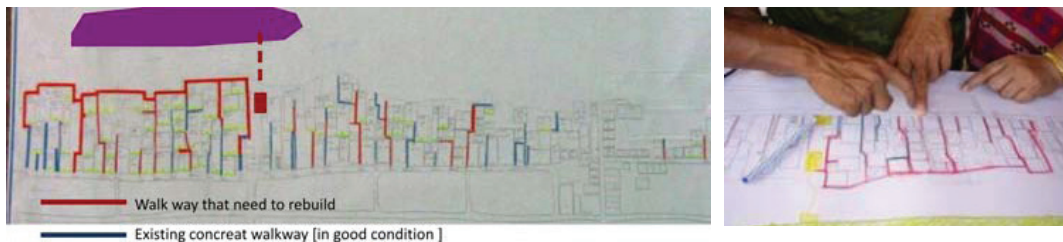
This drawing can be a simple drawing which explains the community's environment, location of important areas and every house in the community.

Tips

- In case the community is quite large, it can be drawn in small groups, then put it together to make a whole map.
- By working together, someone in a group will show their potential as a natural leader keen to work and contribute as a good teacher or coordinator.
- The working place, atmosphere and time are important to help to keep people motivated and interested.



: In the case of Salayani, the Nepal working group was divided into 2 groups: the women's group did the community mapping showing how they live as community with the forest, and the men's group with the youth measured the sizes of house plots.



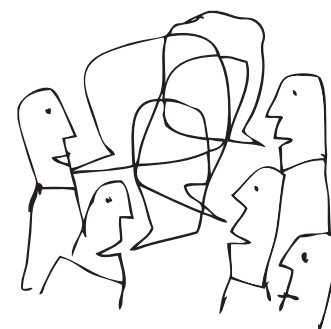
: In the case of Kalaetapae, the working team was divided into 3 zones. Each zone mapped the existing condition of the walkway : either good condition or needing rebuilding. During mapping workshops, people also found common problems such as lack of open space, and they planned to use the small island opposite their community to build a community center, playgroup, and garbage recycling centre.



: A series of mapping workshops were conducted by each of the four communities of Narathiwat. Kalaetapae was chosen as the pilot upgrading project.

3. Discuss through community map

Discuss through community map about the way for upgrading: try to find common problem and interest that people collect information into database which needed to improve. And also find things that people like or it makes sense of community



Tips

- Collect information into database.
- Make the meeting and discussion open.



: After people worked together on drawing and mapping to explain the community characteristics and problems, open discussions were arranged to collect information from all community members. These were to find common problems and steps forward.

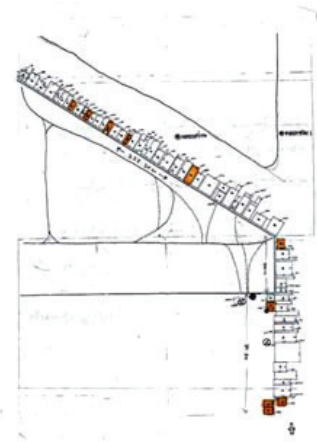
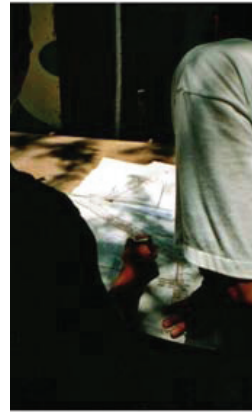
4. Transform community drawing into the scale map

After having community about upgrading direction, actual scaled map is required for upgrading planning (work division, cost estimate).

- Community Measuring: it can be done in a small group (at least 3 persons a group: 1 as a recorder, 2 as measuring men) or it can be done by individual family one-by-one.

Tips

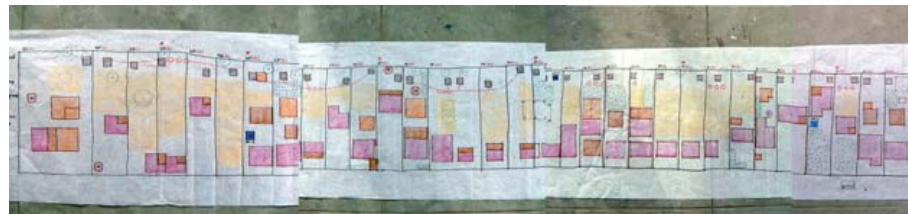
- Finding beginning point to start; the edge of community, road's junction
- Sometimes, it is needed to make measurement onsite again for re-check and edit.



: After the youth group helped to measure each house plot, it was time to combine them together into a scaled map.



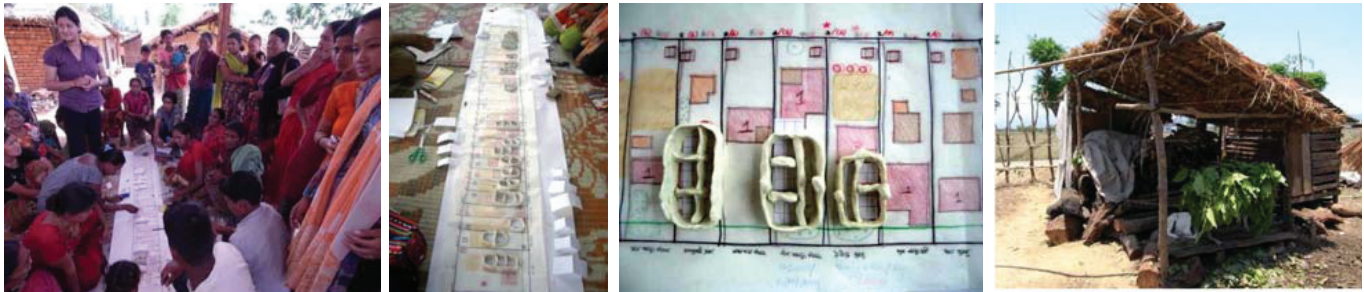
: Architects could help people to make scaled maps after people had drawn it.



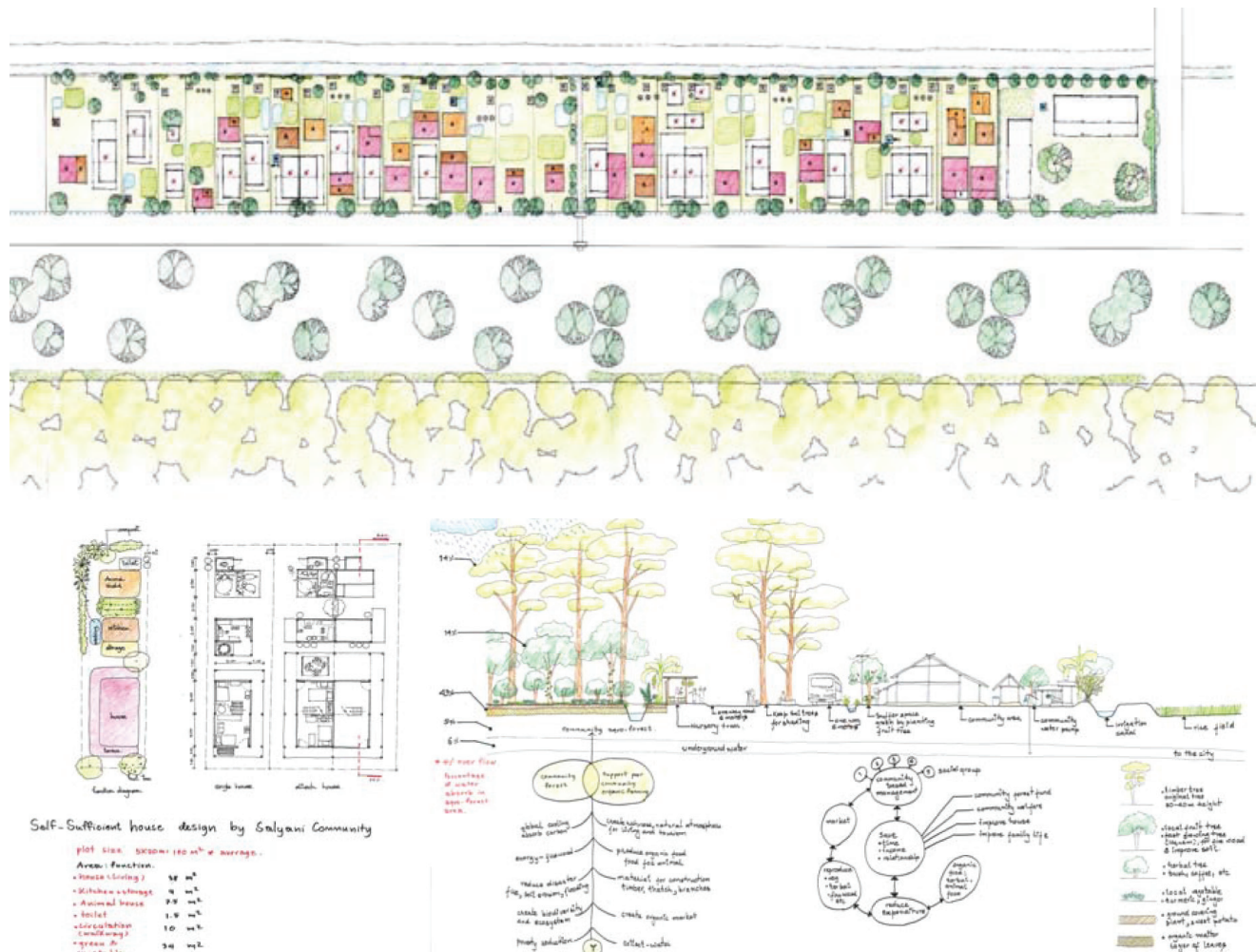
5. Discuss and plan for onsite upgrading through this complete map.



: By working together in the mapping process between the community and architects at Kalaetapae, a new image of the community arose, with better quality of life, open spaces, a community centre, and playground.



: After the mapping process, people started planning to improve their community by adjusting their house, using shared ideas and outputs from mapping and participatory design processes.



: Architects helped to translate people's ideas into sketched plans, adding some more inputs and ideas based on the actual needs of people and a sustainable vision by understanding the local context.

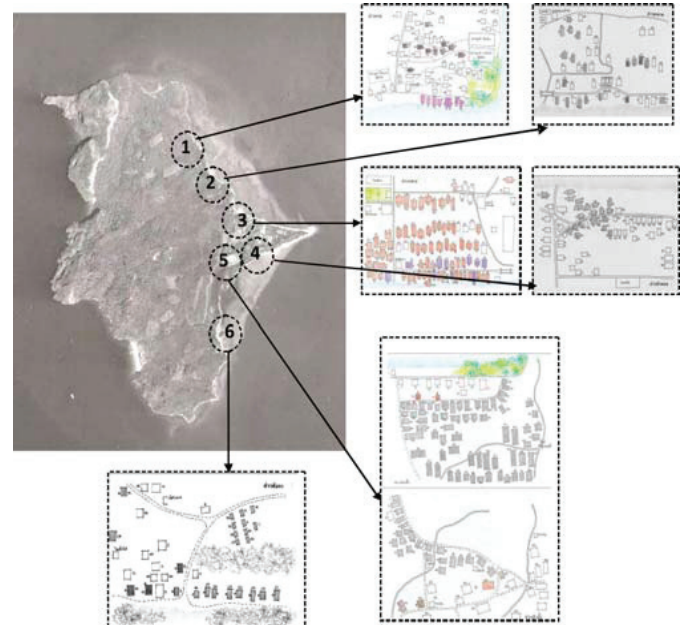
Community Mapping for Housing Development

2. Case: Relocation Lesson Learnt from: Thailand

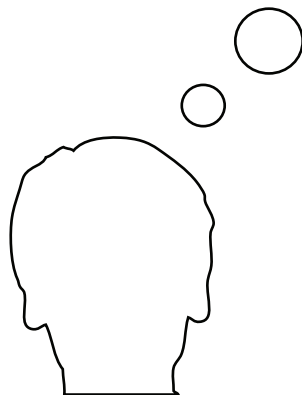
Mapping process for relocation project is difference from on-site upgrading, because people in relocation project need to move to new community, and start to create new relationship shaped by new setting. So that mapping should be the processes for people to understand and keep the value of old community transform into new location. And also the process among people group who will create new community together having time preparing them self by finding their new housing cluster, neighborhood group for staying as a new community's sense.

Step-by-Step

1. Making the imaginary map of existing community.

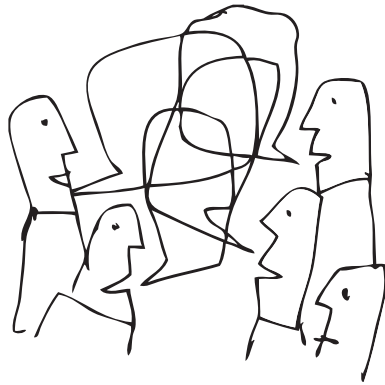


: In this case, the mapping and surveying process helped people to gather basic information about how many families in each community had no land title, and how many needed to relocate to a new community.



2. Discuss through the community map

: how people live together as community, and what kind of new location can meet the existing condition.



3. Create a community database, and organize a meeting among people to summarize:

- Number of houses moving to the new community
- Detail of those houses (see basic community survey in Tools chapter)
- Prioritized criteria for choosing new location

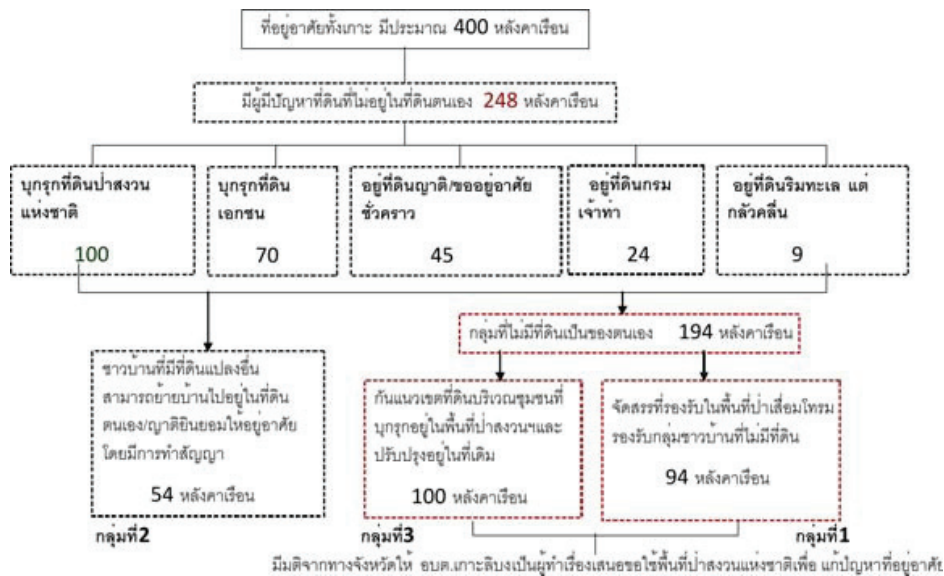
Questions to consider:

- Existing job and working place
- Amount of savings
- How many children going to school / distance from new location
- Land price of new location
- Basic services and infrastructure



: From the community map drawn and understood by people, the architect can help people translate this into a complete map showing clearer information, like the land's ownership, amount of savings, occupation, house number, and the group's name.

4. Map the possible new land and location into the city map, and also map the important nodes which are related to or affecting people's livelihood, such as markets, schools, working places, hospital, and disaster prone area.



: The architect helped to translate people's ideas into a sketched planning, adding some more inputs based on the actual needs of people and a sustainable vision, from an understanding of the local context.

This diagram shows the groups of families who are living in various locations, with various types of tenure. It also shows how possible solutions for each group could be implemented.

5. After collecting the above information from each community and through city-wide survey, a network meeting should be again organized to find which other communities need to relocate and how many families need to shift to the new location. In this meeting it is possible to identify which groups of families will live together in the new community. The next step will be participatory planning for relocation, with all members.



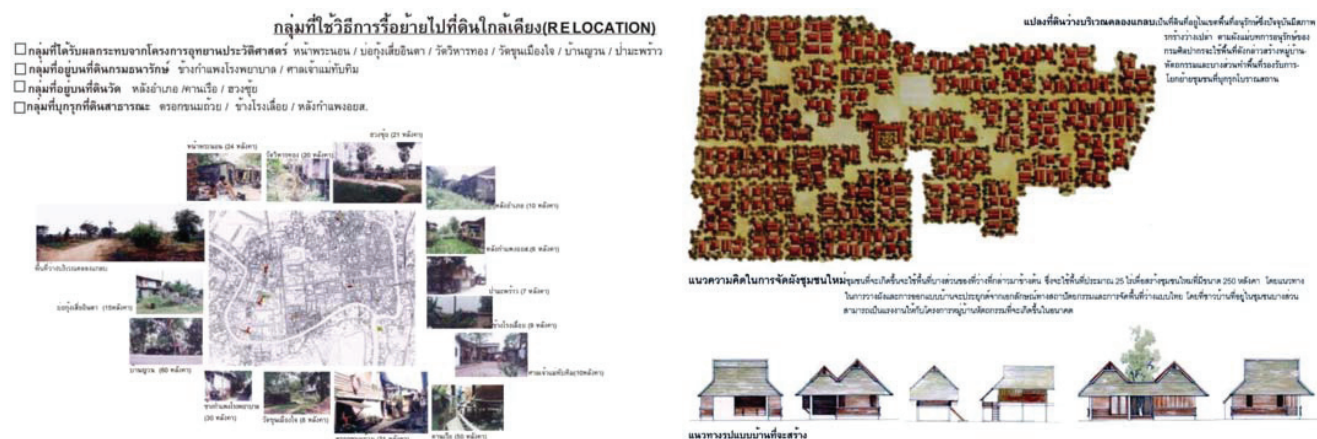
: This picture shows the working groups of each community: the community committee, number of members, and number of families in each community needing to be relocated.

Tips

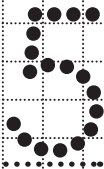
1. Meetings should be openly conducted for everyone in community and all stakeholders, so that everyone can recheck the benefits and avoid the situation of someone trying to take advantage.
2. A series of workshop or active meetings are a practical tool to gradually make new relationships for building a new community together.
3. People's occupation and resources mapping is also important in the large scale of relocation project, hence such relocation projects can start with the master plan of the locality and resource management



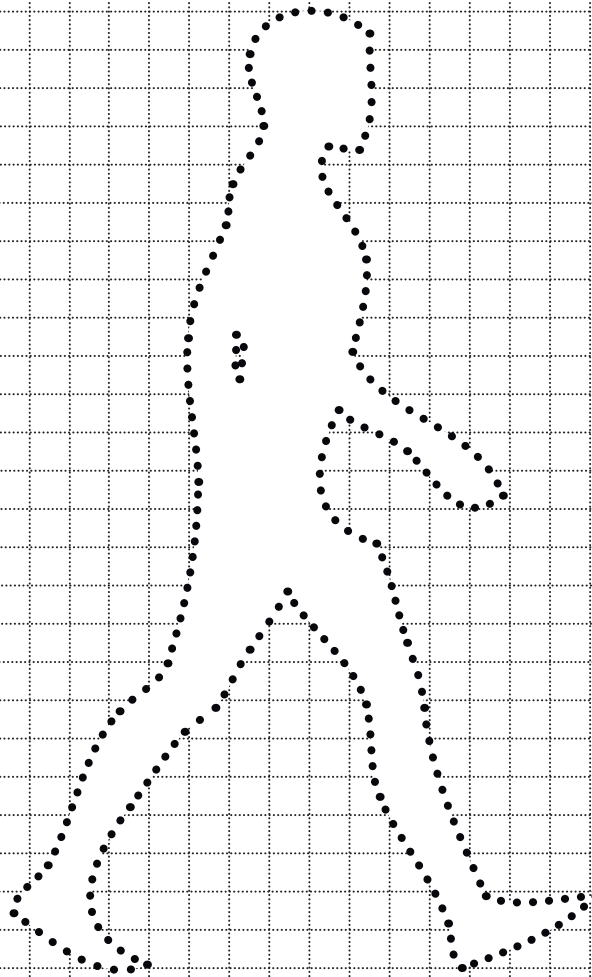
: There are working processes after mapping: working groups were formed, a new site plan for the island including the community was drawn.



: In the case of Ayutthaya, Thailand, after surveying and mapping, there was a number of houses which could not remain on site. The new location and plans were designed to serve this group who were relocated nearby.



Tips



“

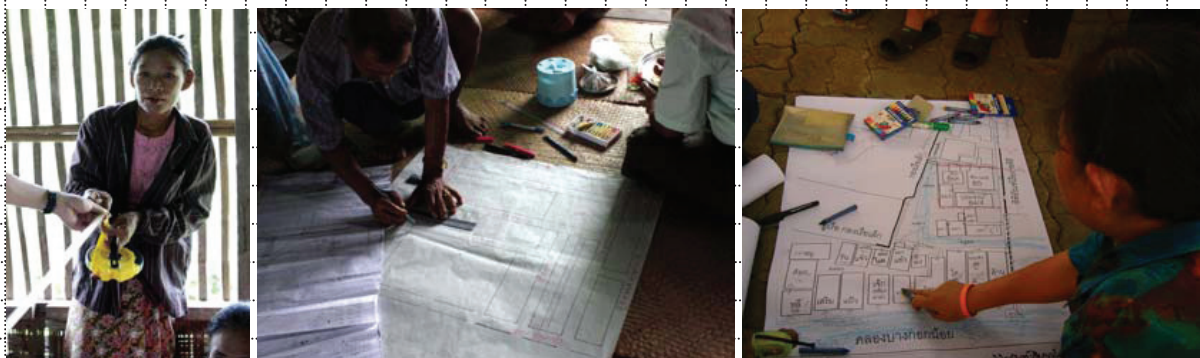
People are the subject of their dreams,
ideas, and potential. Once they realize
their power and potential they never
stop!

”



“ Make it fun likes a game rather than technical matter ”

: Start with the easiest step in which people have confidence, and avoid technical terms and steps which create tension. Little by little, people can take charge of the whole process with some support from the development agencies.



“ Mistakes by professionals can make people more confident ”

Community people know their community better than outsiders like support agencies. Our role as support agencies is to build people's confidence and help people plan and form their steps.



“ Children are a hope ”

Community children can actively help in mapping process, by measuring, being good company, and communicating if mapping is a challenge to them. Sometime children's idea and vision also suggest possibilities and solutions during mapping.



“ Measuring unit vs. body measuring ”

Keep in mind that measuring is the process of visualizing the actual size of matters. It helps to make things tangible and visible, rather than just saying 3 metres. Measuring can be conducted using any materials that make people understand dimensions, especially related to space utilization.



“ Good working place and time leads to good work ”

: A good atmosphere for working together is a key to success. Eating and drinking together during the work process can create a pleasant and friendly ambience.



“ Pay it forward ”

Once community people understand the concept of mapping, they can do and plan it in their way, moreover they can be a practical teacher for other communities.



“ Mapping by small sub-groups ”

Working in small group really creates a good job rather than work in big amount of people. 4-8 persons in a group are common number that everyone in group has role to work and space to learn and share. A group can be divided into women group, children group, mixed group which it depend on its purpose.



“ Think holistically, map it locally ”

Sometimes it is necessary to map something not directly seen as a problem, but which makes a community's situation worse and indirectly affects their livelihood, such as pesticides in farming, or chemical industries in nearby communities. Or it can be ordinary things in the community that are hiding their potential to help development and add to a sense of community, such as a community café or an open space for gatherings.

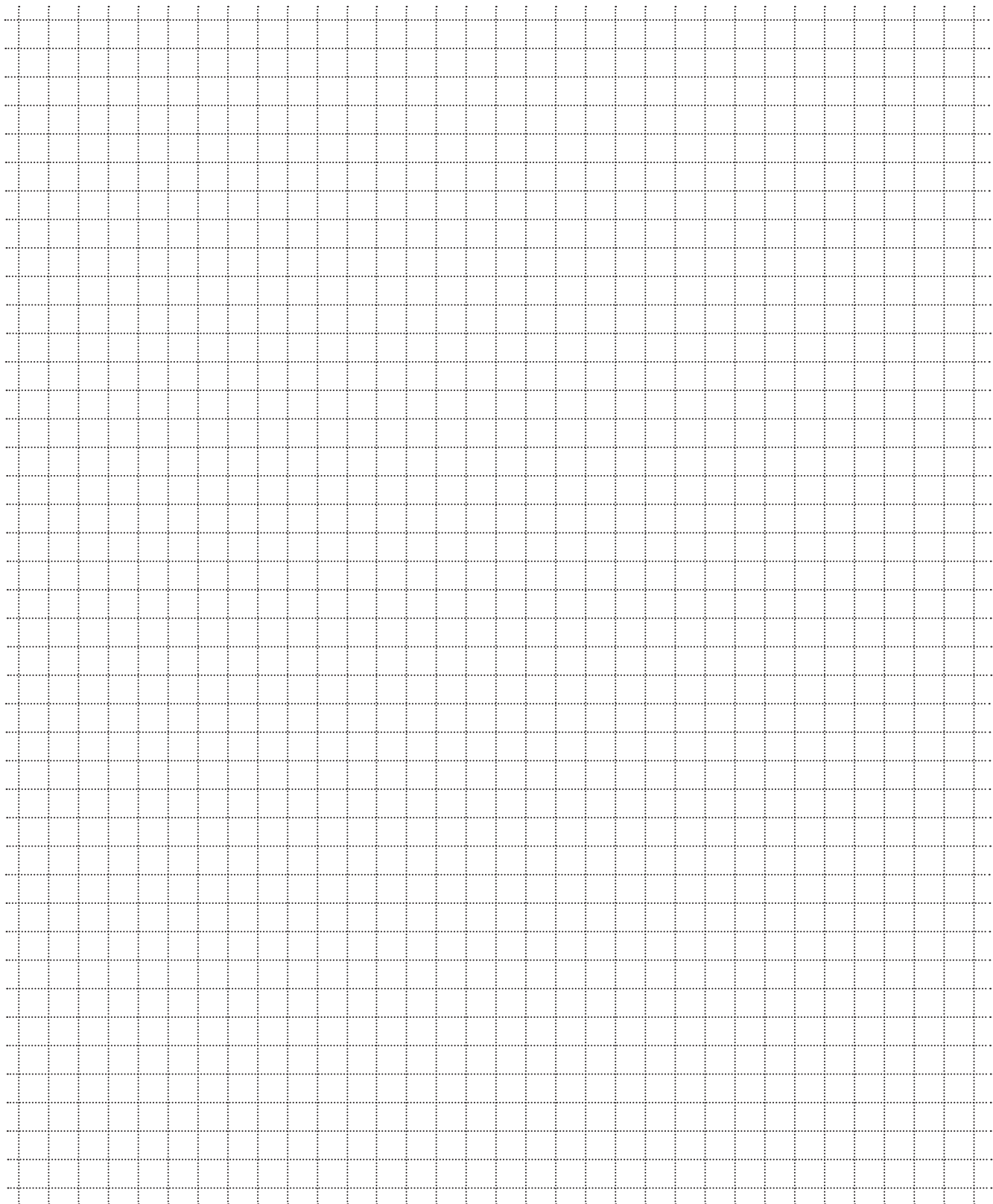


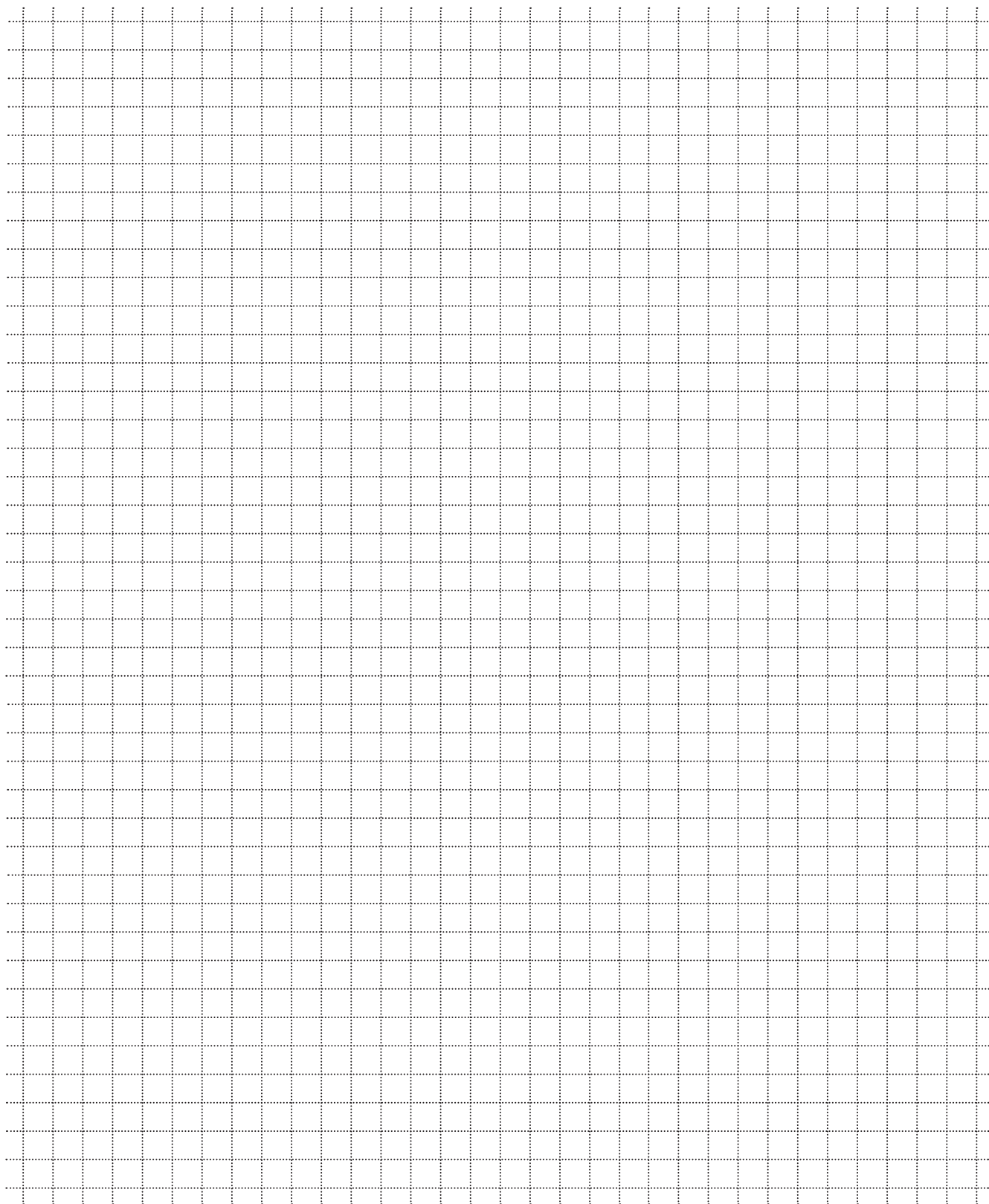
Handbook: community mapping for housing by people's process is a publication of the Asian Coalition for Housing Rights. It is produced in Bangkok and edited by Chawanad Luansang, Supawut Boonmahathanakorn, and Diane Archer, with great thanks to Chayanee Khunkan, and Suvapat Choodoung for beautiful layout and printing assistance from Parbpim Ltd., Part. All meaningful pictures and stories are from our friend working actively in Thailand, Nepal, Fiji, Myanmar, Indonesia, Philippine, as well as community people who are the key actors of the mapping process, contributing in this publication.

First published in Jan 2011 by ACHR

ISBN 978-974-496-4373

Printed in Thailand by Parbpim
296 Soi Suwicharndamri, Bangyeekhan,
Bangplad, Bangkok, 10700, Thailand
+66 2 433 0026-7







**Asian
Coalition
for Housing
Rights**

Asian Coalition for Housing Rights - ACHR
73 Soi Sonthiwattana 4, Ladprao Rd. 110
Bangkok 10310, THAILAND
Website: www.achr.net
Email: achr@loxinfo.co.th