

Building Inclusive Urban Resilience

Strengthening ASEAN Cities through Collaborative Action and Empowerment of Vulnerable Groups

Workshop on strengthening inclusive urban resilience through Nature-based Solutions in ASEAN cities

Workshop Documentation

Date: 08. + 09.11.2023

Time: 09:00 – 17:00

Location: Bangkok, Thailand

Overview of the workshop

Thematic focus

The two-day workshop aimed at contributing to increase cooperation on urban resilience with a focus on ASEAN cities and addressing the needs of vulnerable groups. It focused on combining two key topics of interest: increasing urban resilience through Nature-based Solutions (NbS), and addressing the need for more inclusive project designs.

Objectives

- Enabling exchange on past and future city activities and city interests, facilitating the identification of synergies between cities, implementing partners and regional interests
- Explore opportunities to further consider the needs of vulnerable groups and gender aspects in ongoing and planned urban resilience measures, with a focus on NbS
- Explore best practices on how to address the needs of vulnerable groups in urban resilience measures, with a focus on NbS
- Strengthening horizontal cooperation at city level

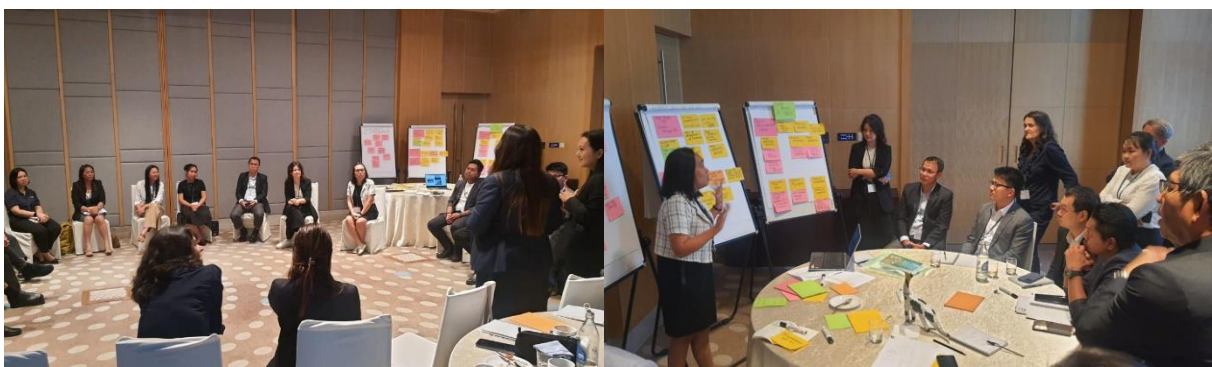
The workshop incorporated findings from an input paper provided as part of the project. The paper focuses on the same a topic area and lays the theoretical foundation for the workshop. The paper will be published at the end of 2023 and will incorporate relevant results from the workshop.

Workshop structure

In the workshop, the participants learned through a combination of expert inputs, discussion rounds and moderated group work sessions:

- What NbS are, including a presentation urban NbS families and relevant examples
- How vulnerable groups can be considered throughout the project cycle to assure an inclusive approach, and how their insights and contributions are often crucial for the success of NbS projects
- How using a gender-sensitive approach is crucial to empower women, work towards reducing gender-based inequalities and reduce women's vulnerability to climate and disaster risks, while highlighting the crucial role women play in strengthening urban resilience

The workshop participants further worked on case studies based on real project's in the participating cities, applying the learnings from the expert inputs and discussion sessions. In the first case study session (day 1), each group chose a real project or challenge from amongst the group participants' cities. They then designed an NbS project, specifically looking at possibilities to involve vulnerable groups and address their needs. On the second day, the participants further worked on their case study, with the goal to draft a gender-sensitive project concept. For the last session, all participants were asked to fill out a city profile, which could be used as basis for the final networking session. In the networking session, the cities could exchange on common challenges related to climate resilience, and on solutions they are already implementing or planning within their cities.



Workshop agenda

Time	Day 1: NbS and Vulnerable Groups
08:45 - 09:00	Registration and Welcome Coffee
09:00 - 09:30	Welcome Remarks and Getting to know each other
09:30 - 10:00	Introductory Presentation: "What are NbS and why are they relevant?" followed by Q&A, Daria Gettueva, adelphi
10:00 - 11:10	Group Work 1: "NbS and their implementation in cities"
11:10 - 11:30	Coffee Break
11:30 - 12:00	Group Work 1 Results Presentation: Gallery Walk
12:00 - 13:30	Lunch Break
13:30 - 14:10	Expert Input: "Empowering Vulnerable Groups through NbS" followed by Q&A, Anna Erbacher, adelphi, Sofia Castello, ThinkCity
14:10 - 14:50	Group Work 2: Cities' experience in working with vulnerable groups
14:10 - 14:50	Case Study Part 1: "Designing inclusive NbS projects"
14:50 - 15:10	Coffee Break
15:10 - 16:10	Case Study Part 1: "Designing inclusive NbS projects " continuation
16:10 - 16:40	Case Study Part 1 Results Presentation: In Plenary
16:40 - 17:00	Day 1 Wrap-up and Reflections

Time	Day 2: Gender-Sensitive Planning and Implementation
09:00 - 09:30	Welcome and Overview of Day 2
09:30 - 10:00	Expert Input: "Including the Gender Perspective" followed by Q&A, Anna Erbacher, adelphi, Sofia Castello, ThinkCity
10:05 - 10:30	Case Study Part 2: "Case study on inclusive NbS: including the Gender Perspective"
10:30 - 10:45	Coffee Break
10:45 - 11:20	Case Study Part 1: "Case study on inclusive NbS: including the Gender Perspective" continuation
11:20 - 12:00	Gallery walk for case study results
12:00 - 13:20	Lunch Break
13:20 - 14:00	Designing City Profiles
14:00 - 15:00	City Profiles Networking Rounds 1 and 2
15:00 - 15:15	Coffee Break
15:15 - 15:45	City Profiles Network Round 3
15:45 - 16:20	Feedback Round
16:20 - 16:30	Closing Remarks

Summary of workshop inputs and findings

Expert inputs

The expert inputs included four topics that were interconnected:

Nature-based Solutions, with a focus on ASEAN

In order to bring all participants on the same page with regard to NbS, the concept was explained and discussed in detail during the workshop. Questions such as “What are NbS?”, “What are they not?” and “What are they relevant for?” were discussed. Besides an introduction to the concept, the workshop also covered types of NbS, focussing on urban NbS. This included a closer look at the two approaches: hybrid NbS and ecosystem-based NbS, which were explained in the context of practical examples. The workshop also covered types of NbS and associated benefits, based on the World Bank’s urban NbS typology, including: 1. Protection, restoration and sustainable use of forest landscapes, 2. Providing space for rivers, 3. Urban green and blue spaces, 4. Sustainable management of agroforestry systems 5. Protection, restoration and management of wetlands, 6. Protection or restoration of coastal ecosystems. With regard to the implementation of NbS, there was and still is a lot of interest in cases and pilot projects among the participants. The input included presentations on best cases on NbS for urban resilience, both globally and in ASEAN.

Including the gender perspective

The second input presentation first covered the theoretical foundations of inclusive NbS projects. It highlighted that considerations in NbS projects to empower vulnerable groups have to be taken into account throughout the project cycle, including design and planning, implementation, and maintenance. Three key entry points to empower vulnerable groups through NbS projects were then highlighted and discussed: 1) strengthening participation and ownership, 2) inclusive concept and design (including aspects of accessibility, social infrastructure, safety, and location), 3) income generating activities and capacity building. Furthermore, it was highlighted how participatory approaches can help balance potential challenges, such as competing land uses and gentrification concerns, ensuring the continuity of projects and strengthening cross-sectoral collaboration. A case study was then presented: the nature-based climate adaptation program for urban areas of Penang Island, Malaysia. It highlighted the value of vulnerable groups participation, and described how the project included various community consultations and engagement opportunities. Challenges and key learnings were discussed with the workshop participants.

Empowering vulnerable groups through NbS

The third input first investigated interrelations of gender inequality and vulnerability. It highlighted that gender is still an important determinant of vulnerability to climate change impacts in ASEAN, highlighting some differences in socio-economic opportunities, political participation and livelihood between men and women in ASEAN. Factors contributing to the vulnerability of women to climate change were then discussed, such as:

- Gender bias in power and decision-making
- Women tend to spend more time on care work, unpaid work or work in the informal sector
- Differences in income and assets
- Gender roles and cultural patterns, which affect mobility and education
- Sex-related factors causing an increased risk of women being impacted by sexual violence

In the second part of the input, key considerations for the inclusion of women in NbS projects were presented, differentiating between project design practices and project implementation practices. Different project examples which had implemented those considerations were then presented, highlighting the importance of women participation and enabling women to take over leadership roles.

Group Work

The group work revolved around topics connected to the expert input. First, participants were divided in three groups and shared their experiences and needs in implementing NbS with a specific focus on vulnerable groups and gender perspective. In the next step, each of the groups chose a specific case they developed. In the final step of the workshop, each city representative worked on their city profile and shared it in three consecutive networking rounds with the rest of the participants.

The group work includes the following results:

Topics cities are interested in targeting using NbS:

- Addressing climate-related risks, with an overall strong interest in addressing flooding and heat
- Tourism development
- Community gardens as NbS with various co-benefits: food security, income generation, healthy lifestyle
- Projects combining NbS and waste management
- Involvement of women and elderly in NbS
- Saving electricity through NbS
- Green roofs
- Income opportunities through NbS, reduction of urban poverty
- Including indigenous communities and promoting local knowledge

Activities related to NbS which have already been implemented in the cities, or which are in planning:

Policies and strategies:

- City-wide target for increase in urban green spaces (for ex. by 30% or number of trees planted per year)
- Public gardens and green areas promotion
- Zoning maps, including designated green spaces, and other open space policies promoting green urban areas

Projects:

- Rain water harvesting
- Urban farming
- Coastal protection through the establishment of (semi-)natural buffer zone
- Use of constructed wetlands for water retention
- Mangrove projects for coastal protection
- Promotion and implementation of climate-smart agricultural practices
- Riverside greening for flood protection and stabilization of river bank
- River conservation projects

Experience of working with vulnerable groups in projects

- Including indigenous knowledge
- Engaging youth groups
- Through forest restoration programme
- Encouraging outdoor activities by providing spaces in parks, such as safe zones for elderly
- Promotion of income generating NbS activities
- Database of vulnerable groups (map with locations and hazard areas)
- Food bank projects
- Little experience with specifically designing gender-sensitive projects

Some Lessons Learned

- Many cities have already implemented projects which, at least in part, qualify as NbS – they were just not familiar the terminology
- Participatory processes should be part of the entire project cycle

- Communication as an important aspect: to raise awareness for climate risks, to reach target groups for project consultations or involvement, to disseminate knowledge
- Projects have so far often not been planned and designed in a gender-sensitive way, but workshop participants were very interested in the topic and how to improve this in the future
- Continuity of projects must be ensured; both acceptance and ownership by the local community, and long-term financing are key
- Adaptation financing as another key topic of interest
- Cultural sensitivity and power dynamics should be taken into account in project design
- Cooperation with universities can be of benefit
- Cultural transformation might be necessary in some cases

Photo documentation: Group work results

Group 1

Group Work 1 (Day 1)

HAVE YOU WORKED WITH NBS BEFORE?

- Community Garden
- man groves
- Clusters of family maintain garden together
- Vertebrate grass palm plantation
- Restoration river
- nursery done by indigenous women

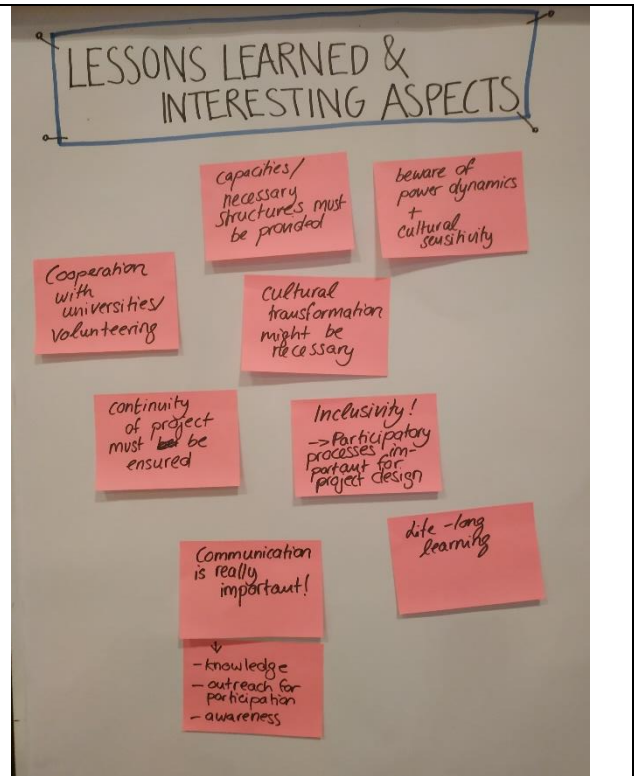
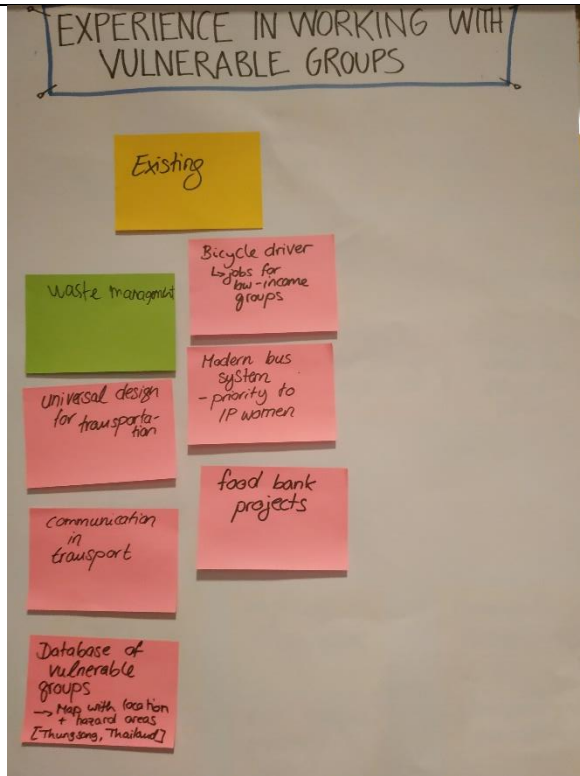
ARE NBS CONSIDERED IN YOUR CITY STRATEGY/URBAN PLANNING?

- 30% go increase green spaces - Davao
- Similar with Phnom Penh
- Rain water harvesting
- Green Areas: more 9 m²/person - Phnom Penh
- 15 mins to parks/open spaces - Bangkok
- Zoning plan
- Zoning map
- Strategy: 10000 trees per province per year - Cambodia
- Strategy: in VN: 100 million trees planted 2020-2025
- Davao: 4000 native trees are planted in city - Davao tourism in Cebu
- NBS: Increase of biodiversity - Salt production? - Kampot city

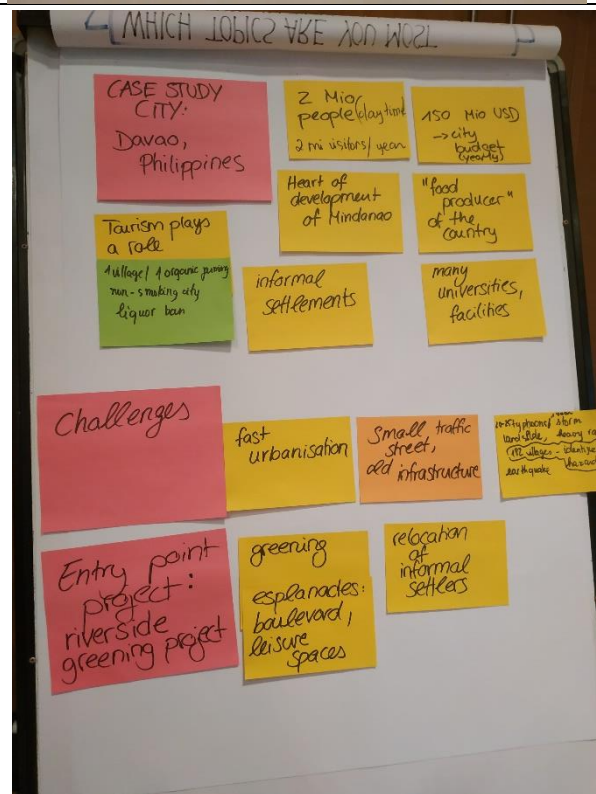
WHICH TOPICS ARE YOU MOST INTERESTED IN TARGETING WITH NBS?

- ZoSA 30% of Mekong Delta under water - Davao/Lithuan
- How to develop tourism through NBS
- Community garden - health - Lushan
- Waste management (reduce plastic)
- Involvement of Women in NBS is crucial - Davao/PH
- Sort Solving organic waste
- + elderly people (because of existing knowledge)
- Upcycling (with plastic parts) - Davao/PH
- Using electricity (Solar, LED)
- Waste to Energy: Organic waste → Biogas, Plastic waste → RDF, Solid waste → Electric (Thailand)
- Green Roofs (costs?)

Group Work 2 (Day 1)



Case Study Part 1 (Day 1)



The participants developed a project concept to improve the current riverside greening measures in Davao, Philippines, in order to better include and consider vulnerable groups, and to maximise biodiversity benefits. This included extending the greening areas, using native vegetation suitable to mitigate erosion and flood risks, further limiting quarrying activities, include income generating activities and opportunities for small businesses, while including various community consultation formats and collaborative activities with the local community.

Case Study Part 2 (Day 2)



In the second case study session, participants reflected whether their previous project concept was gender-sensitive, and made suggestion how to support women participation and empowerment through an improved project concept. This included ensuring the participation of both men and women in community consultations and project activities, including the generation of sex disaggregated data. It was further suggested to integrate a gender Action plan into the work and finance planning of the project. Furthermore, participants suggested a women’s quota in the project team, using targeted communication messages and channels, and finding and recognising female heroes. Group participants then considered how project activities could be altered to give more opportunities to women, and proposed various entry points to address women in capacity building programs and potential income generating activities related to the project.

Group 2

Group Work 1 (Day 1)

HAVE YOU WORKED WITH NBS BEFORE?

- Ecosystem based Adaptation. (Indonesia, Laos)
- SAMAL Program Planning for Social Programs includes Climate change Adaptation in design phase (Laos)
- URBAN FARMING. (Indonesia, Malaysia)
- Climate Smart Agriculture Roll-out (Siem Reap, Cambodia)
- Growth Green Area in Panatrichon city, Chonburi. (PUBLIC PARK)
- Mangrove Protected Area (MPA) Management System (Calapan City, Phi)
- Public work and Transport
- Agriculture (Laos)
- Education
- Tourism (Laos)
- SUSTAINING THE 23 MARINE PROTECTED AREAS: ECO-AGRI-TURISM STRATEGY

ARE NBS CONSIDERED IN YOUR CITY STRATEGY / URBAN PLANNING?

- ALL CITIES HAVE NBS
- Smart Environment plan for Smart City Proposal (ALL SMART CITY PROPOSALS MUST BE GREEN (RELATED TO SUSTAINABLE))
- URBAN FARMING is not mandatory IF voluntarily built working by community
- MANDATORY IN ALL PHILIPPINE CITIES & MUNICIPALITIES; PART OF ANNUAL ASSESSMENT (LEGISLATIONAL MAND)
- STRATEGY PLAN of city: Promote to make more public garden, green area, renovate the old place with green urban design. (Thailand)
- ADAPTATION ACTIVITIES in the Philippines:
 - Mangrove Tree Planting/Restoration
 - Local Production through green buffer establishment
 - Rainwater Harvesting
 - Carbon Sequestration/Credit Trading
- PERMEABLE PAVEMENT (PHILIPPINES)
- NATIONAL POLICY: NEW GOVERNMENT BUILDINGS SHOULD HAVE AT LEAST ONE WATER COLLECTION TANK... (PHILIPPINES)
- TARGET: RE 3 SE have a target 30% but challenges is about past data for IM.
- ALL CITIES HAVE ZONING PLANS (INCLUDING GREEN)

WHICH TOPICS ARE YOU MOST INTERESTED IN TARGETING THROUGH NBS?

- Social benefit 50%
- Environment benefit 50% (Indonesia, Laos)
- INTEGRATION OF PNWDs (POND-URBAN RESILIENCE PROGRAM) & NBS ESPECIALLY IN THE COMMUNITY BASED REHABILITATION PROGRAM (SAMAL)
- Island mangrove: 1) Protection of urban green spaces thru urban farming 2) Risk and disaster management 3) IM urban observatory
- Disaster Risk Reduction
- Urban Green Space Area. (Laos)
- COLLABORATION WITH TOURISM SECTOR (100% AND) TO INTEGRATE NBS (TREE PLANTING) IDEAS IN THEIR FACILITIES (SAMAL)
- Calapan City NBS Targets:
 - Mangrove Ecosystem Enhancement - through planting + Social Mobility (livelihood opportunity - bee production)
 - River Restoration to address flooding hazard by embankment activity
 - Marine Protected Area Management - (Seagrass, Coral Reefs protection) - environmental
- reduce Climate change 100%
- NBS for increase Economic growth for People better living cond.
- 1) Protect environment "Green garden, Waste Management"
- 2) Support community "Farming, safety, organize"
- (Siem Reap, Cambodia)

Group Work 2 (Day 1)

EXPERIENCE IN WORKING WITH VULNERABLE GROUPS

- DM.
 - BAO.
 - Youth.
 - Elderly.
- Indigenous people
- Low income
- elder
- 1. Yes. Rural poor families ID Poor & Poor
- 1. Hearing Impaired
- Hill Tribes
- eldest people CNK.
- Coding School for hearing impaired
- E-Courses for Hill Tribes
- Social Media Screen Education for older.
- SOLID WASTE MANAGEMENT GROUP (CALAPAN CITY)
 1. Waste not, want not
 2. Informal waste pickers
 Provide Alternative livelihood opportunities for them
 - eco-bag making
 - eco-brick making
- SAMAL, PHILIPPINES
 1. INDIGENOUS / HILITAN COMMUNITIES
 2. JAKHAYAN PEOPLES
 3. PERSONS WHO USE DRUGS (PND)
 4. WOMEN IN BARRIERS
 5. OUT OF SCHOOL YOUTH
- STRONG
 - ORGANIZING THEM INTO GROUPS
 - VOICE, CHOICE, PARTICIPATION
 - Member of Councils

LESSONS LEARNED & INTERESTING ASPECTS

- GOV'T PROGRAMS FAIL DUE TO LACK OF RISK ASSESSMENT OF BENEFICIARIES (small water)
- INCENTIVES TO EMPLOY WORK BETTER THAN GRANTS
- CAPACITY BUILDING TO FATHERS
- REVOLVING FUND
- VOLUNTARY TRAINING
- CLEANING THE CANAL IN CHIANG MAI (CREATED OPPORTUNITIES IN TOURISM FOR URBAN POOR).
- SHALLS BECOME SOUVENIRS - FISHERMAN
- 1. older health
- 2. Green Public Park: Friendly with Universal design
- 3. Panatitikan city.
- 1. Vulnerable Group
- 2. NBS in City: Clean water
- 3. Chiang Mai
- CALAPAN CITY, PHILIPPINES
 1. Informal settlements along the riverbanks & Mangrove Forest
 2. Mangrove Ecosystems along the Calapan River System
- 1. Vulnerable Group
 - Indigenous people;
 - Low income;
- 2. NBS project
 - Ecotourism.
 - Organic farming.
- 3. Xay district, Laos.
- ISLAND GARDEN CITY OF SAMAL (PNUDS)
 - CHILDREN COMMUNITIES
 - PERSONS WHO USE DRUGS
- NBS in Ecotourism (local community)
 - Strategy in Rehabilitation & Rehabilitation in the community level
- 1. Vulnerable group
 - Improving income of urban people through promote vegetable farms to supply in the market.
- LOW INCOME

Case Study Part 1 (Day 1)

CASE STUDY LOCATION: ISLAND GARDEN CITY OF SAMAL BAT CITY

POPULATION: 107,000 30,000 ha

DRUG ADDICTS: 7,169 → 20-60% (DA)

PROBLEMS: SEA LEVEL RISE
FISH / BATS
TOURISM

CONCEPT: RECOVER AND INTEGRATE DRUG ADDICTS IN A 3-PHASE NBS PROJECT

1. PLANTING MANGROVES
2. VISITS TO THE BAT CAVE
3. MONITORING FISH - (THE BARE ONE)

350 RECOVERING DA PER PROGRAM, DEPENDING ON THEIR CHOICE

Participants of the second group chose an existing initiative in Island Garden city (Samal, Philippines) as case study, which is supporting the recovery of drug addicts. They created a project concept to combine the current initiative with an NbS project, in which the program participants would support mangrove planting activities, fish monitoring and organise visits to the bat cave, thereby restoring and protecting the island's ecosystems while giving the program participants a chance to be involved in work-like activities.

Case Study Part 2 (Day 2)

Gender Goals

- 1. Equal opportunities**
- **Livelihood trainings**
- **Capability enhancement**

1. Remove shame of female PWUDs

Strategies

Include PWUDs families in the Program


Ensure gender balance in the project staff

Project Leader: KAREN KAYE RUIZ, MPA


Head Secretariat: REY ANN JACOSALEM, LPT, RN

Project Staff:

- 1. CHOLOU JIVAN GACO**
- 2. SATURNINO BANGGAT**
- 3. JONATHAN TIBAY**
- 4. RUTH LUNA**
- 5. JANIEL REBIGAN**
- 6. HAPPY SAMIANA**



2



6

Systematize a monitoring evaluation and learning framework in Project design and implementation including disaggregated data collection by sex and other socioeconomic factors. Iterative process during the project cycle.

- **Institutionalized 46 Barangay Anti-Drug Abuse Councils**
- **Utilization of National Information System for ADACs**
- **Utilization of Provincial Information System for ADACs**
- **Annual Assessment of ADAC (National & Provincial)**

In the second case study session, participants reflected whether their previous project concept was gender-sensitive, and made suggestion how to support women participation in the program through an improved project concept. Changes to the project concept included targeted gender goals, namely livelihood and capacity trainings. Furthermore, suggestions were made to include entire families in the program, to ensure gender balance in the project staff, and set up a monitoring and evaluation system collecting disaggregated data by sex and other socio-economic factors.

Group 3

Group Work 1 (Day 1)

HAVE YOU WORKED WITH NBS BEFORE?

- "Green Zones"
 - Community projects
 - ~ 1-400 acres
- Constructed wetlands
 - Prik Municipality, Songkhla, Thailand
- Tree lines at farm areas
 - > wind breaker (rural area)
- Mixed agriculture programs
- Interest in promoting food security
 - Philippines, Thailand
- River conservation (also for fishing) + tourism
 - Ranau, Malaysia
- Promoting local plants (botany) -> science project
 - > local wisdom
 - Ranau, Malaysia
- Top-down regulation
 - waste -> risk
 - planning regulation
 - conservation
 - Ranau, Malaysia
- "Green walkable city"
 - > how to re-design the river bank
 - Battambang, Cambodia
- Controversy: low/no tax on agricultural areas
 - > not always best incentives for cities
- Philippines: national government funds grant bamboo for river side as city project
- Mangrove forest projects

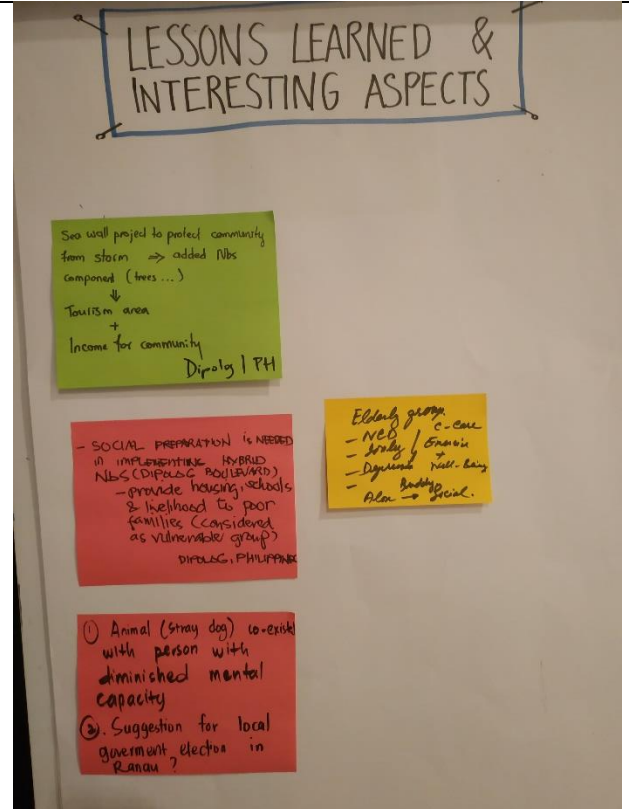
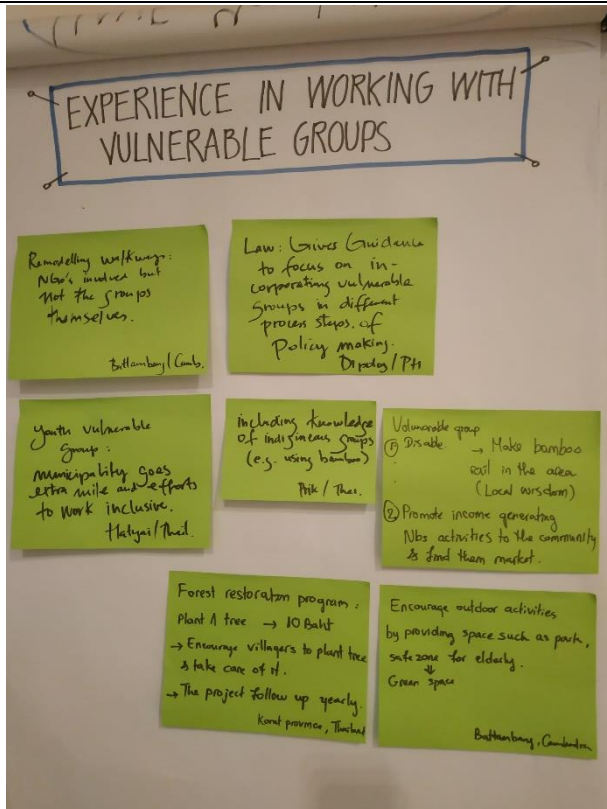
ARE NBS CONSIDERED IN YOUR CITY STRATEGY/URBAN PLANNING?

- Policy for green zone, people to plant trees
 - now: 20% target: +5% in 10 years
 - [Thailand, Hanoi]
- Underground water bank outside the city
 - Increase tree area
 - River conservation
 - > waste mgmt
 - [Luang Prabang, Laos]
- NBS already in short term plan
 - Forestation in villages -> "tiny forest"
 - Forest protection
 - Management of eco-tourism parks
 - > Upgrading: Master Plan on urban development, include NBS
 - [Dipole, Philippines]
- Open space policy
 - increase / open space walkable city
 - Greening / shade around soccer field
 - Constructed wetland -> flood reduction
 - Underground waterbank -> reduce flooding
 - [Prik Municipality, Thailand]
- Issue: rain-driven flooding
 - Interested in constructed wetlands, but very dense city
 - Build dam at the river side
 - Part of Smart City Network
 - Heritage city
 - Aim: walkable city
 - Problem: heat
 - [Battambang, Cambodia]
- Mangrove projects
 - Program: tree planting in school compound
 - Solar street light
 - New target: tree nursery = 20,000 for 1 province
 - [Kap City, Cambodia]
- Tree growing, carbon credits, cooperation with private sector
 - > eastern economic corridor [Thailand]
- Any development plan: 10% of open space
 - [Ranau, Malaysia]

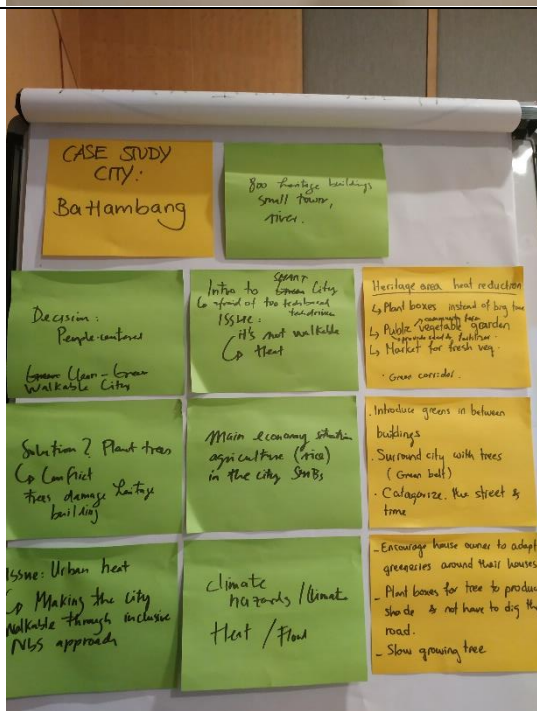
WHICH TOPICS ARE YOU MOST INTERESTED IN TARGETING WITH NBS?

- Urban gardening
- Climate hazards
 - > NBS in adaptation strategy
- Increase native woodland
 - > conservation
- Flooding, air quality
 - [EEA, industrial area]
- Water storage, flood and drought prevention
- Social benefits
- Constructed wetland, social and biodiversity benefits
- Education
- Special-need community, women

Group Work 2 (Day 1)

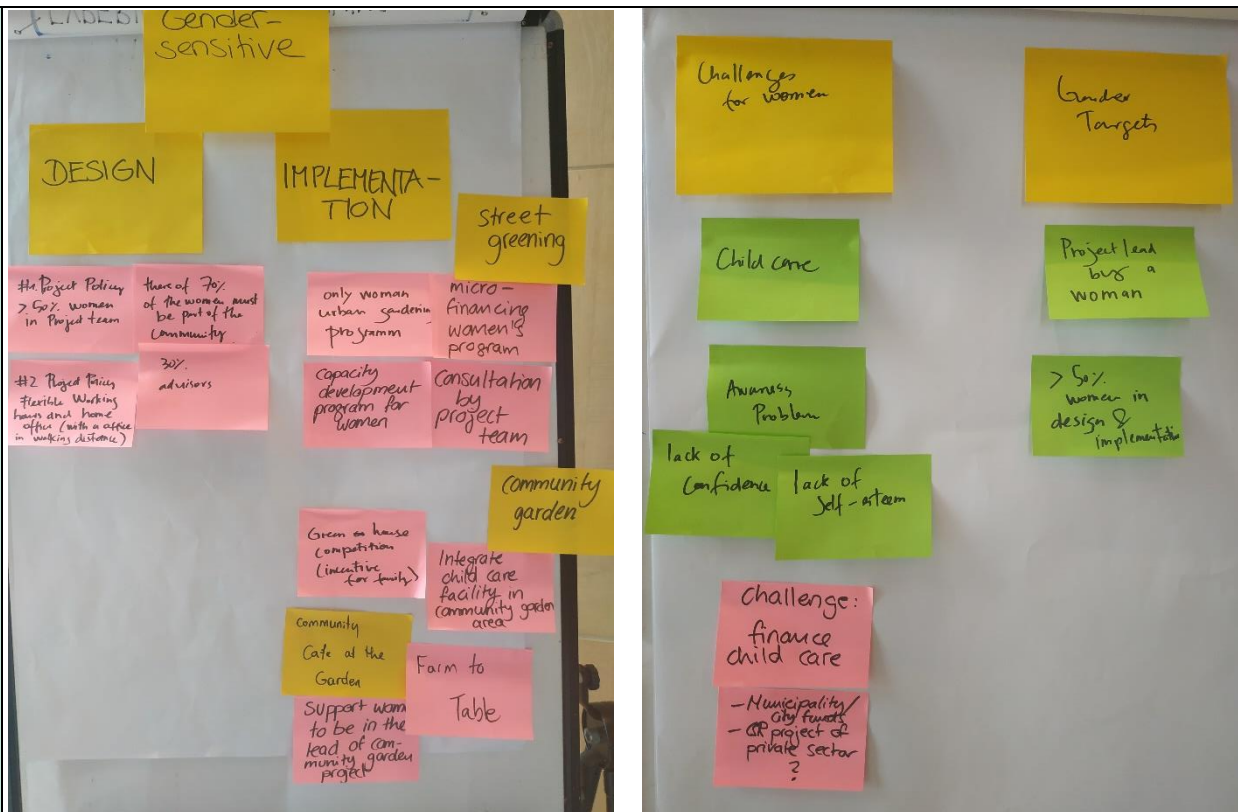


Case Study Part 1 (Day 1)



The third group chose to draft a new project concept for the city of Battambang, Cambodia, which has a strong interest in NbS to address urban heat. Confronted with the challenge that the old city centre of Battambang consist or heritage buildings easily damaged by tree roots, the group developed innovative greening solutions using plant boxes for smaller trees, smaller green spaces inbetween buildings and a green belt sourrounding the city. Furthermore, they suggested to start a program which encourages house owners to green their houses. Additionally, they suggested to use free space near the river to start a community garden, providing additional co-benefits such as income generaton, fresh produces and a place for community activities.

Case Study Part 2 (Day 2)



In the second case study session, the group considered how the project concept could be adapted to become more gender-sensitive. Suggestion included gender targets for the project team, allowing flexible working hours and home office to facilitate child care. They further re-evaluated project activities and came up with suggestion on how they could be adapted to strengthen women’s participation. The group suggested an “women only” urban gardening program, including capacity development, micro-financing opportunities and free consultations with the project team. Additionally, they proposed a women-led farm-to-table café in the community garden, providing further income opportunities and attracting visitors. Child care was discussed as important challenge, and how child care facilities are financed in municipalities of different ASEAN member states.

City Profiles



Chiang Mai, Thailand

Most important current climate hazards

- PM 2.5 in burning season (February – April)
- Land Slide & flood (flash flood)

Key interests in the field of climate change adaptation

- Extent of pet corn farm and agriculture on the mountain, dependency of people

Experience with NbS:

- a) past,
- b) future interest

- Promoting community forest and promoting sustainable agriculture on the mountain
- Fire barrier (line)

What are the city's biggest needs to achieve successful climate change adaptation?

- Reduce burning waste from agriculture and educate people for an impact of climate change

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,
- b) future interest

- Hill Tribe
- Mountain people
- Lack of education and infrastructure

Panat Nikhom (Chonburi Province), Thailand

Most important current climate hazards

- Air pollution from industry & mobility

Key interests in the field of climate change adaptation

- Panat is surrounded by industrial factories and this city is a passage for transportation

Experience with NbS:

- a) past,**
- b) future interest**

- Building many public parks
- Collect trees data by QR code

What are the city's biggest needs to achieve successful climate change adaptation?

- People engagement to add green area

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,**
- b) future interest**
- Elderly

Rayong, Thailand

City network: ASEAN Smart Cities Network (ASCN)

Most important current climate hazards

- Flood
- Pollution
- Air quality

Key interests in the field of climate change adaptation

- Flood: management system
- Pollution: pollution monitoring
- Air quality: real time notification

Experience with NbS:

a) past,
b) future interest

- a) Green space
Growing plants along road to slow the impact of rainfall

What are the city’s biggest needs to achieve successful climate change adaptation?

- Cooperation between organizations in public sector and private sector

Vulnerable groups inclusion, incl. gender-sensitivity:

a) past,
b) future interest

- a) Welfare program for vulnerable group
SDG awareness
home-bound patients management

Xay District, Lao PDR

City network: ASEAN Frontrunner City

- Most important current climate hazards**
- Fast flood
 - Land slide
 - Drought
 - Clean water
 - Heat
 - Waste management

- Key interests in the field of climate change adaptation**
- Technology (green energy, clean water)
 - Lesson learned from other cities
 - Reforestation and upstream forest observation
 - Vulnerable map

- Experience with NbS:**
- a) past,**
b) future interest
- Canal improving
 - Ecotourism
 - Environmental awareness raising
 -
 - Green space area improving
 - Greening of schools
 - Early warning system (food)

- What are the city's biggest needs to achieve successful climate change adaptation?**
- Knowledge (capacity building)
 - Funding
 - Collaboration (community engagement)

- Vulnerable groups inclusion, incl. gender-sensitivity:**
- a) past,**
b) future interest
- a) Low income families
 - b) Low income families
Women, children, elderly

Thungsong City, Thailand

Most important current climate hazards

- Heavy rain → flood

Key interests in the field of climate change adaptation

- Build a flood drainage system

Experience with NbS:

- a) past,
- b) future interest

- Plants prevent erosion

What are the city's biggest needs to achieve successful climate change adaptation?

- Budget

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,
- b) future interest

- Children, elderly

Bangkok, Thailand**City network: ASEAN Smart Cities Network (ASCN)****Most important current climate hazards**

- Heavy rain → flood

Key interests in the field of climate change adaptation

- Flood Risk Management

Experience with NbS:

- a) past,**
- b) future interest**

- Increase Green Area: 15 minutes park
- Increase Blue Area: water storatoin
- Green Infrastructure

What are the city's biggest needs to achieve successful climate change adaptation?

- Collaboration

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,**
- b) future interest**

- Low Income People

Battambang, Cambodia

Most important current climate hazards

- Flood
- Drought

Key interests in the field of climate change adaptation

- Building dam
- Divert flow of river flow

Experience with NbS:

- a) past,
- b) future interest

- Plant trees along the riverbank
- Natural reservoirs – lake, pond, water catchment
- Communicate on method to prevention & protection during droughts

What are the city's biggest needs to achieve successful climate change adaptation?

- Enlarge canal
- Restore old waterway
- Restore water catchment

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,
- b) future interest
- Women, kids, elderly, handicapped

Da Nang, Vietnam

Most important current climate hazards

- Domestic flood

Key interests in the field of climate change adaptation

- Zero Waste practices
- Gender & vulnerable group inclusion

Experience with NbS:

- a) past,**
- b) future interest**

- a) Applying community garden concept in solving organic waste issues
- b) Greening city

What are the city's biggest needs to achieve successful climate change adaptation?

- Awareness raising
- Capacity building
- Infrastructure implementation

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,**
- b) future interest**
- Youth, women, children, people with disabilities, elderly

Phnom Penh, Cambodia

City network: ASEAN Smart Cities Network (ASCN)

Most important current climate hazards

- Mekong river flood
- Raining flood

Key interests in the field of climate change adaptation

- Canal expanding
- Improve warning system

Experience with NbS:

- a) past,**
- b) future interest**

- a) Community garden
- b) River renaturation
Urban farming

What are the city's biggest needs to achieve successful climate change adaptation?

- All level participation
- NGOs
- Expert

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,**
- b) future interest**

- Informal settlements
- Low income people

Davao City, Philippines

City network: ASEAN Smart Cities Network (ASCN), ASEAN Envi. Sustainable Cities (AESC) (not AIESC?)

Most important current climate hazards

- Floods
- Landslides
- Earthquakes
- Droughts

Key interests in the field of climate change adaptation

- Improving city flood management
- Developing green urban infrastructures with women championing these campaigns

Experience with NbS:

**a) past,
b) future interest**

- Creating forests in the cities / parks
- Gulayon sa brgy (community gardens)

What are the city's biggest needs to achieve successful climate change adaptation?

- Increased investments in ecosystems & NbS

Vulnerable groups inclusion, incl. gender-sensitivity:

**a) past,
b) future interest**

- Gender, PWD, SOGIE – LGBT etc. are being consulted in different levels: feasibility studies to project inception...

Siem Reap City, Cambodia

City network: ASEAN Smart Cities Network (ASCN)

Most important current climate hazards

- Flooding (serious rainfall)
- Droughts

Key interests in the field of climate change adaptation

- Green garden in the city
- Green roofs
- Reducing carbon footprint by Smart farming
- Tiny forests

Experience with NbS:

a) past,
b) future interest

- City garden
- Identified protection areas
- Smart farming
- Green roof, tiny forest

What are the city’s biggest needs to achieve successful climate change adaptation?

1. Funding source
2. Expert
3. Governmental policy support
4. Participation of all key stakeholders

Vulnerable groups inclusion, incl. gender-sensitivity:

a) past,
b) future interest

- Low income families
- At least 60% women participants

Ranau & Kundasang, Malaysia

City network: SDG (Majlis Daerah), Local Agenda 21 (Ranau), UNSECO Triple Crown: WHS (1994), Biosphere Reserve (2014) & Global Geopark (2023)

Most important current climate hazards

- | | |
|--|--|
| <ul style="list-style-type: none"> - Kundasang Town: <ul style="list-style-type: none"> o Earthquake → soil erosion o Landslide o Heat → temperature rise | <ul style="list-style-type: none"> - Ranau Town: <ul style="list-style-type: none"> o Heat o River pollution |
|--|--|

Key interests in the field of climate change adaptation

- | | |
|---|---|
| <ul style="list-style-type: none"> - Micro-temperature rise in Kundasang & Ranau | <ul style="list-style-type: none"> - Tourism - Water conservation |
|---|---|

Experience with NbS:

a) past,

b) future interest

- | | |
|---|---|
| <ul style="list-style-type: none"> a) Community based river conservation Sabah Parks Enactment | <ul style="list-style-type: none"> b) New town based on NbS strategy |
|---|---|

What are the city's biggest needs to achieve successful climate change adaptation?

- | | |
|--|--|
| <ul style="list-style-type: none"> - Participation / involvement of taxpayers who live in city - Inclusive universal design for minorities & women | <ul style="list-style-type: none"> - NbS as curriculum and respect to mother nature |
|--|--|

Vulnerable groups inclusion, incl. gender-sensitivity:

a) past,

b) future interest

- | | |
|---|--|
| <ul style="list-style-type: none"> a) 10% of local authority council must be women | <ul style="list-style-type: none"> b) Public washroom design in town with women & special need need to be included
Future new township designed for children, elderly and other (inclusively) |
|---|--|

Prik Municipality, Thailand

City network: UNDP SDGs Frontrunner City

Most important current climate hazards

- Flooding

Key interests in the field of climate change adaptation

- Check dam
- Constructed wetland
- Reforestation

Experience with NbS:

- a) past,**
- b) future interest**

- a) Awareness
- b) Warning system

What are the city's biggest needs to achieve successful climate change adaptation?

- People participation
- Increasing awareness of the citizens

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,**
- b) future interest**

- a) 25% of women involved with the voluntary group
- b) > 50% of women get involved
> 35% of low income people involved

Island Garden City of Samal, Philippines

City network: SGAC Network

Most important current climate hazards

- Flood
- Sea level rise
- Coastal pollution

Key interests in the field of climate change adaptation

- Integration of NbS to existing PPAs
- Renewable Energy

Experience with NbS:
a) past,
b) future interest

- a) Strategic planning on programs % projects related on NbS
- b) Inclusion of NbS to PPAs
Pocket parks (a or b)

What are the city’s biggest needs to achieve successful climate change adaptation?

- Sufficient finance
- Technical capacity development
- Convergence of all stakeholders
- Partnership with new organizations to support NbS initiatives

Vulnerable groups inclusion, incl. gender-sensitivity:
a) past,
b) future interest

- a) Women, elderly, PWUDs, IPs
- b) Low income families, informal settlers in coastal areas, PWDs

Kampot City, Cambodia**Most important current climate hazards**

- Storm (twitching wind)

Key interests in the field of climate change adaptation

- Warning system
- Awareness building
- Restoration & planting
- Helping

Experience with NbS:

- a) past,**
- b) future interest**

- a) Adaptation to the situation
- b) Escape the problem

What are the city's biggest needs to achieve successful climate change adaptation?

- Building knowledge
- Increase protection system
- Ecosystem by planting mangroves, conservation, biodiversity

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,**
- b) future interest**

- Older people, women, poverty

Kep City, Cambodia

City network: nicht lesbar

Most important current climate hazards

- Affected by erosion factors

Key interests in the field of climate change adaptation

- Street greening
- Strengthen and protect forest ecosystem services

Experience with NbS:

a) past,

b) future interest

- Forest regeneration and green tourism
- What contributes to climate change adaptation and improves the live of the communities

What are the city's biggest needs to achieve successful climate change adaptation?

- Strategic planning
- Government policies
- Budget

Vulnerable groups inclusion, incl. gender-sensitivity:

a) past,

b) future interest

- We need your support this project for forest regeneration and green tourism that contributes to towards climate change adaptation and improves the live in communities

Iskandar Malaysia (Johor), Malaysia

City network: ASEAN Smart Cities Network (ASCN)

Most important current climate hazards

- Flooding
- Heat Waves
- Shore erosion

Key interests in the field of climate change adaptation

- Adaptation of Green Initiative (solar, rain water etc.) in managing climate change

Experience with NbS:

a) past,
b) future interest

- Managing adaptation for urban poor
 - a) Through urban farming initiative
 - b) Tiny forest

What are the city’s biggest needs to achieve successful climate change adaptation?

- Regulating green initiative by authority for public to adapt and adopt

Vulnerable groups inclusion, incl. gender-sensitivity:

a) past,
b) future interest

- a) Urban poor, elderly
- b) Youth development initiative

Battambang, Cambodia
City network: ASEAN Smart Cities Network (ASCN)
Most important current climate hazards <ul style="list-style-type: none">- Urban heat- Urban flood
Key interests in the field of climate change adaptation <ul style="list-style-type: none">- Adapt NbS into the city development plan to achieve “smart city goal”
Experience with NbS: a) past, b) future interest <ul style="list-style-type: none">a) Redesigning & greening the riverbank to be more inclusive for disabled citizensb) Hope to use NbS to solve urban hazard
What are the city’s biggest needs to achieve successful climate change adaptation? <ul style="list-style-type: none">- Capacity building for people in charge- Support from local governments & partners- FINANCE
Vulnerable groups inclusion, incl. gender-sensitivity: a) past, b) future interest <ul style="list-style-type: none">b) Hope to develop more community base NbS projects targeting more women in heritage area

Luang Prabang City, Laos**Most important current climate hazards**

- Flooding
- Landslide
- Air pollution

Key interests in the field of climate change adaptation

- In the interest of improving the climate change is to keep the ecological system of the climate from deteriorating

Experience with NbS:

- a) past,
- b) future interest

- Flooding adaptation: advance notice, build drainage ditches

What are the city's biggest needs to achieve successful climate change adaptation?

- The city must have a good environment
- Funding

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,
- b) future interest
- Children and elder group

Calapan City, Philippines

City network: ASEAN ESC

Most important current climate hazards

- Flood
- Typhoon
- Drought

Key interests in the field of climate change adaptation

1. Green area (green – grey)
2. Carbon sequestration (blue carbon harvesting)

Experience with NbS:

a) past,
b) future interest

- a) Partial
- b) More learning & knowledge sharing in the community

What are the city's biggest needs to achieve successful climate change adaptation?

1. Funding source
2. Technical capacity enhancement
3. Stakeholders' participation
4. Sound local policy implementation

Vulnerable groups inclusion, incl. gender-sensitivity:

a) past,
b) future interest

- a) Coastal informal settlers
- b) Women's & youth participation in NbS program implementation

Hatyai City, Thailand

City network: Southern Cities Climate Change Resilience Network (SCCCRN; Watchdog, voluntary group); UNSECO: Learning City

Most important current climate hazards

- Flooding
- Landslide from the mountain and along the canal

Key interests in the field of climate change adaptation

1. Move elderly & children to save home
2. Warning system for individuals

Experience with NbS:

- a) past,**
- b) future interest**

- a) To help old people to protect from heat by line
- b) Line of connectivity
AI CCTV to monitor rain

What are the city's biggest needs to achieve successful climate change adaptation?

1. Collaboration among public & private agencies
2. Increase the green area, planting

Vulnerable groups inclusion, incl. gender-sensitivity:

- a) past,**
- b) future interest**

- a) Elderly, youth
- b) ↑Women through voluntary association, and low income

Thank you!

