



# City Alliance

## Financial Working Group Meeting on “Financing Integrated Sanitation”

17 and 18 January 2019, Chon Buri, Thailand



## Background

As a result from the 1<sup>st</sup> City Alliance meeting in Sleman 6<sup>th</sup> and 7<sup>th</sup> August 2018, and based on the common vision and understanding, that the City Alliance members committed to continue working on the implementation of the Integrated Sanitation Approach (ISA), the following topics have been identified during working sessions for the joint cooperation:

1. Community awareness and empowerment for water and sanitation related actions
2. *Exchange on possible financing mechanisms*
3. Technology options/system solutions
4. Regulations and policy
5. Capacity Building
6. Stakeholder Communication

Due to the specific demand for support with financial challenges within the member cities/municipalities, BORDA has set up the working group “Financing Mechanisms”.

The main aim of the a.m. workshop is to provide a deeper understanding of existing financing schemes and instruments which are currently applied within the Integrated Sanitation Approach in each City Alliance member cities/municipalities and to share those experiences with municipalities from Thailand. In addition, invited experts from UNESCAP and NONTHBURY Municipality will provide insights on other financing instruments, which have been successfully applied in the region

## Opening and Introduction



### A. **Message from the Head of City Alliance Mr. Sri Purnomo,**

Let use the opportunity from this 2 days workshop meeting to understand the existing financing mechanism and the instrument for the implementation of water and integrated sanitation from other City Alliance member country, And to learn about the presentation from UNESCAP by Ms. Aida Karashanova regarding “Enabling Policies Financing Water Related Sustainable Development Goal” and practical experiences as a lesson learnt from Nonthaburi City Government by Mr. Permpong Pumwiset concerning “ Sanitation Budgeting and Management in Nonthabury City, in particular Faecal Sludge Management . And last but not least, the next important steps are : *Action ,Action, Action*

### B. **From the secretariat side:**

This workshop is attended from the City Alliance member ; Cambodia, Indonesia, Laos, Myanmar, Philippines, Vietnam, Thailand, and Representative from BORDA - SEA, Cambodia Myanmar, Laos, Philippines, and Vietnam the total participants 35 participants.

City Alliance member Certificates have been distributed by the Head of City Alliance and Regional Director of BORDA SEA.



## Presentations of the Day 1

1. UNESCAP – Dr. Aida Karazhanova - Policies on financing in the South-east Asia region.
2. Nonthaburi Municipality - Permpong Pumwiset - Lessons learned from financing O&M of FSM services
3. Bac Ninh - Insights on donor-based government funding
4. Luang Namtha - Insights on loan funded project implementations
5. Kratie - Insights on donor-based grant funding
6. Philippines - Insights on projects funded through PPP models
7. Sleman - Insights from project implementations funded through local government budget
8. Tangerang Selatan - Insights from project implementations funded through local government budget
9. Bitung - Insights from project implementations funded through local

The day was fruitful in terms of given inputs from various institutions and regions. From rich experiences of the presenters, the audience (including rapporteur) received a lot of insightful information on different financing mechanisms that are practically applied in real cases.

(by Dr. AbduRasul) The day started with an input presentation from the UNESCAP representative – Dr. Aida Karazhanova. Thanks to her presentation, the audience learned about various publications of UNESCAP on innovative financing mechanisms and concepts (Yangon declaration, water cycle management, water accounting, Blockchain use in hydrological cycle etc.) Dr. Karazhanova underlined that status quo on finance allocation, which is based on principle of “where the attention goes, there goes money”. She asked therefore all stakeholders looking for finances in water and sanitation sector for more “opportunistic” and “creative” attitude. There is no “blueprint” or “one-size fits all” models in financing mechanisms and we need to look for different models and

opportunities.

Innovate, break the business as usual. Repackage the knowledge and knowledge sharing. Make sure that the knowledge is distributed, on the right table and the right person.

Communicate, create e-learning courses.

We need to capitalized the knowledge for tomorrow's market. How we can sell the project to the funding institution.

Becoming almost a motto of the day, the expression **“where the attention goes, there goes money”** has been confirmed by all presenters of the day working at practical and operational level. Unfortunately, sanitation is not a priority sector within many governments of the region. Sanitation comes often as an accompanying part of a bigger sector/topic such as energy, water or urbanization. In most cases people are not conscious or consciously ready to pay for sanitation services, which is linked to many factors. These factors can be based basically on the following three contextual environments.

**Political environment:** Some government administration systems in the region are centralized, whereas others are decentralized or come in a hybrid form. Despite the fact that the decentralized or unitary systems can play sometimes crucial role for availability of local, provincial funding opportunities, both systems have strengths and weaknesses. We have to find out those strengths and weaknesses and make out of strengths “windows of opportunities”.

**Economic environment:** Some regional countries are wealthier, some others are less wealthy. Based on their economic situation, the funding opportunities may vary and the involvement of public sector or private sector and PPP possibilities can be limited. We have to take

into consideration the economic status of the population. If the population are not able to pay the sanitation service fees, they will use the nearest untreated natural aquifers, which is ultimately can cause more problems to government, since they have to deal also more with health issues.

**Social environment:** Mentality of the people and their attitude towards water is unfortunately still wrong. Many people think that water is “a gift from the God” and see water as common resource rather than commodity. As soon as people do not understand that water is a limited and precious resource, they won't be willing to pay for sanitation services. Water and sanitation are interlinked and sanitation services should be paid.

**Summarizing the sessions,** it is always important to keep in mind the contextual environments before handling with the sanitation issues and looking for financing mechanisms. Aside from the contextual environments, also the bottom-up and top-down approaches can be considered as a starting point for finding of the right financing mechanism. In this regard, the financing mechanism can be looked



In more detail information is as follows:

**1. According to the United Nations Economic and Social Commission for Asian and Pacific(UNESCAP):**

1.1.UNESCAP encourages investment schemes that have a major impact and a bottom-up approach where financial institutions adapt to local communities and utilize their knowledge and recognize their specific situation.

1.2.UNESCAP is promoting further involvement of private sector investment, currently the private sector only represents 20% of the infrastructure in the region.

1.3.The government may want to consider stricter guidelines for water use, e.g. withdrawal of water rates and requires 100% recycled wastewater from its operations

1.4. Knowledge and in-depth data collection on the water cycle (one of which is by using a Water Cycle) needs to be applied and taken into account for all the best stakeholders.

1.5.There needs to be price adjustments and adequate incentives for water use / management and investment in the involvement of the private sector

**2. Thailand's Nonthaburi City**, they presented their experiences in developing Fecal Management in Nonthaburi City. The development of the management of the sludge is not an accompaniment from BORDA, but can be used as a best practice in the development of sludge management.

2.1.The construction of the IPLT in the city of Nonthaburi stems

from the concern of the King of Thailand regarding the importance of sanitation management, which could have an impact on the health of the Thai people, delivered at his birthday event in 2001.

2.2 This desire was immediately followed up by the provincial government to install faecal sludge treatment by providing land of 2 hectares in 2002, then the preparation of DED in 2003 and the implementation of construction in 2004 until in 2007 an inauguration was held.

2.3.The installation made is a bio-fertilizer tank where the capacity is 40 m<sup>3</sup> / day using the anaerobic digestion system that requires investment of 10 million baths. This installation is managed by a kind of UPT at the City level.

2.4.The city of Nonthaburi has 5 truckloads of stools serving 6 days a week (except Sundays) with 4 staff and 1 coordinator.

2.5.Existing service fees:

1. Fee for collection and transportation services:
  - a. Volume not exceeding ½ m<sup>3</sup> = 150 THB (4 \$)
  - b. Volume 1 m<sup>3</sup> = 250 THB (7 \$)

2. License Fee:
  - a. Collection and transportation costs = 5,000 THB (\$143)
  - b. Disposal Fee = 5,000 THB (\$ 143)

2.6. The results of this sludge treatment are compost sold to the community. Initially this compost was given free to the public as an introduction to the quality of compost while estimating the selling price of compost.

2.7. Average income earned per year:

- a. Collection fee: 2,100,000 baths
- b. Compost sales: 90,000 baths



### 3. Experience of Bac Ninh City, Vietnam

3.1. The Bac Ninh Provincial People's Committee issued Decree No.1139 / QĐ-UBND on 10/29/2014 concerning investment to build a wastewater treatment system in the Khac Niem processing village using the state budget.

3.2. To support the performance of wastewater treatment using dewats technology where the development of DEWATS technology is accompanied by BORDA. Before entering DEWATS waste treatment, each noodle producer is required to make a bio-gas digester so that the workload of the DEWATS waste treatment is not heavy

3.3 Thus, to finance the waste treatment system in the location, it can be said that the financing is sharing the government funding by 80% and the community (noodle producers) by 20%

3.4 In the existing quality standard, the effluent that has been disposed of should meet the quality standards in pond A, but the Bac Ninh city government submits a proposal to the Bac Ninh Provincial People's Committee so that the waste from the noodle producer is sufficient to meet the quality standards in column B and then in the next 5 years it will be directed to the quality standard for column A.



### 4. Experience Luang Namtha City, Laos

4.1. Estimated total monetary investment required without compensation costs for waste water management: 1,115,659 USD (Waste Water Treatment and Drainage Improvement), therefore, the City obtained a loan from ADB

4.2. Assistance from BORDA was carried out to assist the

provincial government in planning, designing, implementing and operating decentralized wastewater management (DEWATS, FSM, and facultative ponds). In addition, it is also used to develop the capacity of communities and local authorities to implement and operate decentralized systems and existing policies and regulations.

## 5. Kratie's experience, Cambodia

**Assistance from BORDA for the city of Kratie is focused on 2 stages:**

### First stage (2017-2019)

1. Improvement of municipal level solid waste management systems that operate sustainably, namely by building city landfill and its 3R facilities
2. Development of a standard implementation plan for integrated sanitation projects for secondary cities in Cambodia

### Second stage (2020-2022)

3. Increased decentralized wastewater treatment systems that operate in a sustainable manner, including infrastructure development and establishment of operating and management procedures.
4. Improved faecal mud management systems in all cities including the establishment of professional collection services and the implementation of sludge treatment plants.

## 6. Experience Bauang, Philippines

6.1. Philippines Water Revolving Fund (PWRF), the only rolling water fund outside the United States and Europe, utilizing foreign development assistance with local private funds using joint financing arrangements between the Philippine government and private banks.



6.2. The Philippine Department of Finance (DoF) with USAID and JICA established the PWRF as a joint financing arrangement that integrates public funds and ODA, which was loaned back through the Philippine Development Bank, with internal funds from PFI to achieve loan terms affordable by PDAMs.

6.3. Due to problems in the management of wastewater in Bauang City (lack of access and septic tanks and illegal sludge disposal), the Bauang City Government expressed interest in implementing and prioritizing the Feces Treatment Project as part of the Integrated Sanitation Approach. However, due to budget constraints, the BORDA in the Philippines assisted in creating other funding opportunities, namely the PPP scheme approach

- 6.4. From the results of the interim study of BORDA, the opportunity to pay for private investment can be done by:
- Payment of desludging fees:
    - a. 3 trips per day
    - b. 288 operating days per year
    - c. PhP3,500 (70usd) for the costs of commercial and household desludging
    - d. Total: PhP 6,048M (120,960usd) / year (2 trucks)

## 7. Experience from Sleman, South Tangerang and Bitung, Indonesia

For Sleman Regency, Tangsel City and Bitung, BORDA accompanies local governments in prioritizing the sanitation sector in their government so that funding from local governments can support the sustainability of sanitation infrastructure that has been built and also encourage the achievement of 100% sanitation access.



### 7.1. Sleman Regency

1. Collaboration between BORDA and Sleman Regency Government is held in community- based integrated sanitation management which includes the management of decentralized domestic wastewater, domestic waste management and domestic sewage sludge

2. The policy innovations that have been implemented by the Sleman Regency Government Among others: \*Call Center (where residents can make complaints related to sanitation in their environment to be followed up by the local government), \*Environmental Clean Awards held between *kelurahan* / villages

### 8. South Tangerang City

For South Tangerang City, assistance is carried out in:

a. Capacity building and development of policies for planning water and sanitation in densely populated areas as well as assistance in the operation and maintenance (OM) of sanitation infrastructure towards a livable environment

b. Feasibility studies for sludge treatment at the district scale (identification of suitable locations) and Assistance and Facilitation for the implementation of sludge treatment facilities

c. Assistance in improving sanitation infrastructure (user friendliness, economy, good quality) for community and boardin schools

### 9. Bitung City Government

1. The Regional Government of Bitung City prioritizes the development of 5 aspects, namely clean air, clean land (less than garbage dumps named for plastic waste), clean water, underground clean (Development of individual septic tanks / WWTP

community, septic tank amnesty policy) and clean for state apparatus.

2. Policy innovations that have been implemented by the Bitung Regional Government include: regulations on plastic reduction in the Mayor's regulation no. 70 of 2018 and also septic tank amnesty



## Progress on the Market Place session Day 2



**During the joint discussion held**, the Districts / Cities that attended could discuss each other with the Regency / City with an interesting BORDA mentoring system to be implemented in their respective regions. For representatives from Indonesia, it was agreed that assistance to the mentoring scheme carried out by BORDA in the Philippines is an alternative funding through PPP to be studied further considering that funding in the sanitation sector from the government is limited so a scheme that can be created to attract private sector can be needed invest in the sanitation sector. Whereas Sleman Regency is one example of best practice that will be implemented by Kratie City, Cambodia for processing waste.

### **Conclusion, Follow up, Outcomes from the events**

#### **Conclusions and follow-up of the results of the discussion are:**

1. Development and post-construction activities in the sanitation sector as a public service are still entirely the responsibility of the government, both at the central and regional levels, which when collaborated with the private sector need in-depth study and project feasibility
2. Insights into financing policies (especially the sanitation sector) in the Southeast Asia region as presented by UNESCAP were obtained
3. The exchange of insights from fellow City Alliance members about the operation of public services in the sanitation sector, especially in budgeting, implementation of development, post-construction including calculation of rates / fees charged to the community for operational sustainability
4. In the context of accelerating sanitation services, it is needed:
  - 4.1. Insights into funding schemes are primarily funding innovations through public and private partnership schemes
  - 4.2 Government support in the sanitation sector
  - 4.3 Continuity of operation and maintenance
5. Due to the fact that sanitation services are still very much needed by the community, the acceleration of sanitation services in each country by means of optimizing funds in the community including CSR and village funds, etc.



## Sleman

The benefits from the CA international meetings for Sleman District are as follows:  
Sustainability and commitment of policy makers in managing sanitation and drinking water to answer the challenges:

1. The rapid growth of the region in line with the increase in the need for clean water and sanitation
2. Environmental management to maintain the availability of water to the limited number and quality of clean water
3. Institution and management of clean water and sanitation that have not been optimal
4. Equity in the quality of fulfillment of clean and relaxed water
5. The involvement of all stakeholders, especially the public and the private sector, to be involved in the management of sanitation and drinking water

2. Information sharing and budgeting for managing sanitation and drinking water by each CA member that can lead to new creativity and innovation

3. Planning, funding and the implementation of sanitation and drinking water management in the Sleman district that has been very good so that the achievement of access to wastewater is 97.12%. Drinking water 98.87% and garbage 48.74 can be further enhanced especially for improving quality

4. Fulfillment of national target achievement 100% clean water, 0% slum area and 100% proper sanitation access in Sleman district

5. As the head of the Sleman Regency CA plays an active role in developing urban and integrated water management as a role model for CA members consisting of city states in Southeast Asia

## Output of the workshop:

### I. Three strength's sentences:

- We learned about various publications of UNESCAP on innovative financing mechanisms and concepts (Yangon declaration, water cycle management, water accounting, Blockchain use in hydrological cycle etc.) Dr. Karazhanova underlined that status quo on finance allocation, which is based on principle of “where the attention goes, there goes money”. She asked therefore all stakeholders looking for finances in water and sanitation sector for more “*opportunistic*” and “*creative*” attitude. There is no “blueprint” or “one-size fits all” models in financing mechanisms and we need to look for different models and opportunities.
- Considering from City Alliance member’s experiences and learning, then City Alliance members commit in a working environment to share what are the difficulties, what are the take away, where each project in each city have long list of things they would like to take away.
- Therefore we can share, promote and to collaborate in the future in 3 strengths sentences for each of the Policy Makers, Private Sectors and Academia area from their financial mechanism that we can build on.

These 3 strengths sentences have been compiled from Cambodia, Laos, Indonesia, Philippine and Vietnam



## II. Financing Scheme on Integrated Sanitation Scheme

Summary of the Financing Scheme on Integrated Sanitation Scheme , as follows

- **Thailand's Nonthaburi City**, presented their experiences in developing Fecal Management in Nonthaburi City. The development of the management of the sludge is not an accompaniment from BORDA, but can be used as a best practice in the development of sludge management.
- **Cambodia :Assistance from BORDA for the city of Kratie is focused on 2 stages:**  
**First stage (2017-2019)**
  1. Improvement of municipal level solid waste management systems that operate sustainably, namely by building city landfill and its 3R facilities
  2. Development of a standard implementation plan for integrated sanitation projects for secondary cities in Cambodia  
**Second stage (2020-2022)**
  3. Increased decentralized wastewater treatment systems that operate in a sustainable manner, including infrastructure development and establishment of operating and management procedures.
  4. Improved faecal mud management systems in all cities including the establishment of professional collection services and the implementation of sludge treatment plants.
- **Laos** : Assistance from BORDA was carried out to assist the provincial government in planning, designing, implementing and operating decentralized wastewater management (DEWATS, FSM, and facultative ponds). In addition, it is also used to develop the capacity of communities and local authorities to implement and operate decentralized systems and existing policies and regulations.\
- **Indonesia** Sleman Regency, Tangsel City and Bitung, BORDA accompanies local governments in prioritizing the sanitation sector in their government so that funding from local governments can support the sustainability of sanitation infrastructure that has been built and also encourage the achievement of 100% sanitation access.

- **Philippines-Bauang**

- 1.Philippines Water Revolving Fund (PWRF), the only rolling water fund outside the United States and Europe, utilizing foreign development assistance with local private funds using joint financing arrangements between the Philippine government and private banks.

- 2.The Philippine Department of Finance (DoF) with USAID and JICA established the PWRF as a joint financing arrangement that integrates public funds and ODA, which was loaned back through the Philippine Development Bank, with internal funds from PFI to achieve loan terms affordable by PDAMs.

- 3.Due to problems in the management of wastewater in Bauang City (lack of access and septic tanks and illegal sludge disposal), the Bauang City Government expressed interest in implementing and prioritizing the Feces Treatment Project as part of the Integrated Sanitation Approach. However, due to budget constraints, the BORDA in the Philippines assisted in creating other funding opportunities, namely the PPP scheme approach

- **Vietnam -Bac Ninh City** :To support the performance of wastewater treatment using DEWATS technology where the development of DEWATS technology is accompanied by BORDA. Before entering DEWATS waste treatment, each noodle producer is required to make a bio-gas digester so that the workload of the DEWATS waste treatment is not heavy

**Closing remarks from:**

**Ms.Aida Karazhanova, PhD,Ms.  
ESCAP**

Thank you very much I really enjoy this workshop for the last couple of days. Each of us can recognize in ourselves and old spirits where we could say we know a lot, common surprises, we can share and we can sale, at the same time I could see the spirits of young people in each of us being excited to connect communicate and , design, new knowledge, new advice and learning from new tools and we all share with each other. So in this sense, this work shop is was set up really (really) well. And I would like to congratulate each of you -the BORDA, and Prof. Thammarat, the moderators - it's fantastic job.

We had a very nice dialogue with each other in a very friendly and very trustful atmosphere and that's also because you really commit to come and learn in a working environment to share what are the difficulties, what are the take away. And I could see each project in each city have long list of things they would like to take away. And We can also share and sale in 3 sentences for each of the private sector, or government, or public set up, or they would like to build up on as the strengths and how we would like to collaborate in the future. So I think that was a big advantages and you can make a draw as another homework when you go back, what did you learn, what did you take away, just pick those in 3 sentences as we can show one example, the Cambodia BORDA with the project that they have, so you could see that there is a little address for the government, the public institution , academia for the strengths of their financial mechanism that we can build up on.



*Just think of 3 sentences that you can bring back to your tables and those 3 sentences is a political statements that could be summarizing with experiences of the city and back to my story line. I already got a strong reassurances from this workshop that government alone cannot solve the issue that were created by everybody and integrated solution would be required integrated approach from each and every expectant and specialist in the city.*

We also know that this problem that was created with one level cannot be solved with the same level we need to go out of the box so in this workshop show cases how you have been working hard in each city and when you come together to discuss to find new solution and new attitude towards your daily work and then maybe you can identify the list of tools that you could advise young people, colleagues, peers to pick so you could collaborate. I would like to highlight again, that often megaproject cannot be the only solution because megaproject and government, they are struggling really hard to subsidy water and sanitation.

But there are external forces that make this megaproject very vulnerable, like climate change. We know the financial crisis and we know that the infrastructure is getting really old. So we need to build up a new infrastructure or operation maintenance so here from ESCAP.

I would like to ask you to look again, your capacities to deal with this decentralized management of the water sanitation resource from your city perspective. It is to be still integrated long term policy coming from the high level ; regional level, younger generation that already empowering you to work together, subsidy landowner, subsidy private sector. Everybody who be leased on providing sanitation for all and water for all should be working together. So leadership in this case would come out from all understanding and the need to allow new bounding, and that new bounding and the leadership is needed of for the new project development to each

of us decided that we need a new project, we need new financing choice, we need capacities.

And the coalition need to be subsidized, so the collaborative partnership, as you could see, it is normally work well when it is subsidized, this time all are subsidizing, AIT is subsidizing, ESCAPE is subsidizing , and you are supporting each other and look at this as subsidy approach and how long you can function to band a new monitors that would help you to gather together. It is not much even when the resources come from your own level of experience and mechanism. And cities we all agree to provide the full avenue of opportunities to make the progress of top to un top resources so although all bounding and friendship that we have is trustful opportunities to build up your experiences but the new bounding will bring you knowledge and new spirits of doing things differently as a game changer as we have discussed it before. So the action we got from this workshop that we'll be merging our common view is each of us need to improve our planning tools in individual level, in the city level in our desk and align it with the city planning, national planning , regional planning, so that where the integration would come out as best a seed to ensure the financial streams.

Implementation of sectors and some sectors strategy, we need to address all into sectoral issue and silos. So silos is okay that we all know that we are happy to work in silo but in some point we need to come out of our silo to see of who is doing what so we can improve our silo. It is not called silo or focus approach but I can take advantage of the word silo and innovate here, saying that it's okay to work in silo, for long it's okay to come out of it and then continue, because the planning would have cycles, short term, long term, medium term cycle to ensure the duration. So the key action is collaborate, so once you improve your planning just start to collaborate and here you'll need a lot of good measures to ensure that collaboration.

We discussed today and each city shared of their learnings of creating funds, you want to have to portion of maintenance, how to prove infrastructure subsidy so this provide us. So all of these things we can quite collaboration, understanding and partnership. And you financing scheme

would be one of the way to communicate to different areas or sectors and stakeholders to make them understand your stand as a specialist and competence of the base sector, as an example, right.

I would like to summarize what the ESCAP can offer maybe I did not come out very clearly what is this ESCAP.

ESCAP is Economic and Social Commission for the Asia Pacific, so we are the secretariat, I am coming from Secretariat and I am responsible for the technical project and reports and technical cooperation. So my job and my interest was back to my background of chemistry environment and pollution and become economy because I want to find out how to ensure to right decision making in the sanitation and financing. So, that's why I feel that I can really offer you new tools that we collected, my job was to compile those tools for you and they are known SDG help this I will apply to AIT, I work with Prof.Thammarat from 2015 for the last 3 years. I have a lot to share, he has a lot to share. BORDA has a lot to share. So what we do is first step would me to share we have and then we would advise how the operationalized. So we SDG have the best access free. It's like one data way of publications, products and even e-learning process. Those e-learning process ~~courses~~ is like free access to the publication that you don't want to read but they are very interactive they are using modern software and those actually different tools could be certainly improved online courses like in the university and the frontier of policy makers could learn from. So because, our job, our target area is not university students, our target but is policy maker, so my job is to translate Prof. Thammarat has picked up from you, what BORDA picked up from you on the need of collaboration and put it in away that is easy to understand by policy makers, high level low level for whatever level by digesting the new thing.

I am currently studying master courses online in London University, it is a demanding work. I would always maybe crazy check to the

library that's my short coming. So, what I do, I'd known I bring a lot of knowledge in my essay and my assignment and I have big short coming from the professors from the London University, saying that none of the literature that I wrote are in the library of the London University, why am I picking up the example of literature from ESCAP they are not in that library, because in the last 3,4,5 years we have worked in SDG and I am bringing in but I am not qualified unless I study the old literature. So, I feel okay, I have to work hard studying the basic before I am talking about new things, so in a way that the learning spirits of young people I really wanted to also pick and don't forget that we have to do a lot to help our children and maybe beyond that.

So, please share I share our tools please share your experiences, tailor those tools into your experiences and let's meet again, we will check when we can do that. ESCAP offers two big venues for the government because we are under inter-governmental meetings. So my job is to package your knowledge into policy brief, into case studies. So one thing I will do is I will ~~to~~ pick the policy brief ~~decree~~ where you can also propose your strengths and as the input as SDG help this and we can inform the government in March will be Asian Pacific forum on sustainable Government in October Asian Pacific Urban Forum it will be handled in Penang Malaysia. And then next year that would be high level summit, I saw we want to have integrated sanitation summit. But I am not sure that the summit with the leaders top leaders would be focused on sanitation unless we told them through what the people need, because there is an existing venue that of water and sanitation can handle it.

I think your goal of having the summit is already coming true because we don't have time to plan new summit. Just use the venue in Kimomoto in October next year to be your summit and organize your session for urban plan in that. I will help you to channel into that knowledge personally.

So thank you very much.

**Prof. Thammarat Koottatep**  
**Asian Institute of Technology**

I think that I spent 2 days in this workshop, I have learned a lot. Unfortunately, I will not contribute too much in the discussion yet, because it is like we learn from you that the who are one working in the fields. And we have been working with the BORDA, for quite some years, not just for the sake of the research or academic purposes, but we would like to learn from you and how we can respond to the needs of the local, of the users , of the officers that the one who take action in the field. Even the professor, researchers on MTBS, we are not tackling the problem from the institutions that like AIT. We just provide the knowledge and then the knowledge will not only come from us from the lab, but also will come from you, but we may be able to conceptualize or bundle this knowledge in aware that other can use easier in more adequate ways. So that, our team at AIT and also with a BORDA as well, we would like to offer to you that we can be a kind of catalyst of the gab changing process. You are the gab changers. We try to catalyze you that you can do much better and then of course you may need tools, you may need resources. You can find certain loans, financing mechanism from the local government or from the loaners that give grants to you, but you may lacking of resources. I am sure that you can find out a problem resource that attribute resources efficiently that would be the needs. Thailand is one example, that we use our resources for the development of our country you have heard from us but for sure you can learn from each other as well. That would be a very interesting part that you can learn from each other and that capitalize from that. I think the AIT set up this high level knowledge hub ,that is so called the regenerative sanitation hub. I'm sure that many of you just come up with that the big question mark on your face, " what does it mean? The generative sanitation. You have heard about that sustainable sanitation, you have heard about that integrated sanitation, again the experts the professors again come up with the



new term which is causing you a confusion again. Well I just like to offer to you a kind of the framework that we would like to develop based on integrated sanitation.

We would like to do in a more practical ways or means that we would like to regenerate that existing processes systems or infrastructure that you have which is where I need in the sense that from the practical point a view, from the natural resources, from the ecosystem, it's totally different. But we have to build on our existing infrastructure of system that you have, or even the institutional set up. I think That would be very important then regenerating that are, you can regenerate from that existing part. Anyway, I think I can speak only a few minutes on that, but for sure you still have a big question mark but that means emended or that would be more chaos for you to listen to me for another hour. But I don't think that is a good time for Friday evening like this. But anyway, I just would to launch new things to you or to give ideas that by the third week of February, the book so called regenerated sanitation will be launched. It is provided by the IWA publishing. It will be launched at FSM 5 in cape town south

Africa. Perhaps some of you may join this event. It is one of the biggest event for the sanitation sector expert, or professional or practitioners come together to discuss in the conference. So if you have the chance, you can come down there and for this book not for free for sure. But I offer to you from a page from the books that we have, we also have the FSM 2 box which again also a tools, and also a resources I have heard in the first morning yesterday that you say that you also need a kind of regulation or a kind of how-to-do the project.

We try to collect on good example that if you would like to adopt or adapt the new regulation, you know you can download from that the page. This is a good example in Bangalore, that they implement it nicely the 'KANKA' and then they can learn about it and they can apply that. They also gain a lot of resources not just only for training tools of few kits that have been used . In addition to that, we work with the experts that people like to explore who are the user of these 2 box, we would not like just to finish deliver our tools to **experts** and then we finish at the website. But we would like you to use and they also need a kind of application if they are demand or request from the city, from the country. that they would like to use that part, there would be a certain things that we need to adjust or adapt into our local context for example that we are now try to translate 2 box into Laos language because it is that one thing we can do. And also we try to adjust a certain units according to your national system that—also possible, but I cannot say on behalf of yourselves, but we need your demand, we need your request that direct or through me or direct to the Foundation, also fine. Then we can make use of this tools in more efficient way. And we will be the one that can help you on that.

Then I am sure that 80 our centers or the hub would not just be a kind of that academic institution working in the lab and then deliver the knowledge but we would like to be not just produce few capacity. But we would like to help you in building the capability as well how to use tools, how to use the knowledge, the skill, that is

so important. We also offer this kind of capability, trainings, short course that we can offer to you.

I am sure that in many cities in Indonesia and Philippines, even if they have a better offer of how we can make use of that kind of resources that our team can help you.

And the last but not least I observe that from these two days discussion that we have talked a lot of Donor Driven models on top down model at most. Only one talked about the PVT but to me I would like to challenge to all that why not.

We find out an innovative business model that allow private sectors to work on behalf of us. But if it is profitable and then we can ensure they can do the work. It is not just for service but if they find the profit then it would be many entrepreneurs or investors would like to work on that.

Right now in Thailand and in Malaysia I've heard that there are many companies would like to get the solid waste of sample , just deliver them the solid waste then they process we do not need to invest anything, not even in single USD to invest, just deliver the solid waste to them then they will process and then the product and by product from the waste management are belongs to them. They can get money from that, they can get all the loans, invest on the issue just make a good contract with that. So that would be many kinds of business model generation that we can explore and again gather another advertisement. We will offer a kind of short course or master degree program on business model generation on the use of recycled together with that IWMI with BeMe.

Maybe some of you have heard about that BeMe that works on waste management, waste recycling program for years.

So we work with them then we would like to differ that, not for the sake of Curriculum But we want to offer short course as a degree program up to your finance.

That I would like to say