Making urban sanitation strategies of six Indonesian cities more pro-poor and gender-equitable: the case of ISSDP

A case study on social inclusion for SWITCH

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1. Abstract

This case study addresses how the gender equity and pro-poor approaches were strengthened in the integrated sanitation strategies of six Indonesian cities. This was done in the framework of the Indonesian Sector Sanitation Development Project (ISSDP). The cities are located in different parts of Indonesia and have different environmental, social, economic and cultural conditions. The work was demand-responsive: the six had come forward to improve city sanitation and hygiene in an integrated manner.

In three short-term missions, already existing equity, gender and pro-poor approaches were identified and analysed. Subsequently, a strategy was developed to improve them in close cooperation with the city sanitation platforms and ISSDP. This resulted in an increased gender and poverty focus in the city-level sanitation and hygiene strategies and proposed pilot projects. The paper describes the proposed measures in detail. The concluding sections present lessons from the approach and outcomes for the SWITCH project and a conclusion on the similarities and differences with learning alliances.

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2. Indonesia – an overview

2.1. Urban Sanitation in Indonesia

2.1.1. Urban population

In 2007, Indonesia had an estimated population size of 235 million people. It grows annually by 1.7%. According to the Population Reference Bureau, 42 % of the people now live in cities. Urban growth was 4.4% per year between 1990 and 1999, approximately triple the annual national growth of 1.5% [2]. In 2025, the country is expected to be 61% urbanized equalling an urban population of 167 million people[3].

The two main factors driving urban growth are rural transformation and rural unemployment. Because of the high rural densities around many cities, 30-35% of urbanization occurs through transformation of surrounding villages into urban neighbourhoods[4]. For poor rural people without capital or qualifications, the main hope for a better livelihood is in the urban informal sector, e.g. in street vending, scavenging, solid waste recycling and paid day labour. Many migrants also cultivate tiny, but nutritionally important vegetable gardens[5].

2.1.2. Urban poverty

The definition of the poverty line in Indonesia is defined on the basis of the income needed to ensure a calorie intake of 2,100 daily. Poverty declined steadily from 40% in 1976 to 11% in 1996, but then rose sharply to 23% in 1999 due to the economic crisis. Recovery since then has been slow, with still 17% of the population below the national poverty line in 2004. Households headed by single mothers are overrepresented. In 1999 such households constituted 13.2% of all households in Indonesia. This percentage is likely to be higher in cities. In 1999, the urban poor in Indonesia numbered 15.7 million, the rural poor 32.7 million. In other words, over 32% of the poor in Indonesia are in the urban areas, the highest ratio in East Asia.

2.1.3. Gender and urban poverty

Relations between men and women in Indonesia are inequitable and make women vulnerability to poverty. Poor women are doubly disadvantaged by their economic status and by being female. Despite advances in the last ten years, poor women continue to be deprived on a number of counts such as: traditional customs and mores; discriminatory labour practices and work environments; inequitable wage structures; greater susceptibility to health problems; harassment, rape and other forms of physical violence; domestic abuse and social stigmas about divorce and female-headed households. Although women contribute to livelihoods of the urban poor equally or even more than men, their roles are not recognized by government agencies, extension services and development programs. Poor women do not shape projects and gender analyses are not considered an essential part of project planning[6].

[2] http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1117507568206/1185458-1117507605518/workshop_report.pdf
[3] http://en.wikipedia.org/wiki/Water_supply_and_sanitation_in_Indonesia#_note-9#_note-9
[4] http://siteresources.worldbank.org/INTEMPOWERMENT/Resources
[5] http://countrystudies.us/indonesia/33.htm
[6] http://siteresources.worldbank.org/INTINDONESIA/Resources/Publication/03-Publication/Citiesintransition-Eng.pdf

2.1.4. Urban sanitation

In Indonesia, urban sanitation infrastructure is less developed than urban water supply. According to the Joint Monitoring Program of WHO and UNICEF, urban access to improved sanitation was 55% in 2004 against 77% for improved water supply. Other sources give figures between 70% and 75%, however[7,8,]. On-site sanitation with septic tanks is the most common form. Sewerage systems serve only 2-3 percent of the urban population. Out of seven major sewerage systems, four date from the colonial era[9]. However, these access figures only provide part of the picture. For instance, many septic tanks are not emptied regularly and so in reality have become soakpits. Many soakpits are a health risk, because they are located close to the drinking water sources. Sludge of emptied septic tanks is often deposited raw in open water sources. The actual percentage of safe excreta and blackwater disposal is thus considerably lower than reported in official figures.

Solid waste has become a major problem in Indonesian cities. The capital, Jakarta, for example, generates seven million tons of solid waste annually. Services deteriorated during the economic crisis of 1998. In 2000, 60% of the registered urban areas had no solid waste collection and only 1,6 % of the collected waste was treated by composting. Poor operation of sanitary landfills, often open dump sites, causes infiltration of leachate to many surrounding areas. Other common problems are limited availability of land for sanitary landfills, limited financial capacity of local governments, low budget allocations (typically less than 2% of local budgets), low technical and managerial capacities and limited participation of communities and private sectors in this service.

Drainage infrastructure is limited and local flooding affects especially poor communities located in flood plains and other low-lying areas.

2.1.5. Sanitation policies and programmes

There is no separate sanitation policy and the new national policy for water and sanitation focuses mainly on rural services. Urban sanitation is the least well addressed of major policy issues in Indonesia. Indonesia has set itself the following targets for sanitation:

- No more open defecation in urban areas by the end of FYP 2004-2009
- Halve the pollution of surface waters by human excreta by 2009;
- Increase the utilisation rates of municipal sewerage services.

Poverty and poor sanitation are closely linked. Diarrhoea is the second leading factor in killing children under five in Indonesia and accounts for about 20% of child deaths each year[10]. Premature child death is responsible for 90% of the health-related economic loss of poor sanitation. The total economic impacts of poor sanitation in Indonesia (higher health costs, more water pollution, loss of productive time and negative effects on tourism and the environment) have been valued at about US$30 per person per year. Each year, the country

[7] http://www.wsp.org/filez/pubs/124200734141_EASAN_Joint_Publication.pdf, Annex 1
[8] http://www.wsp.org/filez/pubs/124200734141_EASAN_Joint_Publication.pdf
[9] http://siteresources.worldbank.org/INTWSS/Resources/UWSIEP.pdf
[10.] Urban Sanitation: It's not a private matter anymore. Portraits, Expectations and Opportunities (Brochure). June 2006 (web version not yet available)

loses an estimated 2.4% of its GDP per year due to bad sanitation[11]. A World Bank study even values this loss at $12 per household per month[12][13].

A national policy, strategy and action plan on solid waste management (SWM) were prepared in 2003. The strategy emphasizes the three Rs (Reduce, Recycle, and Reuse), promotes public awareness and advocates public-private and local government partnerships.

2.1.6. Governance and finance

In 2001, Indonesia adopted a national decentralisation policy. Since then, local government has the authority to conduct planning, implementation, monitoring and evaluation of all governance and development programmes. The policy increased the local responsibility for the environment. Peri-urban settlement and inner city communities may even set up their own decentralised water supply and sanitation systems rather than be part of a whole city network run by the city utility

Over the last 30 years, the Indonesian government has spent around US$ 820 million on sanitation or US$ 0.02 per person. This equals to 1,3% of expenditures for drinking water. In the last two FYPs, the investment increased to an equivalent of US$ 15 and US$ 26 per person[14]. With decentralisation, new finance mechanism have been introduced. Previously, local governments typically invested less than 2% of their annual budgets on water supply and much less (detailed figures unknown) on sanitation. Overall, annual investments on water and sanitation are some 3,6 trillion rupiah or US$ 375 million, about three times more than those of the central government, but they are much lower than those in other middle-income countries[15].

2.1.7. Implementing agencies

At national level, five ministries (Finance, Settlement and Regional Infrastructure, Environment, Home Affairs and Health) and the National Development Planning Agency deal with urban sanitation. The latter heads the Sanitation Working Group since 1999. It has limited authority and mainly organises workshops and trainings.
The provision of water and sanitation services in urban areas is the responsibility of PDAMs (Perusahaan Daerah Air Minum), local government- owned water utilities. There are 306 PDAMs in Indonesia. There are only a few utilities dedicated exclusively to sanitation, called PD-PAL or Local Government Owned Wastewater Utilities. Dinas Kebersihan or solid waste agencies are responsible for the management of urban solid waste.

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[11] http://siteresources.worldbank.org/INTINDONESIA/Resources/Publication/03-Publication/Citiesintransition-Eng.pdf

[12] World Bank http://siteresources.worldbank.org/INTWSS/Resources/UWSIEP.pdf (2003) Cities in Transition : Urban Sector Review in an Era of Decentralization in Indonesia. (Dissemination Paper No. 7), Washington D.C., USA, World Bank: Urban Sector Development Unit, Infrastructure Department East Asia and Pacific Region. http://siteresources.worldbank.org/INTINDONESIA/Resources/Publication/03-Publication/Citiesintransition-Eng.pd

[13] Additional information on ISSDP can be found on the following websites:
http://issdp.ampl.or.id/v2/index.php?option=com_frontpage&Itemid=1 (in Bahasa) and
http://www.wsp.org/filez/activity/910200732409_Indonesia_Country_Program_Management_and_Integration.pdf

[14] http://www.un.org/esa/agenda21/natlinfo/countr/indonesa/sanitationIndonesia04f.pdf
http://www.un.org/esa/agenda21/natlinfo/countr/indonesa/sanitationIndonesia04f.pdf

[15] http://en.wikipedia.org/wiki/Water_supply_and_sanitation_in_Indonesia
http://en.wikipedia.org/wiki/Water_supply_and_sanitation_in_Indonesia

2.2. The ISSDP

In 2005, the Government of Indonesia (GoI) and the World Bank Water and Sanitation Program (WSP) started the four-year Indonesian Sanitation Sector Development Program (ISSDP). Its purpose was the integrated promotion of safe excreta disposal, waste water disposal, solid waste management, drainage and hygiene at national and city level.

ISSDP was financed by Dutch Trust Fund to the World Bank and by the Government of Sweden for wastewater, drainage and solid waste management (SUSEA agreement). ISSDP is one sanitation programme in Indonesia and is distinguished from others reported in the Sanitation Country Profile[16] because it links support to an enabling national environment to demand-based city strategy development and implementation.

The national component involved developing a national enabling framework for urban sanitation and design national campaigns on sanitation awareness and handwashing. The city component was to strengthen the capacities of the six pilot cities that had come forth first to plan and implement improvements in urban sanitation (Table 1).

Table 1 : ISSDP Pilot Cities

Name of town	Nature	Population size	Population density
Banjarmasin	capital of Kalimantan	572.200	8,186
Blitar	agricultural centre in East Java	126.388	3,880
Denpasar	capital of Bali	56.2907	4,550
Jambi	spread-out town in Sumatra	419.920	2,045
Payakumbuh	agricultural centre in Sumatra	121.500	1,510
Surakarta	larger industrial city in Central Java	552.542	12,546

During the first two years a consortium of Indonesian and Dutch consultants was contracted to help develop the national framework, build the capacities of six cities to develop urban sanitation strategies and plans, and prepare three campaigns (to raise leadership awareness of sanitation, make the poor more aware of sanitation solutions and promote women's handwashing habits). In the second two years, support will be given to strategy implementation at national and city level. A team of about 50 long and short-term international and national specialists provide inputs such as: studies and reviews, sanitation policy consolidation, strategy development, advocacy, capacity building and guidelines and manuals development.

ISSDP is pro-poor: it should ensure that poor urban neighbourhoods and people get equitable access to improved sanitation and hygiene. In 2007, the Joint Mid-Term Review Mission advised to include also a gender strategy. A two-person team (one national, one international consultant) was engaged to review the pro-poor and gender approaches and support their strengthening at national level and in the city strategies.

2.3. Outline of the case study

The next section describes the methodology used (3.1), the already existing approaches (3.2) and the resulting adjustments (3.3), covering human excreta and blackwater disposal, drainage, solid waste management, hygiene and sanitation promotion, WASH in schools and ISSDP's own organization. Section 4 gives the key lessons and conclusion from strengthening

[16] http://www.un.org/esa/agenda21/natlinfo/countr/indonesa/sanitationIndonesia04f.pdf

social inclusion in ISSDP (4.1) and the major conclusions for SWITCH (4.2). The appendices contain a some specific outputs related to social inclusion in ISSDP: inclusive city sanitation strategies, baseline formats and project digests for action research.

3. Strengthening the gender equity and pro-poor focus

3.1. Methodology

The methodology used was to identify and build on good practices on the ground and develop them into a more systematic social inclusion strategy for the planned sanitation and hygiene interventions. A mix of indirect and direct methods was used, with (1) a desk study, (2) interviews with programme staff in Jakarta and the cities (the six city coordinators), (3) meetings with the Sanitation Pokjas, or Sanitation Working Groups comprising the heads of departments and NGOs with roles in city sanitation and hygiene, (4) visits to the lowest government level and poor neighbourhoods with gender and/or poverty specific services for observations, interviews and a hygiene workshop, (5) debriefings with city mayors/ *pokjas* or workshops on the proposed strengthening of social inclusion in the national language (Bahasa).

3.2. Existing approaches at neighbourhood/city level

This section presents a number of existing socially inclusiveness approaches that were found during the field visits:

- Increased access of the poor to water for hygiene
- Decentralised community-managed sewerage systems
- Communal sanitation blocks(MCKs)
- Community campaign for on-site household toilets
- Informal private sector collecting and recycling inorganic waste
- Productive use of bio-degradable solid waste
- Municipal fund for neighbourhood projects
- Supportive Campaigns
- Gender equality in-house

Increased access of the poor to water for hygiene
he provincial capital of Kalimantan, Banjarmasin, is located in a large river delta. There are 17 poor neighbourhoods. The poor live in wooden houses on poles in the river and swamps. Alongside the houses are wooden jetties with ‘helikopter toilets’ directly over the river (Fig. 1). Neighbours and passers-by also use these toilets. While most poor people buy treated water for drinking per jerrican at communal reservoirs (the “blue tanks’’, Fig. 2) they use river water for all other uses including washing food utensils and bathing (Fig 3).

Fig. 1 “Helicopter” toilet

Fig. 2 A blue tank

Fig 3 Multiple uses of river water

Two types of pro-poor and gender equity approaches were found:

- One neighbourhood had made a poor old widow the tank operator. She supervised the collection and collected and accounted for the payments. In return she got a small payment and her own water free (Fig 4).
- In another neighbourhood, the local government had subsidized the installation of private ‘ yard’ connections. As a result, all households had an outside tap on their platforms and women were seen to wash utensils, food and clothes not with river water, as elsewhere, but with the tap water (Fig. 5).

Fig. 4 Interviewing the local caretaker

Fig. 5 An outside tap (on the left) for multi-purpose water use

Decentralised community-managed sewerage systems

In Denpasar, the capital of Bali, and Blitar in East Java, an NGO has helped several poor neighbourhoods to build on-site sewerage systems also known as SANIMAS. They consist of private connections to a series of inter-connected baffle reactors buried under the street pavement. Each house has an individual grease trap (Fig. 7). The tariff covers the cost of the operator who cleans blockages beyond the traps. Investment costs are highly subsidized: users currently pay only 2%. The city can therefore finance one system annually.

A quick assessment brought out that poor households, such as migrant renters of a single room, and owners of rich houses (Fig. 7) paid the same flat amounts to construction and O&M. and that the local managing committee may be embezzling O&M funds. It kept accounts, but without accountability to local authorities and rate payers and incomes and expenditures did not tally. Only part of the O&M costs were covered from the income; the NGO paid for example for desludging. Women did not participate in sanitation meetings and they and the poor such as immigrants were not represented on the management committee.

Fig 6 Grease trap and baffle reactor

Fig. 7 Rich households....

....pay the same fees as the poor

Communal sanitation blocks(MCKs)

Sanitation blocks, known as M(andir), C(ucil), K(akus) for bathing, laundry and defecation, are widespread. They are managed by the municipality or the Rukun Tetangga or RT

(=neighbourhood association). The usual fee is Rp 100 (about one US dollar cent) per visit. RTs use the collected funds for maintenance. Demand is high, but payment capacity low. Poor women would like to earn extra income to finance the MCK use. When poorly managed, MCKs are disliked: they are dirty, smelly, lack water, have no separate sections for women and men and long queues at peak hours. People then prefer open defecation near water.

Some neighbourhoods run MCKs well. In one Surakarta neighbourhood, the users voluntarily operated it on a roster basis. The women cleaned and disinfected toilets after use (Fig. 8) and collected payments during the day and their husbands did so at night to ensure a 24 hours' service. A well with diesel pump provided water whenever piped water supply was interrupted. A mixed committee did the overall management. The facility was very clean, but too small to meet peak time demand.

An alternative piloted in Denpasar is the MCK+. This includes sludge treatment so that there is no untreated sludge disposal into rivers, a widespread urban sanitation problem (Fig. 11). The MCK+ is beautiful (Fig. 10), but its investment costs equalled that of 15 neighbourhood MCKs and it is not community-managed and cost-covering. The NGO employs the operator and manages the service. Not counting population growth, the city would need 19-30 years to serve all poor neighbourhoods with these facilities.


Fig. 8 Cleaning after each use


Fig. 9 Operator also disinfects


Fig. 10 MCK+: pretty but costly

Community campaign for on-site household toilets

The agricultural town of Payakumbuh in Sumatra has a strong Health Department. It carried out a successful toilet campaign with poor refugees resettled in the city outskirts after a volcano outbreak. Within three months, 30 of the 40 households had made a toilet with their own resources, comprised of an off-set soakpit and a hut with a squatting platform, ranging from a paved mud floor with a hole to a ceramic pour-flush toilet pan set in a small cemented and tiled raised platform (Fig. 12 and 13).


Fig. 11 City sludge disposal


Fig. 12 Simplest pit latrine


Fig. 13 First stage toilet

The primary health workers kept weekly records with written commitments of each household towards toilet completion. Two local women emerged as natural leaders and took over promotion and monitoring. Households plan to upgrade toilets over time.

Informal private sector collecting and recycling inorganic waste
The lack of well-working and affordable solid waste collection and disposal services has led to a vibrant informal sector with poor men, women and children collecting in the streets and from households, segregating them in various types of wastes (paper, cardboard, metal, glass and various types of plastics) and selling them to non-formal and formal private sector entrepreneurs. On the city dumps, poor women, men and children work as scavengers and graze their goats and cows on the organic waste. The city dump of Surakarta for instance has about 118 collectors, of which 40% are women, and feeds over 1,000 cattle of poor families living near the dump.

Mrs. Bahrain began a plastic recycling business in Banjarmasin in 2000. Her husband later joined her. About 60 of the 100 employees are women, who can bring their children to the worksite. Their main jobs are selecting and classifying 50 kinds of plastics. The sales turnover is Rp 450 millions/ month (US$ 50,000 in 2007). Yayuk is a recyclable solid waste trader in Blitar. A former scavenger, she now buys waste from 20 fellow scavengers whom she has lent a revolving working capital from Rp50.000-200.000. Her sales turnover is about Rp 20 millions/ month (US$ 2200 in 2007).

Most cities have also female solid waste entrepreneurs (see Box above). Surakarta has hundreds of women who buy and recycle small amounts of waste from primary collectors. Payakumbuh has three inorganic waste recycling businesses run by couples. One of them has a sales turnover of Rp 200 millions per month. In Denpasar, the Solid Waste Aggregators Communication Forum has four women members. Denpasar has about 15 recyclers and hundreds of aggregators, of whom many work as a family business. One neighbourhood runs a local solid waste collection and recycling service.

Productive use of bio-degradable solid waste
In a lower middle class neighbourhood in Banjarmasin, women of every three households share a composting bin to compost kitchen waste. They used the compost and fluid from the bin for potted plants, a communal vegetable garden, environmental beautification and sales. Women and men shared the physical work and in monthly clean-up campaigns and in the garden. Profits helped build a communal badminton court. In the peri-urban areas of Payakumbuh, women's groups already a mix goat urine and composted kitchen waste for composting vegetable gardening and plant nurseries. Plants are sold and rented out to businesses. A quick calculation with one group taught that the profits provided up to 25% of the household income. Toilets build over fish ponds also serve to generate income and food. When learning about dry (eco-) toilets to produce compost and urine fertilizer, they expressed a strong interest in a trial.

Municipal fund for neighbourhood projects
Blitar, a small town in East Java, is special for its community development fund. It has twenty neighbourhoods, of which three are poor. The budget of the town was Rp. 6.14 billion (US$ 646,000) in 2004, double the amount of 2002. Under its community block grant programme the city disburses 2% of its income directly to the neighbourhoods for small projects, including an obligatory 13% for low cost housing. The neighbourhoods themselves contribute 13-22% of the project funds in kind or cash. The purpose of the fund is to increase public

participation and self-management and allow local officials and communities to exercise their autonomy. Village Community Empowerment Institutions (LPMSKs) take care of mobilization. Women participate in the mandated community assemblies or pre-musrembangs in which these projects are planned. Since 2003 project selection criteria include the number of poor beneficiaries. Most local grants go to improvement of infrastructure. From 2005 on, use of funds for hardware is restricted to 60%. Learning from mistakes is an accepted part of the approach[17].

4. City level action plans

This section describes a number of city-level action plans that were developed with ISSDP to ensure social inclusive sanitation and hygiene programmes. However, it starts with a description of the activities at the national level that were initiated to support activities implemented in the cities, and the agreed measures to strengthen gender equality within the ISSDP organisation itself.

4.1. Supportive Campaigns

At the national level, the ISSDP helps to strengthen an enabling environment which will stimulate and facilitate cities to take up urban sanitation and hygiene improvements. For this purpose, three campaigns will be undertaken to promote sanitation and hygiene among the national, regional and local decision makers and the urban poor.

Campaign for policy and decision-makers.
One reason for the low support to sanitation is that opinion leaders, policy makers and managers do not see the links between sanitation, public health and economics. A communication strategy, action plan, campaign and advocacy materials have therefore been developed. They have a strong link to poverty reduction, but women are presented as passive beneficiaries only: the national message, to be spread by only the Minister of Women Affairs is “without toilets women suffer more”.

Sanitation Awareness Campaign
From research it is known that in Indonesia, sanitation is women’s second priority, but only the eighth for men. The campaign is to change this. The primary target group is urban men, aged 15-65, from lower and middle class households, who decide on larger investments at home, in order to raise their demand for good sanitation and hygiene .
The key message is than men should provide ‘a clean and healthy living environment’ to protect women and children against disease and nuisance and create dignity for women and the whole family. The leading question is “Are you responsible enough to create a clean and healthy environment for your loved ones?” The key communication channel chosen is television, with supporting messages on radio, in local newspapers and by printed materials − posters, flyers and a catalogue with toilet options for men to discuss in male community meetings or musrembangs. Women will be reached through their own meetings (often religious gatherings) and women’s organizations, including the national women’s movement PKK.

Hygiene improvement campaign
The campaign for improved hygiene focuses on handwashing. Washing both hands with soap/soap alternatives (e.g. ash or firm rubbing) and water can reduce diarrhoeal disease by

[17] http://www.innovations.harvard.edu/showdoc.html?kpid=8971

33 to 47 percent[18]. The campaign draws on formative research carried out by the Environmental Sanitation Program (ESP) supported by USAID[19]. The target group is female caregivers (mothers, grandmothers, sisters and nannies) of children under five, because children aged 0-5 suffer and die most from diarrhoeas. Other target groups such as schoolchildren, teenage boys and girls and fathers may be addressed in later campaigns. The central message is "wash (both) hands with soap at critical times". The major media for awareness building and message spreading are TV and radio. As supportive material, small tip cards will be packed with commercially sold soap. Trained female cadres at RT (community) level, such as Puskas Mas (Public Health Centres) and PKK (the national women's programme) will lead women's group sessions for inter-personal communication and spread flyers and stickers. All caregivers get a Child Monitoring Card to monitor diarrhoea of children aged 0-5.

The pilots of the campaigns will include a comparative study on the communication effectiveness of mass media alone versus mass media plus interpersonal approaches to measure and compare their relative cost-effectiveness.

4.2. Strengthening the 'enabling national environment'

The gender assessment resulted in the following conclusions and recommendations for the national component of ISSDP:

- Advocacy of sanitation especially to men is a strong point, but the communication strategy should include enhancement of women's public sanitation roles. Women have now less influence than men to put these topics on the political/ developmental agenda despite their sanitation and hygiene roles and priorities. The Communication Strategy and Plan of Action should recognise and reflect also women's roles in sanitation and hygiene and poor men's and women's valuable work on sanitation in the informal sector.

- The Sanitation Mass Campaign should recognize also women and girls. It is positive that the national sanitation campaign stresses the responsibilities of the adult and adolescent men for the family's good sanitation. However, this message and image does not give credit to what women and girls in the family already do on sanitation and hygiene at home. It has therefore been recommended that the campaign message and images bring out the roles and responsibilities of both: the women already caring for a healthy home, but the men now taking their responsibility to support them, and both putting sanitation and hygiene on the community agenda.

- Recognition of sanitation by single mothers. Given that about 1 in 5 households is headed by single mothers, the campaign should make sure that images and messages on sanitation relate to their circumstances, showing how they can cope with improving conditions and practices and make a living when public-private partnership in the sector is improved.

- Hand washing Campaign: the limitations of a women-only focus. It makes good sense to promote handwashing by especially female caretakers. They are the main

[18] http://www.lboro.ac.uk/well/resources/fact-sheets/fact-sheets-htm/Handwashing.htm
[19] ESP-USAID 2006. Formative research report Hygiene & health. No on-line version available

preparers of food and carers for children and family hygiene. Yet, from the literature it is known that in many cultures women cannot easily make husbands, fathers, fathers-in-law and elder sons to wash hands. If these male categories do not wash hands properly after defecation and before eating, a critical mass for a positive impact on public health may not be obtained.

- Men to be given their roles in handwashing. Given the above, it is neither fair nor optimal to make only women responsible for the promotion of handwashing. A sub-message in text and image should be that also men take their responsibilities for this practice. They can for example be interviewed on what they see as their responsibilities: see that the family has safe water and soap for washing hands, co-educate children, and practise good behaviour themselves.

- Economic feasibility of handwashing for the poor. An important aspect of handwashing that came out of City Focus Group Discussions was the costs of handwashing for poor families. It is therefore important to show in messages and images the costs and cost-savings of washing hands and the no-cost alternatives for soap such as the use of ash, clean sand or firmly rubbing both hands during rinsing.

4.3. Adjusted City Action plans

This section describes a number of adjustments to the city-level action plans:

- Expansion of central sewerage networks
- Improved SANIMAS
- Improved on-site toilets
- Improved solid waste management
- Improved waste water disposal
- Shift to participatory hygiene promotion
- Linking improved sanitation with poverty reduction
- WASH in schools still to be addressed

4.3.1. Expansion of central sewerage networks

In the inner cities with a sewerage net (Banjarmasin, Solo, Denpasar) special measures will be considered to facilitate that the networks also serve the poor. They have been summarised in Table 2

Table 2 : Proposed measures to make sewerage services more affordable for the poor

Technology choice & service level	Consumers get the option of group connections at a lower per capita cost
	Consolidation/expansion of small community-managed sewerage systems (to be linked up later)
Promotion and installation	In poor neighbourhoods, local women to be trained, equipped and authorized as promoters, plumbers and tariff collectors for sewerage and water connections. Women tend to be very committed and better at promotion than men.
	RT sessions with local women and men heads of households reviewing drawings of various toilet models, options and costs to create awareness, demand and innovative solutions, e.g. building four toilets in a block to save land and reduce costs,

	sharing toilets and upgrading toilet materials over time.
Finance and administration	Consumers get interest free loans to connect and pay back as part of the tariff;
	Introduction of weighed tariffs reflecting the principle 'the polluter pays'. Use of local indicators, e.g. type of housing, to determine the category of payment.
	Different loan terms for different groups, e.g. middle class pay in 20 instalments, poor in 60 instalments and very poor pay a symbolic price to create a payment habit. In Santiago de Chile this led to 30,000 extra connections.
	Timely payments are rewarded, e.g. by a % reduction for the next year.
	Poor consumers may pay on a more frequent basis to match their patterns of daily or weekly income ('pay when you please') to a local intermediary. S/he either collects the payments at the consumers' houses or the latter pay in their house/shop The intermediary pays the monthly bills to the office of the utility;
Selected subsidies with transparency and accountability	Targeted subsidy by the municipality or RT to households in the poorest communities and classified as the poorest consumers within these communities through the participatory welfare classification technique[20].
	Further transparency is achieved by displaying the list of subsidized consumers and making a procedure for complaints handling;
	Community self surveys with PRA methods (welfare classification, sanitation map, rapid home visits to check septic tanks and disease transmission risks) can help create a greater demand for sewerage connections, solidarity and neighbours' help, and accountability for subsidies.
Regulation and legislation	Regulations or by-laws make connections and payment of tariff (also for renters) compulsory for land lords within reach of the network;
	Regulations or by-laws oblige house owners/landlords outside reach of the network to install proper toilets with septic tanks meeting city-set tank standards.
	Wide-spread information through male and female channels (e.g. press, local organisations, wall messages) and RT checks for knowledge and social pressure.

4.3.2. Improved on-site toilets

As mentioned earlier, many septic tanks are not desludged in time or not at all, nor safely located in relation to water point sources and intermittent piped water supply. Many soakpits also bear contamination risks. In the environmental risk surveys, local health staff have

[20] In particpatory welfare classification, a group of local people agree on local indicators for fortunate (I), in-between (II) and unfortunate (III) households (sometimes there is category IV, the very worst off). They then make a social map of their neighbourhood which reflects the houses in each category. Only those in category III or IV get a subsidy. Subsidies are marked in the map or displayed otherwise for transparency, verification and accountability.

identified the households concerned. Next steps are household awareness campaigns and in poor areas giving technical and financial support (see interest free loans and targeted subsidy above) to make tanks/pits safe. Mechanic desludging in dense settlements is possible through vacu-tugs, e.g. as public-private partnership[21]

4.3.3. Improved helicopter toilets

Three cities have special circumstances for on-site sanitation as they are located next to river banks. E.g. in Banjarmasin people will dislike to demolish their helicopter toilets as these constitute a considerable investment and there is no space and little solid land for septic tanks and soak pits. One can also not expect that people will shift to MCKs (which must be located at much farther distances, because solid land and space are scarce) as long as helicopter toilets can be used so easily even during the night.

Fig. 14 Sanitary Helicopter Toilet

Fig. 15 One type of dry toilet

Fig. 16 Single Vault Moveable Container (Indoor dry toilet)

Fig. 17 Low cost dry toilet slab

Where soil conditions or lack of space do not allow replacement by sanitary household toilets on land, the proposed solution is to upgrade helicopter toilets by equipping them with a light-weight pour/flush pan, a flexible hose and a floating tank (Fig. 14), combined with a public-private partnership for sanitary tank emptying, e.g. a Vacutug service (private) and sewage treatment or composting beds (public).

4.3.4. Dry composting toilets

In Blitar, Jambi, Payakumbu and at the outskirts of Denpasar, some interest in dry toilets with urine diversion giving a free natural fertilizer and rapid faeces composting is already present. Demand can be increased through neighbourhood sessions on the technology and cost-benefits with men and women (who grow the vegetables and raise plants for the family's cost-savings and extra income) and demonstration projects. Affordability depends on options including low-cost designs (Fig. 15-17) and financing through e.g. local credit at banks or shops or through local credit and savings systems as those run by women's groups and RTs.

[21] http://www.tve.org/ho/doc.cfm?aid=1312. A case study will soon be published.

In these more peri-urban and open areas, households will get informed choices on different kinds of toilets (including dry toilets), superstructures and the possibility to upgrade these over time (Fig. 18).

4.3.5. MCKs

A component in the city strategies on MCKs is to learn more systematically from the existing experiences, and to develop effective support programmes with skilled staff, materials and training through an 'action-learning programme'. An example of a useful support material to be developed is a catalogue of management and financing options for more informed community decision-making. Brief assessment formats have been developed to help local communities, leaders, PHC/PKK staff and researchers start participatory learning and action planning. They are attached as Annex 2 and 3.

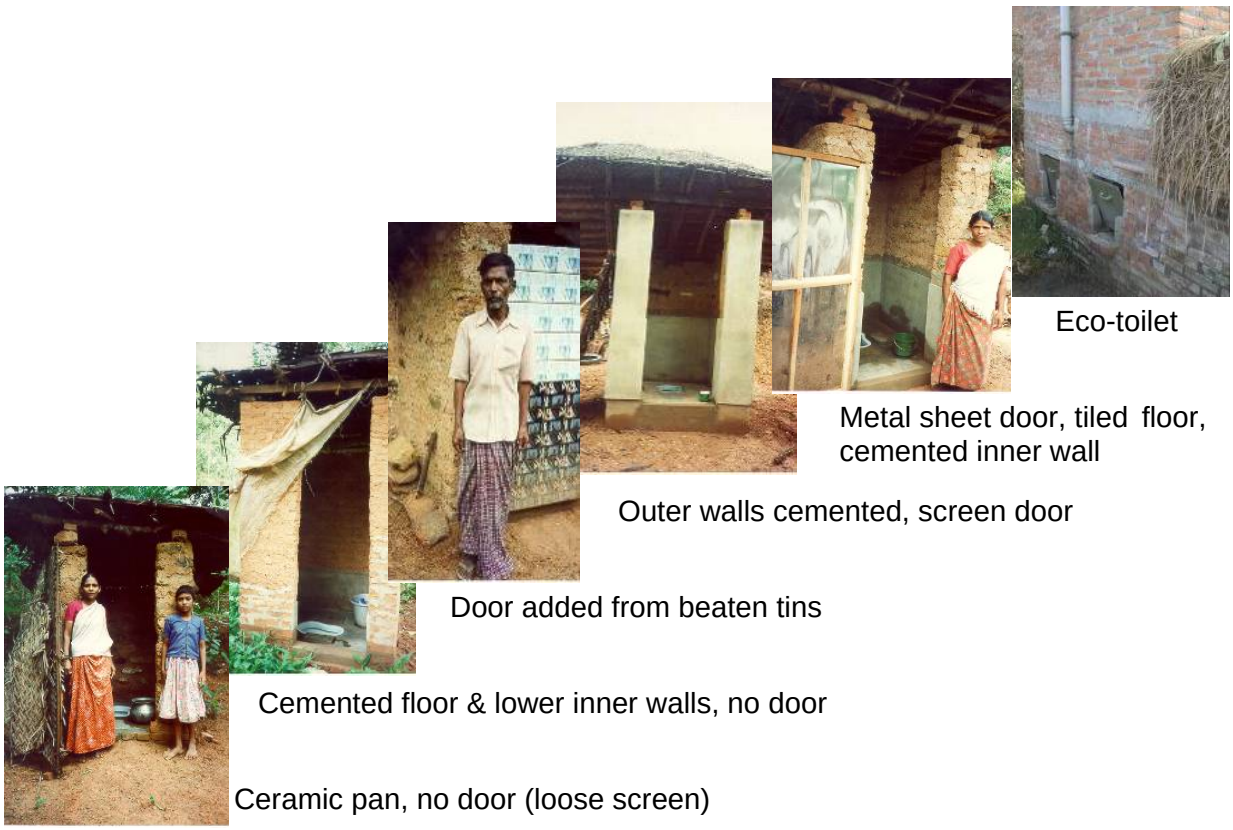

Fig. 18 Low-income households improve toilets over time (photos C. Sijbesma from Kerala, India)

For MCKs, it is important to determine the optimal city design standards:

- which maximal distances are household members, including women, children and the elderly and disabled, prepared to walk to stop open defecation and only use the MCKs?;
- What is the optimal size and composition of such an MCK regarding numbers of toilets, showers and water supply to provide basic services for all, including at

peak hours and cover preferably the recurrent costs at affordable and acceptable user tariffs?[22];
- Can designs be improved at low costs to meet the needs of women, the elderly and the disabled regarding accessibility, privacy, menstrual hygiene?;

4.3.6. Improved solid waste management

ISSDP research had shown that decentralised segregation and composting of organic waste can reduce the cities' solid waste streams by 25-30%. The strategy for improved solid waste management (SWM) builds on already existing models of solid waste segregation and recycling in the six cities:

Civic-Private Partnership
Composting or vermi-composting is done by community women, in small groups or in the community. The RT (neighbourhood association) employs a male or female informal private collector or collectors to collect, sort the wastes in a local site and sell recyclables to the secondary informal private sector to combine service with poverty alleviation. Alternatives: Families segregate bio-degradable and other recyclable wastes at source and informal private collectors (men and women) or the local youth groups collects and sells the different wastes to the secondary informal sector for income generation.

Civic-Public-Private Partnership
RTs (neighbourhood associations) employ (or households directly pay) poor female and/or male solid waste collectors from the informal private sector for door-to-door collection. The collectors bring the waste to city-established decentralised SWM stations where they segregate the wastes and sell it on to the secondary private sector. The remainder is brought to the city dump for safe end disposal. Alternatively, households already segregate the wastes at home, informal private collectors collect them at the homes for processing/selling and different family members bring the remaining waste to the TPS, where the city collects it for final disposal.

Cadres from the city health services and national women's programme and elected leaders of the RTs, RWs and Kelurahans (lowest levels of local government) will inform meetings of male and female heads of households in the neighbourhoods about the options and help them make informed choices and plan, organise and test services.

Where forms of neighbourhood-based SWM are already practised, horizontal learning will be encouraged. Under this strategy, the cities assist leading women and men from the concerned neighbourhoods or groups to visit women groups and community meetings in other communities to inform them, explain and demonstrate the processes and product, invite participants to visit their communities for observations and interviews and give hands-on training with an agreed compensation.

The city strategies will include special attention and measures to ensure that poor women and men participate in learning and decision-making on partnerships in SWM:

- Extending information about and invitations to meetings;
- Using extension methods suitable for non-literate participants;

[22] Although a strong case can be made for some municipal support to recurrent costs as long as better-off households do not pay the full recurrent costs of their piped water supply and sewerage services.

- Accounting for participation of poor women and men in trainings;
- Ensuring poor women's and men's shares in decision-making bodies and sessions;
- Ensuring that procedures and documentation are gender and poverty specific.

An important part of the SWM city strategies is the protection against environmental and health risks of segregation, collection and recycling at home, by the employees of the city service and by the men, women and children in the informal sector as analysed by Cointreau and Hunt[23]. Better education and training, improved working conditions, operational procedures and equipment and protective clothing can do much to reduce the risks. Decentralised and participatory SWM with precautions to reduce risks is cost-effective because it reduces the need for costly investments for transport and end-disposal and enhances income generation and poverty reduction in the cities.

Improved waste water disposal and drainage
Improved sanitation and SWM have the additional advantage of contributing greatly to the reduction of waste water disposal and drainage problems. The following gender-friendly and pro-poor city strategies were formulated to reduce these problems further:

- Participation of community men and male leaders in the identification of locations where waste and drainage water does not run off due to a lack of sloping and/or blockages from solid waste. (In the local cultures men were responsible for community drainage and waste conditions);
- Mapping of houses with and without soakpits as part of community mapping and action planning and implementation for on-site drainage;
- Participation of women in drain design and use and men on maintenance to avoid the use of drains for child faeces and solid waste disposal;
- Avoiding that natural and constructed drains in the better parts of the city do not increase drainage problems in habitation areas of poor people by using an integrated approach and eventually city-wide approach from flow start to finish.
- A policy and strategy for cost sharing for improved drainage is part of the recommended city strategy for improved drainage. In poor areas, where RTs or households cannot easily contribute in cash, self help (rotong goyong) in the form of voluntary labour by the men (digging) and catering the women will reduce the construction costs of protected drains in poor areas. Part of the planning is to agree on the value in cash to be contributed by those who do not contribute in labour, which are usually the better off. Monitoring of payments and public display of the status of household/community contributions helps to realise the agreed norms for such contributions.

4.3.7. Shift to participatory hygiene promotion

Cadres of puskasmas (health centres), Posyandus (health posts) and PKK (the national women's programme) promote better hygiene and sanitation through presentations (Fig. 19). Spreading information and motivation in one-way talks is not the most effective method. Research has shown that concepts of personal and domestic cleanliness are strong and include

[23] Cointreau, Sandra (2006). Occupational and Environmental Health Issues of Solid Waste Management Special Emphasis on Middle- and Lower-Income Countries. Washington D.C., World Bank: Urban Sector Board http://siteresources.worldbank.org/INTUSWM/Resources/up-2.pdf
Hunt, Caroline (2001). A review of the health hazards associated with the occupation of waste picking for children, *International Journal of Adolescent Medical Health* 13 (3): 177-189.

having a toilet, bathroom and water and solid waste management in the community[24]. Information comes from parents, the mass media (especially TV), school, and peers.

Participatory methods used with neighbourhood groups of women and girls and men and boys are more effective in improving conditions and practices because they offer opportunities for horizontal learning, including between schoolchildren and adults, the identification of bad conditions and habits to change and good ones to reinforce, and information exchange, decision-making and peer influence on ways of making these changes. Depending on socio-cultural conditions, such sessions can be mix or separate for males and females.

Fig. 19 Conventional method

Fig. 20 Review of drawings

Fig. 21 Sorted in priorities for action planning

An illustration in case was the hygiene promotion activity carried out with males and females of a poor neighbourhood in Banjarmasin. Prior to the session, the team had used felt pens to prepare simple½ A4 line drawings (Fig.20) (with more time drawings can also be made by community youth/children/adults). The slips showed a range of locally specific risky and safe hygiene and sanitation conditions and practices and promotion methods, such as brushing teeth and washing kitchen utensils with river water. In two sub-groups in the local mosque, the women and men first laid the drawings out in two lines on the floor: good and bad situations and practices.

During the exercise group members discussed risks until a consensus was achieved, with children telling what they had learned in school. Having completed, the reasons for laying a drawing in a good or bad line were reviewed. The groups then subdivided the two lines into four: good habits/conditions already and not yet present and bad ones no more or still present (Fig. 21).

Finally, the two groups chose three priorities for action from the two second lines (not yet practiced good and still practiced bad). The men and women then visited each other's displays and discussed their priorities. Both groups had selected helicopter toilets as one priority, the men chose community solid waste management and more active participation of their children on hygiene, the women concluded that they should become more active in local planning if they want to get better hygiene and sanitation.

The cities' strategy for hygiene promotion is to train the Posyandu (health post) volunteers to organise and run Community Health Clubs in poor urban communities. Clubs will be either mixed or separate for women and men, depending on the local culture. The clubs will have 20 sessions of two hours each to strengthen local health and hygiene knowledge and practices.

[24] ESP-USAID 2006. Formative research report Hygiene & health.

This strategy, which was proven to be cost- effective in Zimbabwe[25], is planned to be tested in the urban sanitation program with the following proposed modifications:

- Make it possible to take up the community health programme for existing groups, such as religious and women's groups, unless this means that interested persons will be excluded (They may for example involve only the locally better-off);
- Adjust the contents to include implementation relevant subjects such as technology options with cost, O&M and management implications;
- Build staff capacities to adjust the contents to local risks, e.g. helikopter toilets and brushing teeth and washing kitchen utensils with river water in river areas;
- Include gender and poverty equity in the curriculum e.g. representation of women and the poor in local decision making meetings and bodies, accountability to users for local management and financing, and roles and responsibilities of women and men in domestic and community environment, hygiene and health;
- Make hygiene promotion sessions accessible to men and promote their participation through male communication channels. Accessibility may involve opening the possibility of a second series of evening sessions, as men and women tend to meet at different times;
- Include demonstration visits from groups to individual households with interesting solutions to sanitation and hygiene to strengthen horizontal learning;
- Match incentives and compensation for health volunteers (proposed compensation is free health insurance) to the amount of time spending. It should be avoided that as women, health workers are expected to work for (almost) free;
- Give hands-on practical training, using the same participatory methods that the workers will use with the groups;
- Develop a set of no/low-cost participatory learning tools and techniques, involving such interesting group activities as drawing, sorting, ranking, mapping and matrix making. Communal learning materials, such as pictures of technology options and designs and pictures for sorting and ranking of sanitation and hygiene priorities, should preferably low-cost so that local groups can have their own sets. Encouraging members to replicate sessions at home with relatives and neighbours can be a good way to spread learning and skills and involve men.

4.4. Linkage of improved sanitation with city poverty reduction

- The city sanitation strategies aim to give poor women and men more economic opportunities related to the safe disposal and where possible recycling and reuse of human and solid waste, waste water and drainage and the promotion of hygiene. Thus, improved sanitation will be linked with poverty reduction. This is done by generating employment of the poor, in particular for poor women. The following opportunities were identified:
- Operators of 'blue tanks' (piped water reservoirs): preferably poor women who besides free water for themselves get either a fixed or variable compensation from water sold. Poor women and men are also potential operators of MCKs
- Collectors, cleaners and recyclers of plastic water bottles and cups. This is already much done by women and girls/children. They can learn to recycle them into mats, bags, curtains and run small businesses;
- Organic waste recycling. Poor women can be actively encouraged to set up and manage their own recycling businesses, e.g. in (vermi) composting of kitchen and

[25] See case in http://www.irc.nl/content/download/23457/267837/file/TOP1_HygPromo_05.pdf

market and sell solid and liquid compost (and worms), or productively use compost for urban horticulture and plant nurseries.
- Productive users and/or sellers of urine and compost from eco-latrines (especially suitable in high water table areas with some solid land and space for horticulture);
- Street sweepers;
- Meter readers and tariff collectors in their neighbourhoods, enabling poor families to pay daily or weekly instead of monthly, and to follow up non-payment (see section 3.3.2 on sewerage);
- Sanitation craftswomen, trained and licensed to promoted, make and repair house connections for water and sewerage, construction and repairing of on-site latrines, and promotion and selling of toilet parts (see section 3.3.2 above);
- Managers of recycling business using own collectors or buying from others (several such businesses are already operational and have been documented in a PPT on five of the six cities[26]);
- Home and Group Industry for snack production (22 in Banjarmasin, according to the inventory of the City Facilitator);
- Hygiene promoters (male and female, to reach both sexes) trained in participatory promotion and monitoring of improved sanitation and hygiene.

4.5. Action research to test/validate new approaches

As part of the ISSDP, each city can submit a proposal for one action research/pilot project for funding. The formulation process is still in progress. Developed projects concern:

- Integrated Sewerage Management: pilot project/action research in selected city area to improve the physical conditions and performance of a part of the existing sewerage net and expansion of connections including by poor people and improve hygiene and sanitation practices and solid waste management;
- Basic Sanitation and Hygiene Improvement in City Primary Schools: review and improvement of water supply, sanitation and handwashing facilities and their operation, maintenance and management and hygiene education;
- Wastewater treatment and its productive use by poor women and men: through joint planning and design by the relevant city institutions and local male and female small-scale farmers link wastewater treatment with agricultural/ horticultural production especially by poor women and men. Since this is a multi-year project, the pilot phase will focus on preparatory research and participatory pre-planning and design (special interest of Denpasar city).

4.6. Enhancing gender equity in-house

Although the ISSDP programme management understood gender as a concept and practiced gender and gender equity informally, it was agreed that improvements were possible. These comprise:

- Formulating an explicit in-house policy for gender equity;
- Always reporting programme statistics separated by sex and nationality;
- Maintain a rolling overview table on project staff and city participants in training and sector events by sex, expertise (technical/social) and level (lower/middle/upper);

[26] Winara, Asep, 2007. Women's Roles in Private Sector Participation for Sanitation Systems. Powerpoint. ISSDP

- Include gender and poverty aspects in city sanitation whitebooks and plans;
- Meet the demand for gender training in the sanitasi pokjas (= sanitation committees) and from the local governments;
- Present gender equity and pro-poor approaches and results to the outer world;
- Help the cities showcase cases in the media, at sanitation events and on the web;
- Integrate capacity building on gender attitudes, knowledge and skills in the city human resource development strategies and plans.

5. Conclusions

Social Inclusion

Over a third of all poor people in Indonesia live in cities, a share likely to grow when in 2025 the urban population may count 167 million people. Urban sanitation greatly lags behind other urban infrastructure services and is worst for the poor. To improve access to urban sanitation ISSPD launched a combination of national level advocacy campaigns and city-level strategies and action plans.

ISSDP found that in some places socially inclusive approaches were already in practice. However, in other cases social inclusion was hampered by the following practices:

- Data and data analysis are not disaggregated for sex and economic class and consequently there was no clear picture of the kinds of roles that men and women in the lower and lowest income sections already play in urban sanitation and the social and economic value of these roles. Consequently, city sanitation and hygiene strategies were not gender sensitive or specific.
- Equating of gender equity approaches with ‘project for women’ by local government officials rather than involving both sexes in a more equitably in programmes e.g. more – and especially poor – women in local planning, decision-making.
- Limited recognition on how a gender equity focus could strengthen urban poverty reduction.

Together with the concerned city departments, the ISSDP investigated urban sanitation coverage and classified all neighbourhoods on sanitation conditions and risks to public health. It then helped the cities develop comprehensive and pro- poor city sanitation improvement policies and strategies. The main recurring elements of these strategies are:

- Introduction of innovative technologies or approaches to decrease and improve quality. For instance, participatory hygiene promotion methodologies were introduced as these are more effective and more cost-efficient.
- Linking improved sanitation with poverty alleviation by combining income generating opportunities with improved WASH services. For instance, civic-public partnerships for solid waste management, female care-takers for community latrines, female water vendors, etc.
- Flexible (re)payment arrangements to enable the poor to make payments at times they have cash. Micro-credit facilities and interest-free loans for the poor were introduced to support in the poor in making large one-time investments.
- Well-targeted subsidies for the poor combined with participatory well-fare classification to ensure transparency and accountability. Subsidies will also cover the safe disposal of faecal sludge.

- Improved regulation and legislation. For instance, the obligation for land lords to provide connection to a sewerage network or provide a septic tank.
- Capacity development of the poor. For instance, to ensure the safe handling of handling of solid waste, provision of improved equipment and protective clothing, etc.
- Promotion of participatory methods to ensure ownership of communities, and improve the quality and sustainability of services.
- A series of generic and cross-cutting measures such as adequate information that is also suitable for non-literate participants, ensuring that procedures and documentation are gender and poverty specific.
- Finally, measures were taken to improve the gender equity and sensitivity within the ISSDP project team.

ISSDP Approach

The practical approach of making an inventory and analysing innovative pro-poor community participation and/or gender initiatives for improved sanitation and hygiene in the cities proved to be a good way to incorporate local best practices in the city strategies and identify areas for further improvement. Together with city authorities several participatory action research studies were identified and formulated. ISSDP will finance one/city.

The applied approach turned out to be a good catch-up strategy for social inclusion. It would have been better still had it been part of the city inventory and planning strategies from the very start, involving *pokjas*, male and female staff from the different departments and ditto community representatives and household groups in the processes and the documentation of these process and their outcomes.

Learning and scaling up

The ISSDP does not have learning platforms. Yet, the organizational set-up, with a national component, and in each city sanitation *pokjas, a* local government system comprised of wards, neighbourhoods and communities, makes both horizontal and vertical peer-learning at and between levels possible. Horizontal learning platforms allow learning between male and female neighbourhood members and groups at poor neighbourhood level, between departments in *pokjas* at city level, and between cities through mayors, *pokjas* and NGOs.

Vertical learning involves learning between neighbourhoods with innovative practices and local departments, the *Pokja*, local NGOs and local universities and other research organizations. The formulated action research are the **prime** mechanism of further learning on and development of innovative approaches within and between the cities. Given the limited involvement and strength of the national sanitation committee, learning opportunities at national level are least developed.

6. Annexes

- Format for Community self-assessment of MCK
- Draft ToR for a study of an MCK+
- Format for Self-Assessment of School Sanitation and Hygiene
- Project Digests for City Pilot Projects/Action Research
- Draft ToR to evaluate the Community-Led Total Sanitation Campaign
- Draft ToR to evaluate a Community-Managed Decentralised Sewerage System
- Format for inventory of employment in city SWM (formal and informal sector)

6.1. Annex 1 : Community Self-Assessment Form

1. *Who operates?* Nobody City-paid operator □ Commercial operator □ RW/RT paid operator
   Local women volunteers □ Local men volunteers
2. *No. of toilets?* For women □ For men □ For both □
   Ever extended? Yes, by community Yes, by other namely □ ……. Not able No need
3. *No. of bathing cubicles?* For women □ For men □ For both □ *Wastafel present?* Yes □ No □
4. *Soap to wash hands?* Yes □ No □ *Queuing at peak times?* Yes No □
5. *Operator promotes handwashing?* Yes □ No □
6. *Water supply?* PDAM □ *Regular?* Yes □ No □ *Enough*? Yes □ No □
   Stand-by? Yes, borehole with pump □ Yes, handpump □ No □
   Did community arrange for stand-by? Yes □ No □
7. *Wastewater disposal?* Septic tank □ Community Treatment Plant □ City sewerage □ River □
8. *Excreta visible in toilets?* Yes □ No □ *Water seal?* Yes, with water □ Yes, no water □ No □
9. *Bad smell?* Yes □ No □ *Cleaned after each use?* With water □ With water & soap □ No □
10. *Payments*? per visit □ by subscription □ other □ *Details:*……
    Did community set payments? Yes, leaders alone □ Yes, by user consultation □ No, others □
    Amounts paid? Toilet ……..… Bath …… Laundry …….……
    Soap …… Water ……..……..……..
    Are payments too high for some? Yes □ No □ *What is problem*? ……
11. *All adults pay?* Yes □ No, some refuse No, poor are free □ *Children pay?* Yes □ No □
12. *Income covers which costs?* Operator fee □ Water bill □ Soap to clean □
    Soap to wash hands □ Carbol □ Cleaning brush□
    Emptying Septic tank □ Sewerage bill □ Fuel bill □
    General Upkeep (painting, repair doors, floor etc.) □
    Expansion of MCK □ Replacing worn out MCK □
13. *Anyone pays some uncovered costs?* No □ Yes, RT□ RW□ City□ Other □ namely…….
14. *Anyone pays all uncovered costs?* No □ Yes, RT□ RW□ City□ Other □ namely…….

Scores for Community Self-Assessment of MCK

A. Environmental Health Risks[27]

1. Average number of households practising open defecation per toilet:
   Average number of persons practising open defecation per toilet:
2. No separate toilets for women
3. No separate bathing cubicles for women
   No *wastafel* for handwashing:
4. No soap for handwashing:

[27] Still to be included: provisions for menstrual hygiene

5. Yes, queuing at peak times:
6. Operator does not promote handwashing:
7. No regular water supply:
   Water supply not enough:
   No standby water supply:
8. Wastewater disposed in river:
9. Excreta visible in toilets:
   Water seals broken:
   Water seals without water:
10. Toilets have bad smell:
    Cleaned after use with water only:
    Not cleaned after use:
11. Payments too high for some:
12. Children must pay:

B. Community Management Capacity

1. MCK managed by locally paid operator/ local volunteers:
2. MCK extended by community:
3. Separate provisions for women:
4. Soap to wash hands present
5. Operator promotes handwashing:
6. Community arranged stand-by water supply:
7. No stagnant waste water within MCK
8. Safe disposal blackwater in sewer/septic tank; septic tank always emptied when nearly full:
9. Toilets cleaned after each use:
10. Toilets seen to be clean (no excreta/excreta smears in pan/ floors/walls and no bad smell):
11. Payments set by representatives of all user categories (including women, poor):
    Payments are affordable/weighed (poorer households pay less):
12. All adults pay except (ultra) poor:
    Children pay less or are free to use:
13. MCK Income covers all operation costs:
    MCK income covers upkeep
    MCK income covers expansion
    MCK income covers replacement
14. RT/RW covers some uncovered costs (specify which and how much):
    RT/RW covers all uncovered costs (specify which and how much):

6.2. Annex 2: Terms of Reference for a study of MCK+ in Denpasar, Bali

DRAFT

Background and justification

International research shows that sanitation and hygiene improvements have a greater impact on health than water improvements[28]. Installation and general and hygienic use of sanitary latrines and adequate washing of hands are the two most significant measures in reducing disease transmission[29].

Densely populated human settlements often lack the space for the installation of household latrines, with serious consequences for public health. Social consequences of the lack of space are also serious. Where private spaces for open air defecation are scarce, women and older girls must restrict defecation to after sunset and before sunrise, walk considerable distances to suitable defecation areas and face risks to their safety.

In such cases a communal toilet, bathing and laundry facility can be an alternative solution. Experiences with communal toilets have however shown that such toilets only function well when the responsibility to operate and maintain the toilet, the financing of the recurrent costs and the management of the service are clearly defined and executed and when the operating organization has certain interests, financially and otherwise, in proper maintenance and management.

A study of how effective an MCK is and what factors contribute to its effectiveness and shortcomings has thus a wide relevance, not only for the sanitation strategy and its services to especially poor women, men and children in the city of Denpasar, but also for other cities in Bali and in Indonesia in general.

For this reason a study of and article on the costs and effectiveness of the first MCK+ of Bali is therefore proposed. The MCK+ is located in Jempiring, a densely populated low income community in Kelurahan Ubung, Denpasar, Bali. The MCK+ has been designed and constructed by BaliFokus, a local NGO with technical and financial assistance of BORDA, a German non-governmental organization in 2003 (CHECK).

Objectives

The objectives of the study and documentation and publication are:

- to describe, analyse and document the approach, experiences and results of the MCK+ in Jempiring
- to assess the cost-effectiveness of the established service;
- to draw general lessons and formulate general recommendations for the city sanitation strategy and action plan 2009;
- to write an article on the case study and publish this in an Indonesian and international journal on sanitation

Intended results

Intended results of the activity are:

- a documented case study on an approach advocated in the CSS of Denpasar and ISSDP in general
- an article in a recognized sector journal on an innovative option for low cost sanitation services in low-income urban settings
- strengthened capacity of the city to commission and use sanitation social research and documentation;
- enhanced feedback of experience and results in the field to policy makers, programme managers and training institutions.

Proposed activities

The research and documentation will include an assessment of the following aspects:

- the general physical and socio-economic context, including existing water supply and sanitation

[28] See e.g. Esrey, S.A.

[29] WHO, 19 .

conditions and housing conditions (legal settlement, owned or rented houses), demographic, socio-economic and cultural characteristics of the population of the MCK+ location;
- the reasons for the establishment of the service;
- the history of its establishment;
- the participation of the community men and women in planning, design, construction, operation, maintenance, management and financing (capital and recurrent costs);
- the intended users (men, women, children, adolescent boys/girls, invalids, elderly)
- the technology and design (drawings) incl. type of pits, water supply, waste water disposal;
- the characteristics of the targeted users;
- the potential number of families in the project area which might make use of the facility and the estimated number of adult women, men, adolescent girls and boys and children in these households (= the potential user population)
- the percentage of the potential user population which does use the service (% coverage of the service);
- the reasons why users go to the MCK+
- the number of actual users per day and month, and variations in use over time
- the purposes for which the facility is used; most and least popular purpose of use;
- the capital and recurrent costs of the service;
- the ways in which the capital and recurrent costs have been/are being financed;
- how long it would take the managing group to earn back the capital costs;
- the operation and maintenance arrangements, incl. opening hours, operation of water supply, procedures for payment and use, procedures for cleaning, procedures for technical maintenance and repairs, provisions for channel changing and pit emptying;
- the effective functioning of the service: payment discipline and hygienic use by the users, operators' performance in upkeep of hygiene and managing payments; the reliability of the supply of water (no. of days when water is absent of inadequate), upkeep and repairs of physical facilities (leaking taps, broken tiles, presence of brooms, buckets, facilities for handwashing, availability and financing of soap for users and toilet disinfectant, drainage of waste water;
- the financial performance, e.g. the types and sizes of costs per month and per year; the average income per day, month and year; the balance between costs and revenues; reservations for larger maintenance and repairs; deposit and use of profits (by whom, what for, how decided?);
- the financial management: budgeting, bookkeeping and accountability arrangements; performance of these arrangements; system for management decisions and how well this functions.
- the number of users that can be deduced from the revenues (this allows for a crosscheck on number of users)
- the views of the various interest groups (users, operators, managers, local authorities) on the effectiveness of the service and their possible suggestions for improvements;
- the benefits of the service for the various interest groups (users, operators, managing organization, local authorities);
- the amount that a regular user of the facility spends on use of the facility, as compared to the cost of a latrine and shower at home;
- the prospects for future sustainability, management and ownership of the women's latrine;
- the necessity and strategy for improved sanitation habits of children and men.

The report will give a description of the methodology of research, the findings, the conclusions and recommendations for policy-makers as well as for implementation programmes which to replicate the approach in other communities. Documentation will include photographs illustrating major features of the service and its users and major findings of the study.

In addition to documenting the case on paper, the researchers will indicate a need and demand and costs for an audio-visual documentation of the case, for use with populations, local government and other authorities in Denpasar and Bali and other cities/provinces in Indonesia that are interested to replicate the case in their area and for use in state/national/international conferences and training institutions.

6.3. Annex 3: Community Self-Assessment of School Sanitation and Hygiene

1. Presence and quality of students' toilets

Options	Scores	Given Score
Toilet(s) for students exist but are not functional or not being used	0	
Toilet(s) for students exists and is in use but they are dark, smelly and soiled with excreta	10	
Toilet(s) for students exists and is in use, with adequate daylight, but soiled with excreta. No water soap or ash for hand washing with easy reach.	25	
Benchmark: Toilets are clean (no excreta in pans, walls or floor) and protected against misuse (e.g., locked after school hours)	**50**	
In addition, there is water, soap or ash for hand washing within easy reach of the children	75	
Ideal: ***In addition***, Toilets are child friendly (e.g., pans are smaller, colourful walls, etc.)	100	

2. Presence and quality of students' urinals

Options	Scores	Given Score
Urinals exists but are not functional or not being used	0	
Urinals exist & in use but they are dark, smelly and full/blocked (urine on the floors)	25	
Benchmark: Urinals are clean (no urine stagnant on floor);	**50**	
In addition, no stagnant urine outside the urinal room AND there is water, soap or ash for hand washing within easy reach of the children	75	
Ideal: In addition, Urinals are child friendly (e.g., lower height, colourful walls, etc.)	100	

3. Separate facilities for girls?

- Separate urinals for girls 10 years and older?
- Separate toilets for girls 10 years and older? [30]

4. Operation and maintenance of students' toilets and urinals

Options	Scores	Gieven Score
Toilet/urinal exists and in use but not being maintained or cleaned - no cleaning materials present	0	
Toilet/urinal exists and in use, cleaning materials present and toilet/urinal not soiled with excreta or stagnant urine	25	
Benchmark: Toilet/urinal is functioning and clean; there is a system for cleaning toilets/urinals (either by caretaker or by school children) with adequate materials (e.g., water, soap and broom)	**50**	
In addition, there is a maintenance fund for toilet management enough to buy soap, brooms etc. and pay the caretaker	75	
Ideal: *In addition*, the task of cleaning or maintaining toilets/urinals is shared equally among girls and boys, and of all socio-economic groups	100	

5. Cleaning of urinals and toilets

No one cleans regularly □ Mainly girls □ Mainly boys □

Boys and girls equally □ Female teacher □ Male teacher □

Male and female teachers □ Paid caretaker □

[30] Yet to be added: points to check for menstrual hygiene: materials available, safe disposal, privacy

6. Presence and nature of hygiene education in school

Options	Scores	Given Score
No hygiene education classes held in the school	0	
Hygiene education messages only on special days	25	
Benchmark**: Hygiene promotion during morning assembly or prayers**	**50**	
In addition, hygiene promotion classes are in the weekly time table but not always held	75	
Ideal**: Hygiene promotion classes are in the time table and are held at regularly (every week)**	100	

7. Presence and use of hygiene education materials

Options	Scores	Given Score
No special materials for hygiene promotion available or used in the school	0	
Booklets and other written material available in school, but not used	25	
Benchmark**: Booklets and other written material used in hygiene promotion and School Sanitation Committees or Clubs formed by children**	**50**	
In addition, special material (games, toys, etc.) are used for hygiene promotion *and* School Sanitation Committees or Clubs are active	75	
Ideal**: Teachers involve children in regular monitoring of school sanitation facilities and in their regular upkeep and maintenance (e.g., reporting and solving problems)**	100	

8. Outreach to students' homes

Options	Scores	Given Score
No hygiene promotion done by children in their homes or in their community	0	
Children participate in rallies and marches through the village community on special days; but nothing more	25	
Benchmark**: In addition to rallies and marches, children speak to their parents about the need for good hygiene behaviour (e.g., by requesting access to material like nail cutters, soap and ash), and at least one child reports a change in access to material in their homes.**	**50**	
In addition, most children report change in access to material (e.g., nail cutters, soap and ash) in their homes OR teachers and students have identified and solved at least one community-level hygiene or sanitation problem	75	
Ideal**: *In addition,* teachers involve children in a regular system to identify hygiene and sanitation problems in their houses or community, and find practical solutions by discussing with the parents, PTA or WatSan committee**	100	

9. Training of teachers in hygiene education

Options	Scores	Given Score
None of the teachers were trained	0	
One female teacher was trained	25	

Benchmark: One male and one female teacher has been trained	**50**	
In addition, they have shared training with other teachers	75	
Ideal: *In addition,* they organise sanitation/hygiene promotion at home/in community	100	

8. Use of training

Options	Scores	Given Score
None of the teachers took the training seriously and did not learn anything	0	
Even those who attended seriously could not learn much (e.g., badly organised, bad trainers, no educational material or poor quality material, etc.)	25	
Benchmark: All those who attended seriously learnt the skill sufficiently, at least 1 is using it effectively, and good quality educational material has been provided and is being used	**50**	
In addition, teachers have prepared their own locally-relevant lessons and educational materials for hygiene promotion	75	
Ideal: *In addition,* they have attended refresher trainings	100	

9. Quality of support

Options	Scores	Given Score
No support (no training, no visits, no materials, no funds, etc.) during the UNICEF project period	0	
Officials have organized training for school teachers but have not visited the school visit, and have given no other support	25	
Benchmark: Officials have organized district-level teacher training, and inspected the school Watsan facilities at least once during the UNICEF project period	**50**	
In addition, officials have made sure that adequate amounts of UNICEF-provided educational material are available to teachers	75	
Ideal: *In addition*, officials have responded to specific requests by teachers and made funds available for improving hygiene behaviour and Watsan facilities in schools	100	

6.4. Annex 4: Outlines for City Pilot/Action Research

Title (Judul)	:	Integrated Sewerage Management for Improved Access and Sustainability
Classification and sub-sector(s) (Klasifikasi)	:	Sector: Water Supply and Sanitation Sub-sector: Wastewater and Solid Waste Disposal
Rationale (Alasan)	:	The integrated improvement of sewerage for the safe disposal of excreta, wastewater, stormwater and solid waste) is important for health, economic and welfare reasons. Poor disposal of human excreta is a major cause of the continued high incidence of diarrhoea and explains every fifth child death in Indonesia (BHS Baseline, 2006). Diarrhoea and worms are also causes of child malnutrition and poor performance in schools. Loss of working days and health costs constitute economic losses for families and the country. Sewerage systems are a solution in two parts of the city, where a system is already present and can be improved. Improvement is however only possible when enough people, including lower and lowest income groups want and are able to take a connection. To get a reliable functioning of the system it is further also important to avoid the deposit of solid wastes into the system and for a health impact to measurably improve the sanitation and hygiene practices in the area. Improved sanitation and support of men for S&H improves the lives of women. Women will also benefit from a greater say in community decisions. Participation of the informal private sector in improved SWM will contribute to the livelihoods of poor women and men.
Description of the Project (Deskripsi Pekerjaan)	:	Improvement of the physical conditions and performance of the existing sewerage net and expansion of connections including by poor people, hygiene and sanitation practices and solid waste management
Overall objective		Measurably improved sustainability and use of the existing sewerage system, solid waste disposal and key sanitation and hygiene practices
Specific goals (Tujuan)	:	(1) Improved technical, financial and administrative functioning of the sewerage network (2) Greater and more equitable access to the network (3) Measurably improved solid waste management and key sanitation and hygiene behaviours (4) Equitable participation of men and women in information and decision making and in local management.
Performance indicators (Indikator kinerja)	:	..% of the households, including poor households connect to the sewerage system All household toilets are properly operated and hygienically used; Solid waste is segregated and separately collected, recycled and reused with incomes generated for male and female informal waste collectors and recyclers Other good sanitation and hygiene practices are effectively promoted and lead to measurable hygiene improvements.
Assumptions and risks		The scope and nature of the intended improvements can be achieved in one year Political support is available for applying weighed contributions and tariffs based on the principle that the polluter pays.
Correlation w/ CSS	:	Improvement of the sewerage net, solid waste management, hygiene promotion and community participation with equity for gender and the poor are part of the city sanitation strategy
Map (Peta)	:	General Map (peta area lokasi) — Detailed Map (peta detail lokasi)
Location (Lokasi)	:	
Stakeholders		
Beneficiaries (Penerima Manfaat)	:	(misalnya: masyarakat di kelurahan ABC dan XYZ)
Executing agency (Institusi	:	Dep PU: Physical and Managerial Aspects Sewerage System); PKK: Social Aspects; Dinas Health (Posyandu, Puskas Mas): Hygiene promotion

pelaksana)			
Project activities and results (outputs)	Activity	Duration (month)	Result
	Mobilisation of Community Participation with women and men	November 2007 December 2007	Musrembang accepts sewerage, SWM and hygiene promotion project with measurably balanced participation of men and women.
	Development of social mobilisation campaign for sewerage connections to women and men, including poor women and men (see Annex)		Balanced Sanitation Committee formed
	Planning of participatory hygiene promotion with female and male groups and mixed? Youth groups	December 2007	Social mobilisation plan with participation of local women and men. Special measures to facilitate connection of poor defined. SWM plan with RRR c'ty participation and informal private sector involvement
	Participatory Baseline on sanitation & hygiene	January -2008	Baseline data on key S&H conditions supplementing existing EHRA data, e.g. key practices other family members, satisfaction/problems existing system, readiness of husbands and wife to improve S&H
	Implementation of Mobilization and Hygiene Campaigns with Community Committee and Groups	Jan-March 2008	
	Physical and Administrative Improvement of sewerage system	Jan-May 2008 Jan-2008	Improved performance of sewerage system Equitable, effective and self-sustaining SWM system in Kelurahan or Banja in place and working
	Participatory SWM implemented with equitable participation of women and men and poor		

Title (Judul)	:	Integrated Community Waste Water Management Pilot & Action Research Project
Classification and sub-sector(s) (Klasifikasi)	:	Water supply sector, sub sector waste water and solid waste management
Rationale (Alasan)	:	The integrated improvement of sewerage for the safe disposal of excreta, wastewater, stormwater and solid waste) is important for health, economic and welfare reasons. Poor disposal of human excreta is a major cause of the continued high incidence of diarrhoea and explains every fifth child death in Indonesia (BHS Baseline, 2006). Diarrhoea and worms are also causes of child malnutrition and poor performance in schools. Loss of working days and health costs constitute economic losses for families and the country. Sewerage systems are a solution in two parts of the city, where a system is already present and can be improved. Improvement is however only possible when enough people, including lower and lowest income groups want and are able to take a connection. To get a reliable functioning of the system it is further also important to avoid the deposit of solid wastes into the system and for a health impact to measurably improve the sanitation and hygiene practices in the area. Improved sanitation and support of men for S&H improves the lives of women. Women will also benefit from a greater say in community decisions. Participation of the informal private sector in improved SWM will contribute to the livelihoods of poor women and men.
Description of the Project (Deskripsi	:	Pilot project to analyse existing technical, institutional, social, financial , environmental, hygiene and gender performance of existing community managed

Pekerjaan)		sewerage system and apply and test lessons in one new area
Overall objective		To analyse the existing sanimas systems on its sustainability, equity and effective use and test an improved approach with one new low-income community
Specific goals (Tujuan)	:	Critically assess how well existing community management systems function Develop improved approach and test it with one new low-income community Promote good hygiene practices and conditions by women and men of all ages Effective and self-sustaining SWM with equitable participation of and benefits for women and men, including from the informal private sector Measurably improve the functioning and equity of Sanimas Measurably improve key hygiene conditions and practices
Performance indicators (Indikator kinerja)	:	Technical and administrative functioning of the system; Sustainability of the system and the community management; Equity for the poor in access, use and payments; Gender equity in planning, implementation and management ; Improved key hygiene conditions and practices within the communities
Assumptions and risks		Ability to get the support of at least one existing sanimas community and one new community to participate in improved community managed sewerage and SWM. Risk that political ,administrative and time constraints will hamper the testing of more equitable approaches (e.g. weighed contributions and tariffs according to the principle of "the polluter pays")
Correlation w/ CSS (Kaitannya dengan Rencana Strategis Sanitasi Kota)	:	Community-managed sewerage and SWM are part of the CSS to increase the access of the poor to improved sanitation. The current approaches are promising but not yet sustainable enough to be replicated city wide with local funds. This project is meant to improve the existing approach in a participatory and gender and poverty equitable way. The location is the only high risk area which does not yet have a community-managed sewerage system.
Map (Peta)	:	General Map *(peta area lokasi)* — Detailed Map *(peta detail lokasi)*
Location (Lokasi)	:	Pemecutan Kelod
Stakeholders		local administration
Beneficiaries (Penerima Manfaat)	:	Men and women (including poor families) of Pemecutan Kelod; poor male & female informal private sector workers in SWM *(misalnya: masyarakat di kelurahan ABC dan XYZ)*
Executing agency (Institusi pelaksana)	:	Dinas sewerage; Dinas SWM; PKK Dinas Health; (All Dinas make one full-time staff available for one year). Local administration (plus one social researcher consultant from NGO or University for 1 year action research)
Project activities and results (outputs)		*Activity* / *Duration (month)* / *Result* Selection of social researcher and formation of local study team (incl. C'ty members M&F) — November 07 — Local study and pilot team with W&M Cty mobilisation with equal participation of women and men and acceptance of project in P. Kelod — November 07 — Outline Proposal included in APBD with 50% local financing and pledge for equitable distribution burdens & benefits Preparation & review of study plan in existing Sanimas area (s) — December 07 Participation of all local men and women household heads in forming c'tee and planning local technology design, O&M, management and financing. — December 07 — Equitable committee and cost sharing system Agreed design & accountability of contributions Baseline on local hygiene & sanitation & Hyg Prom planning for male & female groups. Training part. Methods. — January 08 — Hygiene promotion plan & mats ready and groups in place. Health staff trained on participatory methods Implementation of Sanimas study Preparation of technical design — February 08

	& plan. Choice of implementer & monitoring of progress & quality of construction with TA Dinas Prepare capacity building for cty maintenance & management Construction of new system Review of findings of Sanimas study & agreed improvements on O&M, management, financing Capacity building of all C'ties for (better) O&M, financing, management Monitoring of progress & quality in old & new c'ties Completion & handover new system. Post data Hygiene & San Documentation & presentation of lessons learned Pilot & action research project completed	March 08- ? November 08 December 08	Progress report on findings Technical plan agreed and tenders out. Tendering c'tee in place with local W & M Agreed contractor. Local monitoring in place. Cap. Blg. Plan made Cty action plan(s) agreed C'tee members & O&M workers trained. C'ty Monitoring system in place & working. SWM men and women equitably employed Hygiene beh. change data in place 6 City workshop on c'ty managed sewerage & SWM) documented results of tudy, follow up & utcomes

Title (Judul)	:	Cost-Effectiveness of Community-Led Total Sanitation including Ecotoilets in Peri-Urban Areas of e.g. Payakumbu, Jambu and Blitar (May also be possible in some of the other cities?)
Classification and sub-sector(s) (Klasifikasi)	:	Water Supply; Sanitation , Health, Poverty Alleviation
Rationale (Alasan)	:	Improved sanitation has important social, health and economic benefits. Access to a hygienic toilet means convenience, cleanliness as well as more privacy and safety which especially for women are problematic during open defecation. Poor sanitation and hygiene are especially associated with diarrhoeal diseases. These are behind one in every five child deaths in Indonesia (BHS Baseline, 2006). Diarrhoea and worms are also causes of child malnutrition and poor performance in schools. Loss of working days and costs of poor health and early deaths constitute serious losses for families and the country.
Description of the Project (Deskripsi Pekerjaan)	:	This project will pilot the Community Led Total Sanitation Campaign with low income peri-urban communities in the city of …..Among the options that may be tested are eco-toilets which produce sterile urine and quickly composted dry faeces for generating income from agriculture and horticulture by women and men in low-income peri urban settlements
Overall objective		To test the effective promotion, construction and use of on-site sanitary toilets without direct subsidies as a strategy for total sanitation coverage and use in low density peri-urban areas
Specific goals (Tujuan)	:	(1)To identify and test a modest range of appropriate toilet options, including low cost ecotoilets for a larger peri-urban community-managed sanitation and hygiene programme; (2) To use/refine a participatory and gender and poor sensitive methodology to raise the awareness about and social and economic demand for any of these toilets among the local women and men (including especially poor women and men) (3) to help establish a system for designing, planning and installing the improved toilets, either by the male and female

		household heads themselves or by trained toilet masons (4) to assist local men and women to form/use a representative committee to plan, implement and monitor the installation of improved toilets in all households and to follow up the toilets' maintenance and hygienic use by all (5) to train any interested poor women such as single mothers as community toilet masons who can raise and meet women's demands for improved sanitation also as a means for earning an income in their own communities; (6) to promote handwashing with soap at critical times by all members in the family (7) to end open defecation and measurably improve local sanitation conditions and practices
Performance indicators (Indikator kinerja)	:	Development of a step-by-step programme for CBSL; Team of trainers trained in gender and poverty sensitive promotion, incl. PRA techniques for CLTS; number of committees formed to plan and manage community sanitation and hygiene; % males/females and poor on committees; degree to which female and poor members participate and decide in committee meetings; presence of local trained masons and % female; % of local men's and women who participate in transect walks, stool load measurement and toilet options sessions; % households who have agreed to install one of the types of toilets promoted; local adjustments made to sanitation planning and designs; degree of sharing of information on design and constructions between households; % households who have completed a sanitary toilet; % households where all members have stopped outside defecation; % households planning upgrading; % toilets with soap and water for handwashing present; % household members knowing 3-4 critical times for handwashing with soap; costs of promotion and management of programme; costs for households and community ; Safe disposal of children's stools
Assumptions and risks		Soil and climate conditions suitable for on-site sanitation; local materials for construction are available and can be afforded by low-income households; community homogeneity, leadership and solidarity suitable for a community managed approach to sanitation; a (hidden) demand for improved sanitation is present
Correlation w/ CSS (Kaitannya dengan Rencana Strategis Sanitasi Kota)	:	Developing sustainable and effective strategies for effective and lasting improvement of excreta disposal along with improved practices are major goals of the CSS. These strategies need to be adjusted to the different ecological, demographic and socio-economic conditions of the people. They should serve especially the poor who have the lowest sanitation coverage and highest health risks. One typical category are households in low income peri-urban areas. Linking with income generation for the poorest, which includes unemployed single mothers adds a poverty reduction element Testing affordable and accepted/used ecotoilets and the scope, and socio-economic and environmental impacts of ecotoilets for low income women and men is also an important goal of the pilot project
Map (Peta)	:	General Map *(peta area lokasi)* — Detailed Map *(peta detail lokasi)*
Location (Lokasi)	:	Peri urban community with high need & demand for sanitation and potential & demand for free human fertiliser and compost
Stakeholders		Dinas PKK, Health, Sanitasi, Poverty Reduction Programme (if operational in Kota)
Beneficiaries (Penerima Manfaat)	:	Women (as toilet & compost/fertiliser users, and hygiene educators), men (as financers, toilet users and compost/fertiliser users), children, single mother (as toilet mason) in Keurahan …. Female and male leaders who strengthen capacity for environmental and project management
Executing agency (Institusi pelaksana)	:	Dep
Project activities and results (outputs)		*Activity* — *Result* 1. Identify and obtain agreement of pilot community(ies) by physical feasibility, need and demand — 1. Pilot community in place 2. Form & train social/technical/health — 2. Mixed (discipline & gender) team

	support team	in place and trained on sanitation options and cty mobilisation, PRA, cost effectiveness monitoring & gender
	3. Mobilise women and men leaders & household heads & organise PRA activities (mapping by welfare level, transect walk, excreta calculations etc) with women and men & leaders	3. Community Commitment to open defecation free & agreed roles of M&F leaders, women and men household heads; representative sanitation committee
	4. Mixed or male/female meetings on toilet options, costs, pro's and con's incl. eco toilets for free fertilizer/compost. Listing & planning of first batch of toilets. Agreement on who in c'ty needs help to construct (old, poorest etc)	4. Agreed list of households + type o toilets & time schedule
	5. C'tee organizes external materials in bulk for good quality/cost/delivery, organizes & monitors/ accounts for payments & help.	5. External bulk materials in place
	6. Advocacy and selection and training of women household head as toilet mason	6. Female toilet mason trained hands on & first toilets built.
	7. First construction with help of external mason (trainer) & organised visits by women, men, children	7. First batch built & visited for horizontal learning
	8. Hygiene education on handwashing with male and female groups, school children, youth club. C'tee monitors toilet use, hygiene and presence soap, ongoing construction of toilets, coverage on map	8. All can identify reasons, methods and critical times for handwashing with soap or ash. All households have soap at toilets/kitchens/baths All household members use toilet consistently and hygienically, all share cleaning, water collection for flushing/handwashing (equity of burdens & benefits). Stools of infants deposited in toilets only.
	9. External support team checks quality of work, progress and results/outcomes, gives technical support, determines cost/effectiveness, shares findings and plans replication/ scaling up	9. Processes and cost-effectiveness of community managed gender and poverty sensitiveness documented and shared in workshop, policy meetings, media, demo visits by other communities etc.
	10. Pokja meetings and paper, photo show, publicity, workshop for sharing results. Planning & budgeting of larger scale implementation, incorporating lessons learned	10. Proposal and plan for replication with in place.
	Duration (month)	

6.5. Annex 5: Evaluation of CLTS in Kelurahan Bala Panjang, Payakumbuh

Terms of Reference (DRAFT)

Background and justification

In 2006, Puskas Mas and the people of Kelurahan Bala Panjang in Payakumbuh carried out a Community-Led Total Sanitation (CLTS) Campaign in Kelurahan Bala Panjang, Payakumbuh. Characteristics of the campaign was a community commitment to end all open defecation within a short period and to ensure that all households had built and were properly using sanitary toilets without any external subsidies.

Objectives

The objectives of the evaluation are

- to describe, analyse and document the approach, experiences and results of the CLTS campaign in Bala Panjang;
- to assess the costs and effectiveness of the campaign and the toilets;
- to draw general lessons and formulate general recommendations for an expanded replication of CLTS in Payakumbuh city sanitation strategy and action plan 2009;
- to photograph the toilets built including indications of use, O&M and non-use
- to write a report on the evaluation

Intended results

Intended results of the activity are:

- a documented case study on a peri-urban CLTS campaign
- a set of photos on positive and negative aspects
- strengthened capacity of the city to commission and use sanitation social research
- enhanced feedback of experience and results in the field to policy makers, programme managers and training institutions.

Proposed activities

- to describe and analyse how men and women, and poor people, have participated in planning, design and construction, campaign management and financing, and how they now participate in O&M and follow up;
- to assess the sanitation promotion and hygiene education activities undertaken as part of the campaign, the methods and materials used and the participation of local men and women in planning, design and sessions;
- to assess the quality of toilet design, construction, O&M, management, monitoring, cooperation (e.g. in sharing of information, construction and/or financing), the direct and indirect costs of the toilets and the promotion programme, the system and equity of financing and the quality of financial management, bookkeeping and accountability of financial and programme management to the users;
- to assess the degree and variation in use of the toilets by the different types of user groups (adult women, men; adolescent boys, girls; old women and men, children between 5 and 12, infants (do they get help and from whom?) and babies (locations where their stools are deposited?), and the reasons for non-use;
- to find out how satisfied especially poor women and men are about the CLTS approach (goals, methods etc.), the hygiene education and the constructed toilets
- to assess the felt benefits as well as any negative impacts of the campaign and the toilets by women, men, adolescent girls and boys, children under 12, old men and women and any other specific user groups (any invalids, sick people?);

6.6. Annex 6: Evaluation of Community Managed Mini Sewerage in Denpasar

Terms of Reference (DRAFT)

Background

Between 2002 and 2006, and with the help of the German NGO BORDA, the NGO BaliFokus built five SANIMAS systems with household connections in five low-income communities of Denpasar. One more system is now under preparation. The services aim at providing low income households with an effective, clean and environmentally safe way to dispose of human excreta and grey water. They also aim at providing a lower-cost and effective alternative to off-site sewerage and sewage treatment.

Objectives

The objectives of the evaluation are

- to describe, analyse and document the approaches, experiences and results of the community-managed mini sewerage services in six locations
- to assess the costs, effectiveness, sustainability and equity of the services for men and women, including poor women and men
- to determine the user satisfaction of men and women about the projects and the services, including poor women and men
- to assess the impacts (positive and negative) from the processes and the service for women and men
- to summarize the findings from the six case studies
- to draw general lessons and formulate general recommendations for an expanded replication in the city sanitation strategy and action plan 2009-2015;
- to photograph the services and the evaluation process

Intended results

Intended results of the activity are:

- a gender and poverty specific comparative study on the costs, effectiveness, sustainability, equity and impacts of community managed mini sewerage
- lessons on the social, technical, institutional, environmental and financial aspects
- an outline for scaling up with quality in the medium term city plan 2009-15
- photos on positive and negative aspects
- strengthened capacity of the city to commission and use sanitation social research
- feedback of experience and results to policy makers, programme planners and managers and trainers;

Proposed activities

- to describe and analyse how men and women, and poor people, have participated in planning, design and construction, campaign management and financing, and how they now participate in O&M and follow up;
- to assess the sanitation promotion and hygiene education activities, the period of time, the methods and materials used and the participation of local men and women in planning, design and sessions;
- to assess the quality of design, construction, O&M, management, monitoring, cooperation (e.g. in sharing of information, construction and/or financing), the direct and indirect costs of the toilets and the promotion programme, the system and equity of financing and the quality of financial management, bookkeeping and accountability of financial and programme management to the users;
- to assess the degree of coverage and the access for poor households, the variations in coverage over time and the relationship between coverage and sustainability
- to assess variation in use of the toilets by the different types of user groups (adult women, men; adolescent boys, girls; old women and men, children between 5 and 12, infants (do they get help and

from whom?) and babies (locations where their stools are deposited?), and the reasons for non-use;
- to find out how satisfied especially poor women and men are about the service, the toilets, their participation in planning and service delivery processes and the hygiene promotion
- to assess the felt benefits as well as any negative impacts of men and women in users and non-user families, both poor and less poor.

Typical issues to be checked in the evaluation

- whether they wanted the system and were ready to contribute/accepted the proposed share;
- where to locate the system;
- who can be connected (the catchment area);
- how much the community and individual user households would pay to the investment costs;
- the payment system for the investment share, e.g. flat or weighed, in a lump sum or instalments, with or without interest;
- who would operate and maintain the system and if the operators will be male, female or both; what other tasks the operator(s) would do (e.g. in solid waste collection/recycling) and the salaries to be paid to the operator and other functionaries doing regular work, e.g. the tariff collector/treasurer;
- the estimated yearly O&M costs;
- the type of tariff (flat or weighed), amount and criteria and system for allocation of tariff level
- the link between number of users and the tariff;
- the amount, frequency, manner and place of payment and work involved;
- the selection and composition of the management committee including participation of women and men (poor and less poor) in the decision-making and as committee members, and the choice of functionaries (chair, treasurer, secretary etc.) – who choose them and on what criteria?
- the agreed term of office and changes in composition (frequency, reasons and selection method)
- the functioning of the committee (frequency of meetings, attendance of members, agendas, decision making, decisions, follow-up)
- the training of the operator(s) and committee members (who was trained in what, how long, how, where, to what effects), including refresher training and training for new members
- the financial management, e.g. the budget and accounts system, rules on non-payments, the bookkeeping, when and how and to whom the committee account for management and financing, auditing of the books by a local audit committee.
- the financial performance – who pays/pays not and why, actions taken and effectiveness, income and expenditures, type and amount of costs covered and not covered
- technical performance in operation, maintenance, repairs
- any environmental, health and/or safety risks
- satisfaction of poor and non poor women and men users and non users with service and management

6.7. Annex 7 : City SWM –No. Male/Female Workers at Primary Level

City		By Municipality		By Community (RT)		By Informal Private Sector		By Formal Private Sector	
		M	F	M	F	M	F	M	F
Blitar	SW Collection								
	Segregation at Source (TPS)								
	Dump (TPA) Scavenging								
	Street sweepers								
Solo	SW Collection								
	Segregation at Source (TPS)								
	Dump (TPA) Scavenging								
	Street sweepers								
Denpasar	SW Collection								
	Segregation at Source (TPS)								
	Dump (TPA) Scavenging								
	Street sweepers								
Banjarmasin	SW Collection								
	Segregation at Source (TPS)								
	Dump (TPA) Scavenging								
	Street sweepers								
Payakumbuh	SW Collection								
	Segregation at Source (TPS)								
	Dump (TPA) Scavenging								
	Street sweepers								
Jambi	SW Collection								
	Segregation at Source (TPS)								
	Dump (TPA) Scavenging								
	Street sweepers								

City Solid Waste Management – Numbers of Male/Female Workers at Secondary+Tertiary Level and in Administration

City		Municipality		Enterprise (1)		Enterprise (2)		NGO (1)		NGO (2)	
		Men	Women	Women	Men	Women	Men	Women	Men	Women	Men
Blitar	Technical										
	Administration										
	Management										
Solo	Technical										
	Administration										
	Management										

Denpasar	Technical										
	Administration										
	Management										
Banjarmasin	Technical										
	Administration										
	Management										
Payakumbuh	Technical										
	Administration										
	Management										
Jambi	Technical										
	Administration										
	Management										