SANIMAS - Sanitation by the Community in Densely Populated Low Income Areas in Indonesia by BORDA and its Network Partner’s 2000 - 2010 within the framework of the Sanitation Development Acceleration Program 2014 of the Government of Indonesia
An estimated 75 million people in Indonesia lack of basic sanitation facilities. From the amount of it, 30 million people only have low sanitation facility standard, while 40 million people lack of basic sanitation facilities at all. Less than 5% of the population is served by conventional sewerage system. Therefore millions of Indonesian urban residents discharge human excrement and household wastewater either directly into the aquatic environment or indirectly into the groundwater via sedimentation tanks and percolation pits. As a result, river water in or near urban areas contains a high proportion of organic pollutants while the groundwater in almost all cities is contaminated by E. coli bacteria. The latter is of particular concern because many people use wells as their primary source of drinking water. It is estimated that the 6 million cases of diarrhea in Indonesia each year result in the deaths of more than 20,000 children, mostly among the urban poor.
According to Indonesia's Ministry of Health, a significant number of these cases are due to the absence of sanitation facilities, lack of know-how about basic hygiene, and habitual unhygienic discharge of human excrement into waterways.

The very few centralized sewerage systems in Indonesia generally do not cover poor residential areas, many of which lack even the most basic sanitary infrastructure. Due to large investment costs, it must be anticipated that even if a few more centralized sewerage systems were to be constructed, large-scale sewerage programs are unlikely to improve sanitation significantly for the urban poor.

The SANIMAS program specifically targets the poor, in recognition of the clear quantifiable link between unsanitary conditions and poverty in the urban communities of Indonesia. Across the environmental spectrum, practitioners now accept the direct and many indirect links between poverty and environmental degradation as well as quality of sewerage programs are unlikely to improve sanitation significantly for the urban poor.
DEWATS –
The Decentralized Wastewater Treatment System developed by BORDA

DEWATS is an effective, efficient and affordable proven wastewater treatment solution for (sub-) tropical regions. DEWATS applications are based on the principle of low-maintenance since most important parts of the system work without electrical energy inputs and cannot be switched off intentionally. DEWATS applications provide state-of-the-art technology at affordable prices because all of the materials used for construction are locally available. The applications are based on four basic technical treatment modules which are combined according to demand. The treated water meets requirements stipulated in environmental laws and regulations.
What is SANIMAS

To tackle the sanitation problem in Indonesia, the SANIMAS program (Sanitation by Communities) was developed by BORDA and the partner network in close co-operation with the inter-ministrial Water and Environmental Sanitation Working Group (Kelompok Kerja Air Minum dan Penyehatan, AMPL) chaired by the National Development Agency (BAPPENAS).

The SANIMAS approach was intended to assist local governments and poor urban communities to plan, implement and maintain community sanitation systems of their choice (simplified sewerage, community sanitation center, shared septic tank).

The Principles of SANIMAS:

- Demand Responsive Approach
- Standardized implementation practices
- Community self-selection process
- Informed Choice
- Multi-stakeholder funding and contribution
- In-build Capacity Development & Training Programs
- PPP management of infrastructure and facilities
- Impact monitoring
Community sanitation was defined as the collection, treatment, and disposal of wastewater and human excrement. SANIMAS sought to take advantage of many traditional urban cooperation practices to create sufficient community involvement and demand-responsive planning to ensure a greater rate of sustainability. The approach had to accomplish three inter-related outcomes that had never before been achieved all at the same time:

**Ownership by the community** - A successful SANIMAS national program would require, not only a sense of ownership among central government agencies, but also a sense of ownership at the provincial, city, and community levels.

**A high longevity rate** - A high rate of sustainability was to be achieved through efficient physical works that were constructed to specifications and a community that was committed to operating and caring for the works.
Enhanced community involvement - SANIMAS was designed to stimulate community involvement through civil society rather than through local government facilitators. The advantage of using civil society was that NGOs traditionally form bridges between communities and local governments.

A typical project produced a low-cost simple sewerage system consisting of household sanitation facilities linked by a network of small-bore feeder sewers to a local wastewater treatment plant (DEWATS). In areas where low-income people resided in rented settlements, public community sanitation centers (MCKs) were constructed, consisting of toilets and bathrooms connected to a wastewater treatment facility. Each of the developed CBS systems serves from 50 to 100 urban households, depending on the size of RTs and RWs (the two smallest administrative units in the Indonesian Government).
SANIMAS 2000-2010
From the Idea to more than 100,000 Beneficiaries
- A Brief History -

1998 – 2003 From the Idea to the first Toilet

SANIMAS was designed as Indonesia moved through a period of uncertainty and turmoil toward a more pluralistic and decentralized system of government. Until 1998, Indonesian national practice for water and sanitation development had been formulated and coordinated in an informal top-down fashion under strong presidential leadership, so ministries accepted the practices without having a sense of ownership.

After the dissolution of the top-down government structure, new national policies had to be formulated through a lengthy consultation process among ministries that were not accustomed to mutual policy dialog.
In 1998 SANIMAS was started as a field trial in the Water Supply and Sanitation Policy Formulation and Action Planning (WASPOLA) Project to help central government agencies formulate national water and sanitation policy. The project was funded by the Australian Government and coordinated by the World Bank’s Water and Sanitation Program (WSP) working in concert with the Water and Environmental Sanitation Working Group (WSES). The aim of the project was to pilot an approach to Community-based Sanitation (CBS) that can be used as a demonstration for mainstreaming CBS as an option for urban planning in Indonesia.
After few years of discussions and drafts exchanged between the WSES Working Group, WASPOLA, donors, civil society, central and local government stakeholders, a consensus was recorded in the final version of a national community-based water supply and environmental policy in 2003. This policy was prepared in stages by the WSES Working Group led by the National Development Planning Agency (BAPPENAS) and involving the Ministries of Home Affairs, Settlement and Regional Infrastructure, Health and Finance.

SANIMAS was the first child of the brand new consensus-derived national community-based water and sanitation policy. The policy also provides a guide to achieve environmental sustainability as stated in the Millennium Development Goal No. 7.
BORDA provided the technical input to ensure that designs were efficient and appropriate, and community preparation was provided by local NGOs that already had community facilitation experience in their localities.

Instead of going directly to the communities, the local NGO team with representatives of the Working Group visited the provincial level in order to gain support and to help them choose the lead government agency that would interface with SANIMAS. When they approved of the concept and objectives of SANIMAS, the provincial officers helped target the cities to be approached. To participate, the cities submitted proposals and criteria for the selection had to be carefully chosen. Communities' past experience with self-help projects turned out to be an excellent predictor of success. Technical feasibility of sanitation options was another criterion, and in some cases, water had to be brought from the municipal water supply network, or a deep well had to access ground-
After community selection, community plans had to be compiled. The information, education, and communications materials had to be adapted to use in communities. In each community, a committee was set up to address specific aspects of the project such as for construction and operations and maintenance. The committees planned the construction together with facilitators. A project team was formed consisting of one local government member who could communicate with the local government and one NGO representative who could communicate with the community.

Trainings for construction and operations were conducted. Construction was implemented by communities or by skilled personnel from nearby communities. Funds for construction came from the local government, the community, and BORDA.
By bridging local governments and the target groups at the low income community it was possible to develop a basic needs service package.

Community self-selection, demand responsive approach, multi stakeholder financing, guided informative choice, participatory approach and DEWATS technology as applicable technology contributed to the sustainability of these prototype projects.

The design and implementation of the prototype SANIMAS field trials in 2003-2004 led to a sustainable national SANIMAS program that is now Indonesia’s preferred community-based sanitation solution.
2003 – 2006 From lessons learned to a nationwide program

As a result of the trial projects, it was apparent that SANIMAS should be included in each city’s medium-term development plan and that there was a general need for better city-wide sanitation mapping showing the risks to environmental health and flow of household waste.

In 2006 the SANIMAS prototype projects led to a national program with an expanded implementation of SANIMAS in 79 locations in 22 provinces all over Indonesia.

During the pilot phase from 2003 – 2004 all stakeholders learned from the demonstration projects. In 2005 the Ministry of Public Works took over the funding and increased the scope areas. Based on the success in 2005 the Ministry of Public Works replicated the SANIMAS approach on a national scale.
The SANIMAS approach implemented since the pilot phase benefited from lessons learned in the previous projects and gained support at every level of government from central agencies down to the city level. It responded to a local government need for successful locally-funded sanitation programs. The demand-responsive and participatory procedures that were developed in the field trials and the lessons learned by SANIMAS will be helpful to planners in other countries where decentralized local governments are responsible for small sanitation infrastructure programs, particularly for low-income communities.
BORDAS ROLE in shaping national and local government policies

SANIMAS became a national program partly because it was designed through the Water and Environmental Sanitation Working Group that employed experienced NGOs to employ the new role of the central government as facilitator for decentralized local government-funded projects.

During the SANIMAS field trials BORDA, as implementing agency, hold regular meetings with national and local governments. Later on BORDA was continually involved in national discussions and had the flexibility to link in between the national and local government administration requirements, thus allowing a smooth follow up of SANIMAS after the pilot project implementation supported by WSP phased out in the beginning of 2004.

“We are estimating that 30% of the urban population in Indonesia can be served with SANIMAS.” Frank Fladerer – Regional Coordinator BORDA
For several years BORDA and its local NGO partners have been the sole supporters of the SANIMAS program and were able to prove that the approach is functioning and worth to be upscaled. BORDA continuously tuned policy and operational details with the decision makers at the PU as well as at the newly established provincial task forces and local governments.

2000 – 2010 Nationwide SANIMAS dissemination

By 2010, as a result of the pilot and national programs, more than 125,000 low-income citizens in 100 cities and districts in 25 provinces enjoy better health and quality of life. More than 1,000 implementing agents will have been trained, and every succeeding year more than 250 craftsmen, facilitators, and experts will be employed by the program. Every day, more than 8,000 cubic meters of wastewater from over 23,000 densely-populated household clusters is no longer polluting the environment, and every month, the sum of all user payments for maintenance and SANIMAS operators’ salaries reaches $19,500.
The SANIMAS interventions resulted in a high level of awareness of health and hygiene principles, a significant reduction in sanitation-related disease, elimination of open defecation, and improved employment opportunities. The community was beautified when areas that were used for underground tanks were turned into parks and open spaces, where Children can play. Women had inputs to decisions such as type of toilets that were comfortable for pregnant women and the elderly and felt for the first time the dignity of full privacy while using bathing and toilet facilities. SANIMAS-based community empowerment has enabled the low-income communities to cooperate for provision of other services and enjoy for the first time access to their local government through the community-based organization.
BORDAS Role in Indonesian wide SANIMAS implementation

As a small organization BORDA and its local NGO partners boosted their implementation capacities by sharing facilitation costs with local governments, thus enabling the network to get engaged with more than 100 local governments and communities in 17 provinces in Indonesia. Field facilitators who successfully implemented the community facilitation in previous SANIMAS projects where encouraged to take up the role of senior facilitators who coach 5 new community facilitators, thus achieving staff upgrading from within the system without additional overhead costs for new and larger organizations. At the same time a Quality Management System (QMS) for DEWATS engineers training and certification as well as planning and implementation was finalized and introduced.

QMS/Certification, multistakeholder- approach, and staff upgrading from within the system constitute three pillars for up scaling the implementation of SANIMAS.
### Key Achievements of SANIMAS 2000 – 2010

- ✓ 60% reduction of hygiene and sanitation related diseases in intervention areas
- ✓ Improved sanitation facilities provided for over 125,000 inhabitants of more than 23,000 poor households of low-income areas in over 100 mostly small- and medium cities
- ✓ Over 1000 implementing agents trained
- ✓ 100 % “hardware” and 50% “software” costs financed out of national/local Indonesian Government budget
- ✓ Over 250 sanitation experts work for the program every year
- ✓ 421 skilled Operators who maintain SANIMAS
- ✓ The operators salaries for maintenance reaches 19,500 $ per month
- ✓ Professional implementation network established
- ✓ Quality Management System developed that allows for further up-scaling in SEA countries
The SANIMAS pilot projects, launched in 2003 and 2004, were founded on commonly-agreed basic policy principles that supported the longevity of benefits to the community. The planning for the field trials and the challenges that arose during their implementation revealed many lessons about ensuring sustainability of both physical works and community empowerment.

The field trials were formulated and implemented through the consensus of cooperating ministries rather than by order from the top. The trials were the first activity in Indonesia to test the validity of a completely new national community-based water and sanitation policy, and they were the first sanitation prototype activities to become a national program in less than three years.
BORDA’s role in the implementation of SANIMAS field trials

BORDA, the Bremen Overseas Research and Development Association, was the implementing agency in cooperation with its local NGO Partners (BEST, LPTP, BALIFOKUS) the WSP, the Working Group chaired by BAP-PENAS, the Ministry of Public Works (PU), local governments as well as communities in 7 locations in East Java and Denpasar, Bali.

“The pilot /demo project phase of SANIMAS represented one of the best phase during my professional life. The cooperation between all partners was very open, we all had the clear willingness to succeed and there was a good spirit between all partners involved. All professionals and experts that worked for SANIMAS had an enterprising “can do” spirit. “Andreas Ulrich – Director BORDA
2011 – 2014 The Future of SANIMAS

In 1990, 31% of Indonesia’s population lived in urban areas, and according to current estimates, in 2025 the proportion of urban dwellers will rise to 60% and more. Due to the urbanization the demand for improved sanitation is increasing. Hence, the challenge is to upscale the SANIMAS dissemination in Indonesia in the next years.

In 2010 the Government of Indonesia started the new SANIMAS program SLBM (Community-based Environmental Sanitation) which will run until 2014 and aims to implement 1000 units per year.

By 2014 70 Mio. inhabitants who lack of basic sanitation will have access to sanitation facilities through centralized systems (10%), communal systems (5%) and on-site sewage systems (85%).
BORDAS Role in Up-Scaling - Challenges and Expectations for SANIMAS 2011 – 2014

→ To support the government funded SLBM program during training and by providing benchmarking implementations for monitoring and evaluation.

→ To support AKSANSI (Indonesia Association of SANIMAS CBO’s) to take a stronger role in monitoring and community facilitation. AKSANSI was formed in 2006 and its main objective is to promote the provision of access to sustainable sanitation for urban poors and to provide asistance for SANIMAS CBOs.

→ To implement more than 1500 SANIMAS per year as training projects to support SLBM, SANIMAS Regular, SAN– PNPM facilitators and Local Governments.

"Improved sanitation for all"
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