

Power of Partnerships: Bringing Safe Water to Indonesia

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Abstract

Lack of clean and safe drinking water is a major health and development issue in Indonesia. USAID is working to alleviate this problem, and two recent efforts capture the synergy of the public and private sectors. The Aman Tirta program is a consortium working to support a commercially viable point-of-use water treatment product. The *Cinta Air* program, a partnership between Coca-Cola Systems Indonesia and USAID/ Indonesia, focuses on small water infrastructure and behavior change in a village close to the Coca-Cola plant. These two projects highlight the importance and success of non-traditional arrangements in addressing water issues in Indonesia.

1. Introduction

Safe drinking water is a major development and health challenge for Indonesia and affects a large number of people. More than 48 million people in Indonesia do not have access to “improved” drinking water (e.g., household connection, public standpipe, borehole, etc.) (UNICEF, 2006); only 39% of the urban population and 8% of the rural population have access to piped water which is controlled and ostensibly quality checked (Ministry of Settlement and Regional Infrastructure, 2004). Additionally, more than 100 million Indonesians go without adequate sanitation (UNICEF, 2006).

Even with piped water and other “improved” sources, the water is not necessarily clean (Jones 1993; Dharmapatni and Firman, 1995) due to siltation, proximity to sewage, or inundation from seawater (Dharmapatni and Firman, 1995; Nur et al., 2001). Unsafe drinking water is a major cause of diarrhea in Indonesia (Lenz, 1988), and diarrheal disease, in turn, is the second leading killer of children under 5 in Indonesia (excluding mortality within the first week of life) and accounts for about 19% of child deaths each year (Surkesnas, 2002; Biro Pusat Statistik, 2003). A number of authors have shown that diarrheal disease has been the third leading cause of overall morbidity in Indonesia, and the leading cause of infant mortality (Nazir et al., 1985; Sunoto, 1985; Simanjuntak et al., 1998).

To address water, health, and other issues, USAID and its predecessor agency have been working with the Government and people of Indonesia to meet their needs for over 50 years. USAID/Indonesia has embraced public-private partnerships as a way to mobilize the ideas, efforts and resources of governments, businesses, and civil society in order to stimulate economic growth, develop businesses and workforces, address health and environmental issues, and expand access to education and technology.

Two of USAID’s projects focusing on water in Indonesia have come to fruition through the unique arrangements of public-private partnerships. The Aman Tirta project has supported the marketization of *Air RahMat*, used to treat drinking water for households. The *Cinta Air*, or Love Water, project aims to provide clean water supply and water education to residents of Bekasi, West Java, Indonesia.

2. Aman Tirta and *AirRahMat*

The Aman Tirta (Safe Water System) program is a USAID-funded effort to improve access to safe water through point-of-use water treatment. Aman Tirta has taken a new approach to this task by creating a commercially viable product complemented with a behavior change program.



Figure 1. Aman Tirta program logo

As described above, safe drinking water remains elusive to much of the Indonesian population. Studies have shown that in some areas, nearly all households boil water, although it is often then re-contaminated (Prihartono, 1994). This re-contamination can occur through improper boiling; mixing with unboiled water; or improper storage (e.g., an unclean ladle or hand is used to obtain water, rather than a spigot) (CDC, 2005; Ainslie, 2007). Aman Tirta's recent findings showed that up to 96% of source water in one district of Java was contaminated by *E. coli*. When the water was tested after being boiled, 47% of the water was still contaminated by *E. coli* (ACNielsen, 2004; Aman Tirta, 2006). In addition, studies have found that boiling can be economically and environmentally unsustainable (deKonig et al., 1985; Gilman and Skillicorn, 1985). For this reason, inexpensive and simple-to-use point-of use treatment is vital for public health, particularly for reducing the likelihood of diarrhea in children under 5 years old.

Instead of making a subsidized product that would be available and distributed for the short duration of a project, Aman Tirta seeks to facilitate the production and distribution of a product that will be commercially viable in the Indonesian market, ensuring its sustainability after the program funding has ended. While similar products have been implemented around the developing world, to date these products have been subsidized and not commercially viable. *Air RahMat* differs radically in that it aims to be wholly commercially supported.

In order to create a commercially viable product, a partnership between the public and private sector was vital. There are five main parties supporting *Air RahMat*. The Johns Hopkins University Bloomberg School of Public Health's Center for Communication Programs is responsible for overall program strategy design, management, and communication and behavior change interventions. CARE is leading the community participation component and enhancing water treatment socialization and adoption and the implementation of the program. PT Tanshia Consumer Products is manufacturing, bottling, and packaging the *Air RahMat* product. PT Dos ni Roha, one of Indonesia's leading distributors of pharmaceutical, health, and personal care products, is distributing *Air RahMat* across a full range of outlets from variety stores to clinics to kiosks. LOWE Worldwide is handling the developing and implementation of the marketing and positioning of *Air RahMat*. The financial support in its nascent period allows these companies to form relationships and "work out the kinks" while it has a safety net. For example, the bottle was redesigned after the first production run to make it more stable, to improve the visibility of the measuring lines inside the cap, and to create more space on the front of the bottle for type. While this redesign might have been financially impossible for a company on its own, it is possible with the Aman Tirta project and will result in a better and more marketable product. Additionally, the Aman Tirta project is working to build the capacity of PT Tanshia (who will take over whole responsibility for *Air RahMat* in 2009). In this vein, the project works with PT Tanshia on brand management; outreach to NGOs; advocacy with the government; community mobilization; and building a business network so that they will be able to continue the success of *Air RahMat* as a commercial product.

Air RahMat is the Indonesian version of similar products that have been used successfully in more than 25 countries worldwide, and was used generically in Indonesia previously (USAID, 2006a). The name is derived from a combination of four words: Air (water), muRAH (economical), Mudah (easy-to-use), and sehAT(healthy). The product is also certified *halal* (sanctioned by Islamic law) which increases its appeal to Indonesian consumers.

Air RahMat is a liquid 1.25% sodium hypochlorite solution which, when used properly, can reduce by 40-80% the risk of diarrhea by deactivating the most common microorganisms that cause diarrhea in humans. The 100 mL bottle is enough to treat the average amount of water a household uses in 1 month. It costs Rp 4000 – 5000 (around \$0.50), which, at Rp 7 per liter, is cheaper than bottled water (450 Rp/L), refilled water (Rp 175/L), or boiling water (Rp 102/ L) (USAID, 2006a). *Air RahMat* is available through traditional stores such as *warung*, kiosks, *kelontong*, *apotik* (pharmacies) and through non-traditional outlets (community-based organizations, non-government organizations, and community centers). When a 6.3 magnitude earthquake hit Yogyakarta, Central Java, Aman Tirta distributed over 100,000 bottles of *Air RahMat* through UNICEF, CARE, and other relief organizations (USAID 2006b; Ainslie, 2007). Following the flooding in Aceh province in December 2006, UNICEF distributed *Air RahMat* to ensure a ready supply of safe drinking water.



Figure 2. *Air RahMat* bottle

The Aman Tirta program debuted *Air RahMat* to the Indonesian market in Jakarta in December 2005. In February 2006, the product was rolled out to Banten and North Sumatra. By December 2006 the program expanded to other provinces including West Java, Central Java, East Java, Jakarta metropolitan area, and Aceh. Future plans include expanding to all provinces in Java and, ultimately, nationwide (USAID, 2006b; Ainslie R., 2007).

By December 2006, less than a year after being formally launched, more than 1 million bottles have been sold and 950 traditional and 350 non-traditional retailers are carrying *Air RahMat*.

In addition to facilitating the commercialization of the *Air RahMat* product, the Aman Tirta program supports its use through education about safe water and health. This education happens through a multimedia campaign promoting *Air RahMat*, community-level activities, activation activities such as promotions at markets hosted by local radio stations, and community-level demonstrations at *posyandu* (village health posts). In addition, Aman Tirta focuses on cross-fertilization of other USAID projects working in the water and health sectors to ensure that as many project sites as possible are promoting *Air RahMat* in their work. The *Cinta Air* program, described below, incorporates *Air RahMat* into its programming, as do a number of other USAID-funded health and education programs.

3. Cinta Air (Love Water)

Bekasi is an industrial, peri-urban area outside of Jakarta and is home to 25,000 people as well as the bottling plant of Coca-Cola Systems Indonesia. The rapid population growth of Bekasi has strained the already inadequate water infrastructure. A recent survey of the Kalijaya village of Bekasi revealed that 50% of the households relied on shared or public deep boreholes with a pump for drinking water. The other households relied on unprotected shallow wells or bottled water. Only 15 houses of 1700 in the village have individual toilets; the rest use outdoor toilets which consist of boards for squatting over a river, pond, or irrigation canal, with cloth or plastic sheets as “walls” (Figure 3). Handwashing with soap is a poorly practiced hygiene behavior in the area although an important way to reduce disease transmission (Aulia, 1994; USAID, 2006c).



Figure 3. Open toilet over a river

USAID/ Indonesia and Coca-Cola have come together to support the *Cinta Air* (Love Water) program in Bekasi, West Java (Figure 4). This program is part of the global Community Watershed Partnership Program (CWPP), a strategic alliance between USAID and The Coca-Cola Company (TCCC) that focuses on water for the poor. CWPP enables USAID and TCCC to provide incentive grants to local TCCC business units and bottlers as well as USAID missions to carry out water-related projects in target communities in the developing world. Implemented initially in Bolivia and Mali, Indonesia was selected as the third country in the world to participate in this partnership.



Figure 4. *Cinta Air* program logo

Through the *Cinta Air* program, USAID has leveraged its support for improvement of water systems in Indonesia. The partnership with Coca-Cola will empower the Kalijaya community to improve their own village wells; learn better health and hygiene practices; and strengthen Coca-Cola Systems Indonesia’s (CCSI) ongoing Go Green Schools program which involves youth in their local environment. Through good communication, strong technical knowledge, and shared goals, USAID/Indonesia and CCSI have built a successful partnership that addresses the vital needs of the community of Kalijaya.

Launched in March 2006, the *Cinta Air* program is implemented through cooperation by three different programs, all supporting the project team as they address the three prongs of the project—a technical intervention, the multi-media campaign, and the Go Green Schools. The Coca-Cola Foundation Indonesia leads the Go Green Schools and multimedia campaign; USAID’s Environmental Services Program is responsible for the technical water and sanitation intervention and health hygiene advocacy; and USAID’s Aman Tirta promotes the use of *Air RahMat*.

The objectives of *Cinta Air* are to:

- Improve public awareness of water conservation practices, including tree planting, to protect and stabilize water resources;

- Improve public health through the promotion of health and hygiene behaviors linked to water and sanitation practices;
- Empower local communities to improve water quality by introducing simple methods and approaches to improve, protect and monitor water quality; and
- Improve stakeholder capacity to understand and commit to long-term, sustainable options for better water supply.

As of January 2007, significant progress has been made towards the objectives in each of the three prongs, all of which complement and strengthen the other. The technical intervention began with a baseline study of local stakeholders to assess their needs and attitudes regarding water usage and storage; sanitation and solid waste facilities; and hand washing and health practices. This study was a main input for a Mini PHAST (Participatory Hygiene and Sanitation Transformation) participatory process whereby the community members themselves identify the needs and problems around water and sanitation. Through a process of community mapping, walks, and discussions with community members, the *Cinta Air* team learned about the community's situation regarding water, sanitation, and hygiene, and then worked with the community to identify solutions. The team and the community then developed action plans based on these goals and objectives. They identified 22 existing shallow wells to be improved and protected (Figure 5). The community was required to contribute to the well improvement project (either financially or in-kind with time and labor for cleaning and maintenance), assist in the construction, and organize into user groups to identify maintenance responsibilities. This community involvement in the improvement increases the likelihood that the wells will continue to be properly cleaned and maintained; community pressure will reduce shirking and small user fees will give the safe water a greater value than unsafe water.



Figure 5. Children show off an improved well that provides clean water to around 50 community members.

In addition to building the small infrastructure to support safe water, the multimedia campaign works to inform community members about the importance of safe water through a number of different outreach events since the beginning of the project. At community meetings, households (primarily mothers) are informed about proper handwashing techniques, household water treatment (including *Air RahMat*), and other hygiene improvement activities. In addition, outreach specialists from the *Cinta Air* team work with midwives from the local *puskesmas* (sub-district health center) to disseminate information on

basic health and hygiene to new mothers. The *Air RahMat* product is also tied into these outreach efforts; the *Cinta Air* team has identified a local distributor and retailer for as well as a billboard in Kalijaya on which to advertise *Air RahMat*. The multimedia campaign also held a Breaking the Fast event during Ramadan at the Coca-Cola bottling plant, which was attended by more than 300 people from the surrounding communities. An *ustadz* (religious teacher) gave a sermon on the importance of water to humankind. By interweaving the

message through health care workers, religious figures, and traditional community meetings, the multimedia campaign reinforces the importance of safe water.



Figure 6. Two teams prepare to begin the *Jalan Sehat*

The campaign also has fun events to keep people engaged with health and water topics while enjoying themselves. The *Jalan Sehat* (Health Walk) celebrated the program's progress to date and also allowed teams from the village (comprised of more than 440 participants) to compete at different stations that featured water and sanitation trivia along the Health Walk route. The community's enthusiasm for the event is demonstrated by the creative costumes the teams put together (Figure 6).

At the time of writing, the campaign was also planning on implementing a photography competition, a poster competition, a 10K for Water, a radio talk show, and a school water festival during 2007. Many of these events generally include games, music, and competitions—which invariably attract large crowds.

The Go Green Schools campaign involves students from 4 high schools in education about water, sanitation, and the environment. *Cinta Air* staff have held activities for students on the topics of solid waste disposal, water quality monitoring, reforestation, composting, and public health. Nearly 80 students at two high schools have committed to support *Cinta Air* through training of fellow students, composting, awareness-raising, and construction of a greenhouse on school grounds. By involving students, the program helps spread the messages, as students often share their learning with their parents. In addition, high school students are not far away from becoming young leaders—by generating interest in the topics today, *Cinta Air* hopes to have supportive and educated leadership tomorrow.

The *Cinta Air* Program will last till August 2007, and in the long term, the *Cinta Air* Program aims to have the local stakeholders own and sustain the program. Positive responses and feedback have been received by the team from youth and religious leaders, the health agency of Bekasi, the Cleanliness Agency of Bekasi, and two primary school principals. The team will work to transition the continuation of efforts to these groups.

4. Conclusion

Through innovative arrangements and the support of the private sector, USAID/ Indonesia has worked to improve Indonesians' access to and understanding of the importance of safe water. Both Aman Tirta and *Cinta Air* capture the power of the private sector and the development expertise of the public sector to create lasting change and improvement. These programs should be viewed as successful partnerships that can be repeated elsewhere to affect greater change.

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