Pangkalpinang, Indonesia

Public private partnership: From mining to re-claiming spoilt lands

ICLEI Local Governments for Sustainability

The Bangka Botanical Garden (BBG) in Pangkalpinang municipality is an innovative example of corporate social responsibility that illustrates the potential for public private partnership. A public-private-partnership transformed spoilt land into a botanical garden. Such spoilt land was formerly used for tin-mining exploitation but is ecologically important to provide clean water and wildlife habitat, as well as for recreational opportunities. The BBG initiator won the Kalpataru Award, given to outstanding individuals who improve the environment. It has also led to the development of the Bangka Goes Green movement.

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Abstract

In Pangkalpinang a private sector took responsibility in response to pressure from local groups and own initiative. The Bangka Goes Green (BGG) movement was formed in 2007 to transform spoilt land, land formerly used for tin-mining exploitation with ecological significance, into a botanical garden, the Bangka Botanical Garden (BBG). It protects local habitats and restores the natural ecosystem. The establishment of the BBG reflects a credible corporate social responsibility model in Indonesia that also improves the city's image. It has been recognized at the local, national and international level. BGG consists mostly of individuals within the business sector who are committed to strong leadership.

Population / Land area
~ 157,000 (2008) / 118 km^2

Municipal budget
Approx. IDR 500 billion (2008)
(US$ 50 million)

Dealing with the aftermath of extensive tin-mining

Pangkalpinang city is located in Bangka-Belitung province, which is rich in tin resources. The aftermath of extensive tin-mining extraction by the private sector, and to a much smaller degree, local communities, has brought dramatic changes to the natural landscape. The local environment has in many places been destroyed, while the social gap between the disadvantaged and well-off has widened.

The economic benefits of extraction have often been undermined by the environmental problems it creates. Organic tin components stay in the environment for long periods of time as they are not very biodegradable. Due to the toxic nature of organic tin compounds, aquatic ecosystems are often affected, especially fungi, algae and phytoplankton. Phytoplankton is a critical oxygen link for water organisms. Organic tin compounds also affect the fertility of the soil as it disturbs the microorganisms' biological processes. Local livelihoods based on agriculture and ecosystem services can be affected.

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Case Study

City context

Pangkalpinang is the capital of the Province of Bangka-Belitung Island located on Bangka island's Eastern coast in Indonesia. Pangkalpinang's economic growth rate has been near to five percent in recent years. The industrial sector plays a significant role. The contribution to local revenue has been increasing since the institutional regional autonomy in 2002. Other main economic activities include trading, restaurants and hotels, which amount to 40 percent of the gross regional domestic product (GRDP).

Photo: Courtesy of Hongky Listiyadhi

City of Pangkalpinang with ex-mining holes.

Although the local extraction begun in the 6th century, it was not until the Dutch colonial period in the 16th century that massive exploitation of tin resources started. The overexploitation by the tin mining industries has had a great damaging effect on the surrounding environment of the city and its adjacent districts. The unsustainable approach to mining and its processing for centuries have caused damage and pollution to water and people's health. Pangkalpinang is a typical mining city in Indonesia with much spoilt land, which has been left abandoned by the companies after the tin resources were extracted.

Bangka Botanic Garden concept

The Bangka Botanic Garden (BBG) concept of Corporate Social Responsibility was inspired by successful cases in Phuket (Thailand) and Ipoh (Malaysia). Both cities managed to successfully restore the environmental damage caused by heavy mining activities and transform them into touristic areas.

Photo: Courtesy of Hongky Listiyadhi

White storks at BBG.

At first, the initial idea came from the private sector out in response to public pressure and an understanding that tin mining is not a sustainable resource to rely on. Demand and prices of tin fluctuate, and thus does not provide secure long term earnings. A strong partnership was formed between the private sector and local leadership to support the reclamation of spoilt (critical) lands and conserve natural habitat and ecosystems. With the support from the local government, the land reclamation plan grew into a botanical garden rich in diverse

species. Strong visionary leadership was provided by Djohan Riduan Hasan, owner of PT. Donna Kembara Jaya, a local firm that initiated the idea.

With its implementation a sense of responsibility and interest to preserve the local environment grew. A series of consultation and technical facilitation process with the relevant local government units (LGUs), for example Agriculture, Fisheries and Food Unit of the city government. The management of BBG began to bring these concepts to action.

The BBG began with purchasing and applying animal waste to degraded and spoilt areas. Land clearing processes and organic fertilizers, up to a year for certain areas depending on the degree of damage, were applied. Through careful measures and through a learning process, land areas were gradually restored to become fertile again, where plants such as the native species mangroves are able to grow and multiply.

150 out of 312 hectares have been converted into areas for fisheries, livestock and agriculture including fruit gardening (eg. dragon fruits and melons), and is currently even expanding to rice fields. The remaining area will be developed in stages, whereby a certain part of it will be left untouched to allow a recovery of the natural ecosystem.

A combination of native and foreign species has added aesthetic aspects to the garden. It is well managed allowing the native species, both flora and fauna to grow. During the last couple of years, the BBG has attracted a number of species including crocodiles, reptiles, various birds and snakes. It is estimated that there are now up to 2,000 flora species and 200 fauna species living in the BBG.

A number of Memorandums of Understanding (MoU) were established to further strengthen the partnership with the municipality. The second one was signed on March 2010 on educating school children on how to re-green and care for their environment. BBG has supplied the schools with organic fertilizer that are derived from animal waste. The school children used these fertilizers for tree-planting in their schoolyards. A dedicated teacher in each school is appointed to facilitate the implementation of this program.

The BBG has also supported the local government to further advance its environmental program as mandated by the national law under Act no. 26/1008, which requires every city to allocate 30 percent of their area for open green space. The second MoU was signed around the middle of 2009, allowing the BBG to collaborate closely with the government for various tree-planting programs and seed provision to support the municipality in realizing the open green areas target.

The BBG also collaborates with a number of youth organizations such as Youth Bangka Goes Green to further advocate the BBG to the wider audience. To date, many schools from elementary to local universities have developed a joint program to undertake a one-day study tour to learn more about the environmental concept in the BBG.

The BBG is currently not yet publicly open for tourists, but the management plans to launch it as an eco-tourism area in the near future. The BBG has continued to develop and now aims to be a center for environmental education for schools and eco-tourism for the general public. The aim is to transform people mindsets about the importance of having a sustainable environment, protecting the local habitat and its ecosystem and

Bangka Botanical Garden

BBG is the first model of its kind that was developed by a tin mining corporation in Indonesia. The Tin Welfare Banka Belitung (PT. BBTS), a local tin consortium consisting of seven smelters, re-allocated a portion of its CSR fund operation in support of the BBG. The government has determined a 5 per cent rate for Corporate Social Responsibility (CSR) programs but has not yet issued clear guidelines as to how the fund is used. This case study emphasizes that CSR funds can be invested in sustainable projects with support from local government. It is such continuous support of funding from the consortium that has enabled BBG to undertake various programs

Photo: Courtesy of BBG

The Mayor shares BBG milk with school children.

Photo: Courtesy of Hongky Listiyadhi

Crocodile, newcomer to BBG.

also empowering the local community through promoting livelihoods based on local agriculture and aquaculture.

Results and impacts of the project

The BBG is a huge success exceeding original expectations and the sense it was impossible to achieve. The successful implementation of BBG has led to a more comprehensive approach to green the city in a more systematic and sustainable manner. The BBG has transformed the general perspective of what CSRs are able and unable to attain.

Political aspect. It has received great acknowledgment not only from local leaders but also received a national award and international recognition. In July 2010 the owner of BBG received the Kalpataru Award, an annual national award given to individuals by the President for his/her outstanding achievement in the environmental area. A number of neighboring Mayors have consulted with Zulkarnain Karim, Pangkalpinang Mayor and visited the BBG to learn and assess the viability of replicating the model in their own cities.

Socio-economic aspect. Students from all levels, teachers, NGOs, local officials from within and neighboring districts have now gained a better understanding of environmental concepts such as zero waste concept and sustainable environment management, which are the key in transforming spoilt lands into productive areas that in turn will be able to provide for their needs. Though not yet turned into a regular program, the BBG can support poor fishermen groups towards a better living standard. The BBG enables poor fishermen groups to obtain fish seedinglins free of charge. Currently the management also foresees the possibility for export purposes.

Environmental aspect. The gradual recovery of a 'once' lost habitat and ecosystem, cleaner water source, and less pollution from applying zero waste management. The BBG has created a nursery area for various types of green plants resulting in a scenic garden that contains a combination of both native and new species co-existing with each other. Clear results are evident from the growth of new fauna in the area that support species such as crocodile, reptile, snakes and birds that now make the BBG their new homes.

Resource area. The BBG has now become a resourceful area for the local government's environmental program on a more comprehensive scale. As part of National Act No. 26/2007, all local governments in Indonesia are mandated to allocate 30 percent of their area to open green space.

Specific results

Around 1000 cups of milk of 250 ml each have been distributed on a daily bases to 20,000 school children in Pangkalpinang city. To make sure that all school children benefit from the BBG, the program rotates between different schools on a weekly basis. The program is greatly appreciated by many playgroup and primary school parents. Many are unable to provide this to their children.

Regular provision of organic fertilizers for tree-planting to various schools to follow up the MoU between the educational sector of Pangkalpinang city and the BBG. The current production of compost processing is up to four tons/day and distributed to local schools. There are 87 elementary schools and 24 junior high schools throughout the city.

BBG enabled the city to plant 107,000 mangrove seeds in the eastern part of the city coastal areas and other trees in various places. In early 2010 it also donated thousands of mangrove seeds to Thousand Island regency, Central Bangka regency, and other regencies in the province.

Several ex-mine ponds became the breeding ground for fish farming. An example is Red Tilapia fish which production reaches 10,000 per week.

Lessons learned

BBG's experience is a showcase of a successful CSR program. Several important lessons to learn from BBG are:

Strong political support from the local leader is one of the keys to BBG's success. Although there has not been any regulatory framework to make the public private partnership (PPP) concrete, the Mayor's support and technical facilitation from relevant LGUs has been pivotal to the advancement of the BBG.

It may be necessary to **strengthen this PPP in a more formal way**. Having a clearer direction on how the BBG supports the city's vision in the long run is important for its sustainability. A clear division of roles and responsibilities between each stakeholder will foster a stronger partnership and ensure shared benefits to all. Regulation on land reclamation in particular may be necessary for new areas where ownership status is unclear and to avoid conflict of interests in the future. The regulation may be further elaborated to protect the native and endangered species, thus conserving its original habitat, which is critical to providing a balance in the ecosystem.

BBG requires an institutional arrangement that is accountable to the public. Currently, the BBG is in the process of setting up a non-profit foundation for its management. It aims to be self-sufficient in the long run.

The fact that BBG was mostly **driven by the private sector has provided its management with great independence and allowed it to be innovative and creative**. Should the BBG and local government decide to pursue a joint ownership of the BBG in the future, there may be several considerations or trade-offs to be aware of. This is related to the funding disbursement from local budget which usually takes a longer time to process. Decision-making flow and mechanism may also be more complex and not as efficient as it used to be. Such decision must therefore be thoroughly assessed; and the cost matched against benefit of each option for the most effective type of PPP.

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New projects require institutional learning-processes and experience. The first two years of implementation process are the most critical period where learning by doing takes place. The team learned that an application of chemical fertilizer to critical lands would not restore them alone but organic waste. Such institutional knowledge is important to preserve and transferred appropriately such that other parties can adapt better.

Quality of leadership fosters continuous learning for improvement. Present management of the BBG has shown an exemplary quality of a leader who has vision and will keep looking for new ways.

Replication

A few points to take note when replicating BBG in another area:

It is important to have a good strategic collaboration with key stakeholders to define the concept, planning, division of tasks, resource sharing will ensure a sense of ownership and responsibility and equally shared from the beginning. Several important elements include the property, legal basis and funding. Particularly the latter aspect as the initial investment and operational cost will ensure the implementation and sustainability of the program in the long run.

It is also crucial to engage a team of experts from diverse backgrounds to undertake the assessment, analysis and design of the implementation concept. The corresponding experts provide technical guidance on the method and specific requirements necessary to undertake a similar program based on its size and availability of resources. A data center that can be outsourced to a local university or NGO should capture the diversity of flora and fauna, its ecosystem, the enabling environment for each species to grow, etc.

Local Action for Biodiversity

The Local Action for Biodiversity (LAB) program is a global urban biodiversity program coordinated by ICLEI - Local Governments for Sustainability´s Global Biodiversity Centre, in partnership with the International Union for Conservation of Nature (IUCN). The LAB Pioneer program began in 2006 with a selected group of local and regional authorities from around the world, representing over 54 million citizens. The program provides an accessible and enabling platform for committed, leading local governments from around the world. This is achieved by profiling and promoting the importance of urban biodiversity and the role of local governments in its management, as well as by sharing the experiences, successes and challenges of urban biodiversity management in the participating cities and local authorities.

ICLEI provides guidance in assessment, planning and implementation; strategic networking opportunities; profiling opportunities for the participating local authorities at global and regional events; and creates a platform for local authorities to contribute to global advocacy on biodiversity

Key actors with visionary leadership from both public and private sector need to be identified. This aspect plays a key role in any meaningful replication process. Vision building will help to cultivate a shared interest and common goals among key stakeholders thus sustaining the initiative in the long run. A dedicated PR and fund-raising team should strategize the BBG campaign to different public groups and at the same time raise funds.

Budget and finances

Currently all of BBG management, programs and funding are provided solely by the private sector. Beside the land ownership which generally belongs to the government, the investment cost is mostly on the land clearing process, procurement of cows, fish and plant seeds for the initial phase. The number of human resources required depends on the size and extensiveness of the concept.

The BBG employs four management and 50 operational staff working in the field. The initial investment fund was managed by PT. Donna, but present operational cost is funded by the Tin Smelters Consortium. In the long term BBG aims to be self-sufficient.

Sources

- www.bangkagoesgreen.co.cc/

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