



Industrial & urban water in Myanmar

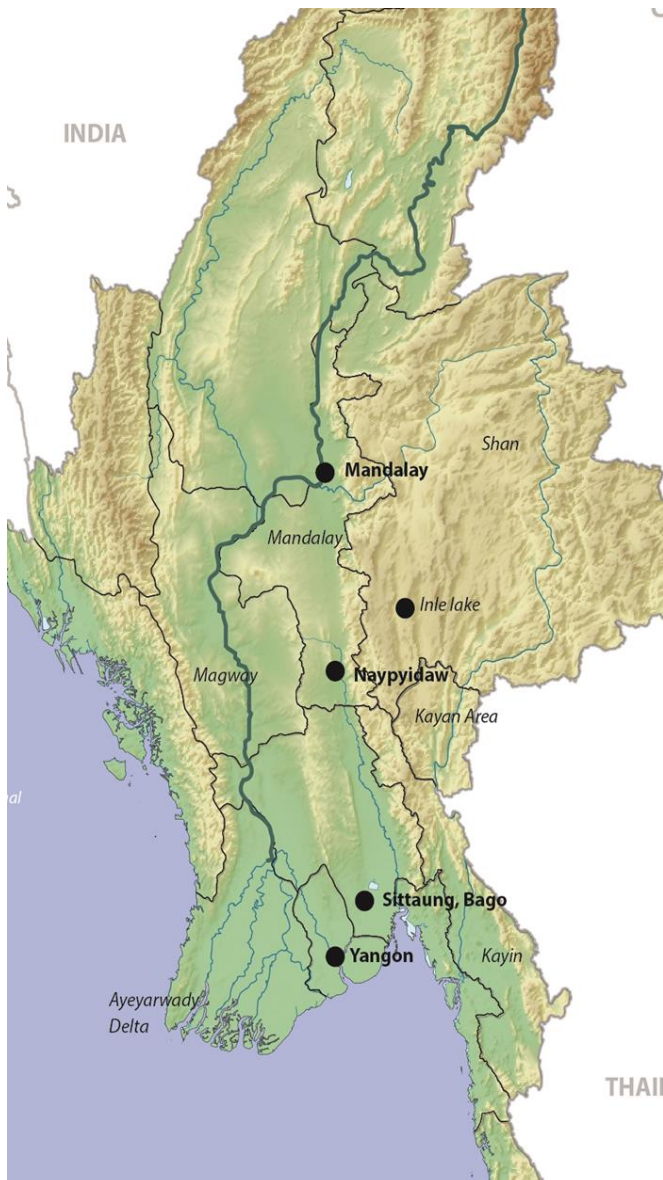
Myanmar is a country in a relatively favorable situation with respect to water resources. It has more fresh water per capita than all surrounding countries. With its abundance in natural resources, the country has great opportunities to achieve a balanced and sustainable development. All water resources of Myanmar are within the national borders and 3 out of 4 are national rivers. The country is still to a large extent unspoiled. Myanmar and The Netherlands, both with large and low lying deltas and large river systems, share many common challenges.

Myanmar is undergoing a rapid economic growth of between 6-8% per annum. The country, with over 51 million people, is growing and developing fast. The current economy is heavily dependent on the agricultural sector, that counts for 38% of GDP. Diversification of the economy is needed and therefore Myanmar will engage into a path of more industrialization. Economic growth in developing countries often goes hand in hand with a huge urbanisation process. For example, the region of Yangon with a currently estimated population of 6 million people. But also other cities in Myanmar will experience urbanisation, and at the same time the water supply in the rural areas need to be upgraded as well. Therefore, Myanmar offers a lot of potential for drinking water supply, water purification, waste water treatment, urban drainage improvements and solid waste management.

Potential

There are distinct regional water differences in Myanmar. For example lack of water in the Central Dry Zone with major cities like Mandalay, salinization in the Ayeyarwady Delta area endangering the livelihoods of many, flooding in the deltas, flash floods in the mountains. Currently inadequate rural and urban drainage cause trouble and damage. The availability of – safe – drinking water depends on reservoirs, communal ponds, private collection of rainwater and groundwater. Future socio-economic perspectives and the associated pressure these have on water, need to be taken into account. Higher demands for agricultural and domestic water, potentially a boom in the demand for industrial water and consequent pollution problems, a sharp increase in the demand for hydropower, increased risks of river floods, changing courses and magnitudes of cyclones and longer droughts are key factors to be considered for the future of Myanmar, and provide opportunities for the Dutch water sector.





Opportunities

Myanmar's interrelation between water, food, and energy security is key to Myanmar because food and energy production have a large impact on the water resources in Myanmar. The Dutch Water Sector can play an active role and contribute to a sustainable and better use of the water resources.

Industrial zones

Myanmar has many industrial zones countrywide, near all larger cities and villages. There are three categories of industrial zones: government industry zones, special economic zone (SEZ) and private industrial zones. Only in Yangon, out of 18 government industrial zones, most of them have no wastewater treatment plants. The private industrial zones, located in southern and northern part of Yangon, hosts mainly garment factories, steel fabrication factories, chemical industry such as emulsion, food production, etc. As these zones are often close to the major rivers, pollution of ground water, surface water and rivers is a high risk. Myanmar has designated 3 Special Economic Zones (SEZ) in Yangon, Kyaukpyu, and Dawei that are currently under

development. "Thilawa" near Yangon, has constructed a wastewater treatment plant. It is clear that industrial water management provides opportunities for Dutch companies that are specialised in water treatment, waste water management and industrial (re)use of water.



Industrial water discharge and supply

Water (too much, too little, too dirty) is one of the main challenges for sustainable development of industry in this emerging market. At the moment, a sustainable framework of legislation, the setting of quality standards, enforcement and attention to water utilization savings are lacking and therefore required. The main challenge of industrial wastewater management is, next to the lack of the right technologies, a lack of appropriate monitoring facilities, proper and systematic keeping of records, regular monitoring and surveillance data for water quality control and proper industrial zone management strategy.

In the bigger cities, the City Development Committees are in charge of the regulation and are responsible for the water supply to the industrial zones. But due to a lack of reliable city water supply, many factories use groundwater, hence creating subsidence risks.

Currently, YCDC is constructing water connections from the YCDC main pipeline to the industrial zones. However, water discharging remains a challenge, with in 2012 still 2054 factories not having a wastewater treatment plant. With the rapid increase of industries, the need for good water treatment technologies is growing.

Waste water treatment

Waste water treatment is an unexplored area in Myanmar with only parts of Nay Pyi Taw and Yangon connected to a conventional and old sewage system. Septic tanks are commonly used in cities and other areas. Some private housing estate, residence buildings, and industrial parks are using vacuum disposal trucks to carry the disposal wastewater to the treatment plant. Yangon has planned, as part of a "5 years Master Plans for sanitation project including the new settlement areas" to construct a new sewer treatment plant, and plans the common wastewater treatment plan for the sub-urban areas. Other cities like Mandalay, Patheingyi, Dawei, Magwe and Pyaw, are dealing with similar issues.

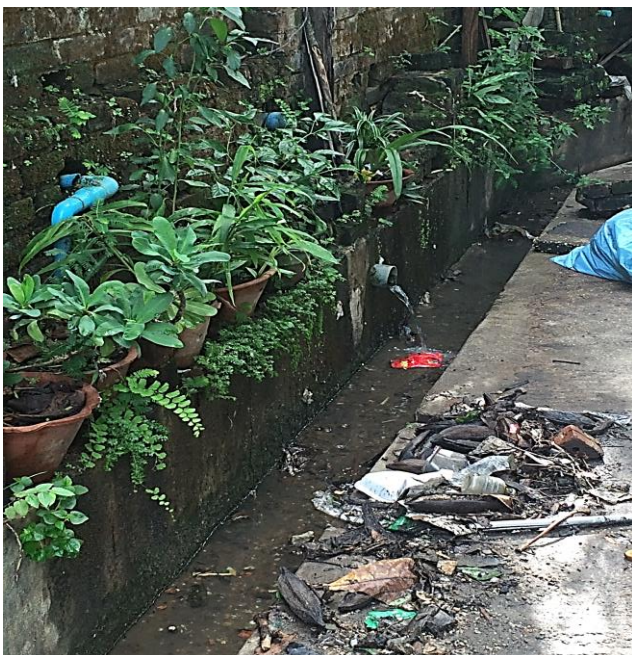




Urban water supply

Safe drinking water is a nationwide priority. In the future, more drinking water supply will be based on piped water systems. Myanmar has many (dams) reservoirs for drinking water; villages tend to use open water ponds for water storage. For example, in the Yangon city urban area, water supply comes from reservoirs (80%) and groundwater (20%). The city water supply is treated before delivered to the clients. People using own tube wells, regularly also use water filtration systems. Yangon cannot meet the demand for urban water supply, due to a lack of maintenance in the system and the urban expansion. Not only Yangon but also many other cities need standards for service pipe connections, water meter, storage tank installation, and grounder water extraction.

In the second largest city Mandalay, water is only supplied ten-hour per day in 55% of the city area; 90% of the supply water is collected from tube wells and 10% from untreated surface water. All in all, in Myanmar there is a high demand for good water storage, filtration, treatment and supply systems technologies and management.



Solid waste management

In Myanmar solid waste management is the responsibility of the local authorities. Systems are weak and management of solid waste hardly exists, hence polluting the living environment. Dump sites hardly exist, so much of the solid

waste ends in open rivers and gullies, thereby hindering water management and filling the drainage channels. Solid waste management and plastics in particular, are a challenge in which Dutch companies can play a role.

Urban and rural sanitation

In the urban areas there exist several types of sanitation septic tank (common and individual), pour flush system, fly proof (chute system), unsanitary latrine and no latrine. In the rural areas only simple latrines are in use. Sanitation is often placed under 'WASH'. A strategy on WASH in Myanmar in the rural areas is currently developed by Unicef and will be available online soon.



Business support

Most development partners have re-engaged with Myanmar and embarked on the formulation and implementation of programmes. The business environment is rapidly changing with a high influx of investors. After the enactment of a new foreign investment law in November 2012 high added value / high revenue potential sectors such as oil & gas, power generation, industrial zone development and related port and maritime infrastructure attracted massive foreign investor interest. Development partners like the World Bank and Asian Development Bank are involved in the field of water via technical assistance grants, concessional loans and a Trust fund, NL funded Water programme.

Others are IFC, UNDP, EU, and EIB. Furthermore the engagement of private finance (equity & debt) through PPP arrangements or other forms of private sector participation is rapidly developing. The Netherlands has several instruments available to support Dutch business to enter the market in Myanmar, like the fund for smaller demonstration projects, feasibility studies and investment studies (DHI), and DRIVE (infrastructure projects). Please check for the latest news: www.rvo.nl or contact the Embassy.

Furthermore, Myanmar is on the country list of PUM, CBI Atradius, and FMO.

Further reading

Contact the Embassy of the Kingdom of the Netherlands or take a look at our website for an overview of recently published reports and activities in the field of water in Myanmar.



Relevant events

- 17-19 May 2016: **Annual Myanmar Upstream Oil & Gas Summit & Exhibition**
Topics: updates on oil & gas production sharing contracts yet to be finalised, exclusive geological data, updates on the fiscal regime and provide a platform for debate and discussion relating the sustainable development of hydrocarbon resources in Myanmar
Venue: Sule Shangri-La Hotel in Yangon
- 23-24 May 2016, **Global Water Conference**
<http://www.globalwaterconference.com>
Venue: Sule Shangri-La Yangon
- 2-4 August 2016, **Urban and City Planning Conference**
Topics: City Planning, Urban Build & Transport Infrastructure, as well as Heritage & Real Estate Conservation
Venue: to be announced, Yangon
- 14-16 Oct 2016, **Myanmar Aqua Fisheries conference**
Venue: to be announced, Yangon
- 20-22 Oct 2016, **Myanmar Water**
<http://www.myanmarwater.com/>
Venue: Myanmar Event Park, Yangon

- 1-3 December 2016, **Myanmar Water**
www.myanmarwater.org

Relevant contacts

Embassy of the Kingdom of the Netherlands

Website:

<http://myanmar.nlembassy.org/>

Facebook:

<http://www.facebook.com/netherlandsmissionmyanmar>

E-mail:

YAN@minbuza.nl

Fax: +95 1230 5805

Tel.: +95 1 2306046

Liaison officer 'Water' at Netherlands Embassy in Yangon:

Tanya Huizer tanya.huizer@netherlandsmissionyangon.nl

To get in contact with Myanmar ministries, please contact our Liaison officer Water.

Others

- Netherlands Enterprise Agency: www.rvo.nl
- Embassy of Myanmar in Brussels:
www.embassyofmyanmar.be
- Union of Myanmar Federation of Chambers of Commerce: www.umfcci.net
- Netherlands Water Partnership (NWP): www.nwp.nl



Published by:

Embassy of the Kingdom of The Netherlands

© Ministry of Foreign Affairs | March 2016