

Twopager on Opportunities of a Circular Economy in Rio de Janeiro

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Central political message

A city and a bay clean of diluted and floating material (in particular plastic and organic waste), a city where our own citizens, but also sportsmen and tourists from all over the world would love to come and swim, row, surf and sail in our beautiful bay. The perspective that the local community would prosper more than nowadays, because of more businesses and more labor opportunities are created because waste is treated as a valuable resource. That would be great!

The challenges to achieve that goal are big. Structural changes in the way we live in Brazil (and the rest of the world), are needed. But let's look at the opportunities, if we approach it from the positive side: making business from waste and waste water.

Four challenges have to be addressed to achieve our common goal for a clean and healthy environment and a green economy and green jobs:

- (1) cleaning up the bay and the rivers
- (2) organizing a system of waste water and sewage treatment
- (3) organizing a structural system of solid waste management and recycling
- (4) An overall challenge to have the right 'governance' in place: drawing up of management plans, improving regulations, capacity building, public participation and the strengthening of transparency, accountability and integrity in the different sectors.

Of course not everything will be in place in the coming 1,5 years before the Olympic Games. But only cleaning up the bay for only a few weeks to make the Olympic Games a success, and changing nothing would really be a waste! All investments done, all hopes for a better future for a lot of people would be vanished.

We have to show to the people, there is a way to use the Olympic Games as an accelerator of structural change, there is a way of sustainable transition to a healthy and clean environment for all, a market where (green) business flourishes, a local community where everybody has a prospect of escaping from poverty if they show initiative, take their future in their own hands and are supported by their community, their government and partners in the rest of the world.

Let's start doing what we can do now and not wait for the better. We can clean up the bay and the rivers, in the short run especially in those areas where the Olympic Games will take place. But we should work at the same time to prevent pollution of the rivers and bays from sewage and solid waste. Otherwise it would be mopping up the floor without turning off the faucet. There is a lot of know how in Brazil and the rest of the world to make that happen. Let's join forces and show the world that we can do it.

Approach

The central idea is that the State of Rio de Janeiro and local/regional companies, knowledge institutes and NGOs work together with Dutch companies, knowledge institutes and NGOs in co-creation, on the

three above mentioned levels of action: the cleanup, water/sewage treatment and recycling solid (plastic) waste.

Start small. Keep projects simple, but focus on creating results. People have to see positive change in their direct environment. Essential for political and societal commitment and support, in the short run as well as in the long run. The government has to show that it is partner of the people, of the businesses which invest in the 3 goals, government has to facilitate processes without taking over the responsibilities.

In The Netherlands three sub consortia are being formed to see if we can help with solving the three main challenges. They have the knowledge, the experience and the sustainable innovations needed to create structural solutions. Naturally, the companies involved have their own interest to valorize their sustainable innovations and practice, to profit from a broader demand.

It is essential that Brazilian partners come together as well and form joint ventures with Dutch firms and institutes. Eventually they have to implement the long term strategies themselves.

Together we should formulate concrete plans for the short term and strategies for the long term. Some Dutch companies, knowledge institutes and NGOs are already active on the Brazilian market. That helps in implementing common strategies.

The following Dutch consortia are being formed:

1. Cleanup the Guanabara Bay

- Big dredging and shipbuilding companies (e.g. IHC, Van Oord) have the capability to clean up the bay with existing and innovative ships
- Small SME-firms have developed small river cleanup systems and are still innovating their models (Plastic Visser, Saraswater, Floating Horizon)
- Ports of Rotterdam and Amsterdam, willing to assist in how to become more sustainable in harbor waste collection facilities
- Knowledge institutes (Deltares, NIOZ, Marin, Technical University of Delft, Imares, TNO, Waste Free Waters (simulation water flows in the Guanabara Bay, simulating innovations on new shipping concepts, monitoring waste in rivers, lakes and oceans, businessplans)
- The Dutch government (Ministry of Infrastructure & The Environment, the Ministry of Economic Affairs, the Ministry of Foreign Trade and Development Cooperation, the embassy/consulate-general) and the Topsector Water, supporting all parties involved.

2. Waste water & Sewage Treatment (WWST) in the Bay area

- Big water treatment companies (Waternet, Evides) which have the best available techniques and operating experience in the world on waste water and sewage treatment
- Technical companies with broad experience in building WWST-plants in The Netherlands and abroad (e.g. Royal Haskoning/DHV, Arcadis)
- Companies specialized in recycling of energy and resources out of waste water and sewage (Paques, NuReSys, AEB)
- Technical companies, already active on the Brazilian market (e.g. Arcadis, DMT,) can help with concrete operational plans

- Knowledge institutes (Wetsus, topinstitute on water technology, KWR Waterrecycling, Deltares, TNO, Amsterdam Economic Board), able to support the companies involved with scientific, technical and business support
- The Dutch government (Ministry of Infrastructure & The Environment, the Ministry of Economic Affairs, the Ministry of Foreign Trade and Development Cooperation, the embassy/consulate-general) and the Topsector Water supporting all parties involved.

3. Solid waste collection & recycling in the Bay area of Rio de Janeiro

- Big waste & recycling companies (AVR, Van Gansewinkel, Attero, Sita, Midwaste, Van Werven) and networks (Dutch Waste Management) with experience to implement waste collection and (plastic) recycling technologies
- The main Dutch branche organisations in waste collection,- treatment and recycling (NVRD, Vereniging Afvalbedrijven, BRBS, NRK), are able to give advice on the topics of implementation of waste collection, landfill, incineration and recycling strategies
- Dutch suppliers of waste treatment equipment (VLM branche organisation, Translift) can be of help introducing systems to implement those waste collection-, treatment- and recycling strategies
- Companies specialized in 3D-printing of plastic recycled waste (PPP), in plastic 'icons' (Plastic Whale) which can contribute to decentralized solutions and more societal awareness
- Dutch based company Philips is willing to use connection with Philips Brazil to see what they can do to use more recycled materials in their products.
- NGO's like Plastic Soup Foundation, Stichting De Noordzee, World Wildlife Fund (WWF) are supporting, creating awareness with campaigns, using their NGO-networks for promotion of multistakeholder dialogues. WWF has offered already to pay for a feasibility study concerning a concrete project in the favelas.
- The Dutch government (Ministry of Infrastructure & The Environment, the Ministry of Economic Affairs, the Ministry of Foreign Trade and Development Cooperation, the embassy/consulate-general) and the Topsector Chemistry supporting all parties involved.

4. Governance

- Water governance (Dutch Water Governance Centre): network organization with integrative multidisciplinary approach with national and international experience
- Netherlands Water Partnership (NWP): 200 members from private companies, government, knowledge institutes and NGO's. Acts as a centre of information on water expertise, policy developments and market opportunities. NWP also initiates, coordinates and executes projects for its members.
- WASTE: management of multi country programs on sanitation and waste management, evaluation studies for projects and programs, baseline studies on solid waste and sanitation situation of cities, research on waste management and sanitation issues.
- Creating more awareness in Brazilian society is essential for success: events can be organized to show what is possible already (e.g. a boatrace with boats made of plastic waste out of the rivers/bay). NGOs and the creative industry could help with organizing those events.
- Government: regulatory affairs (legal system), connecting companies in the value chain, enabling communities of practice, communication on the political level (media coverage on successes).

Finance

But without the necessary funds, it will be impossible to implement our common strategies. Therefore, it will be essential to commit international funds to join forces. Connections could be made with the right people at the World Bank, the Inter-American Development Bank and – in the future - the New Development Bank (BRIICS-bank). A second line of financial contributions could be explored by the sponsors of the Olympic Games. Especially Coca Cola and Dow are parties which have specific interests (image). And the third line is promotion of transparency in CSR-and sustainable policies of companies to attract capital with lower costs. Together we have to look for an effective strategy to commit those parties to invest in sustainable solutions of the plastic pollution in the Guanabara Bay.

Urgent need for action, the next steps

To get a clearer picture on what has to be done in the short and longer term, we should deal with the following topics:

1. Brazilian consortium

On the Brazilian side, it would be extremely helpful if a consortium is built as counterpart of the Dutch (sub) consortia. It only works in the long run, if Brazilian companies are involved to establish green business in and around Rio de Janeiro. The Dutch Embassy/Consulate-General and Dutch firms/knowledge institutes already active in Brazil – especially those active in the city and region of Rio de Janeiro like Deltares, IHC, Arcadis, Van Oord, Translift, Pacques – can be of help with creating that consortium. The first contacts already have been made with Brazilian companies, knowledge institutes and NGOs like Plastividia (plastic industry), WWF Brazil, IBISS.

2. Fact-finding mission

To find out more precisely what the needs are of the Government of the State Rio de Janeiro and the companies involved, and what the concrete opportunities are to start with projects which can be copied elsewhere and which illustrate the structural and integral approach of the Brazilian-Dutch cooperation, we should organize a fact-finding mission of specialists of the different companies within the consortia, knowledge institutes and government. We think it would be possible to plan that mission in the end of November. We can't wait for the new government to be installed, because if we want to have tests done in the rivers and the Guanabara Bay in the Spring of 2015. In the summer of 2015 the cleanup should be operational. The Consulate-General of The Netherlands can help to organize the fact-finding mission.

3. Short term “bid”

The Dutch Cleanup consortium could develop after the fact-finding mission a concrete “bid” for the short term to show what can be done to clean up the Guanabara Bay as efficient and effective possible, and start with some ‘iconic’ projects in the fields of ‘waste water and sewage treatment’ and ‘solid waste & recycling’ management in the light of the upcoming Olympic Games in the bay. The WWF has already offered help with financing a feasibility study for such an iconic project to start with as soon as possible.

4. Long-term approach: a master plan

For the long-term approach we could develop together as Brazilian and Dutch consortia, a master plan, in which concrete projects are positioned in a strategic framework and in which will be planned how the projects are implemented and financed. Other international partners, who already are active in Brazil on certain topics, can be included in this master plan.