

Title of case study*	Green Infrastructure ,Waste Water Recycling and Organic Waste Integrated Treatment System
Date of submission*	09/05/2013
Name of organization(s)*	Ecotelhado
NWP Objective* <i>Select the objective(s) of the NWP that the case study responds to.</i>	<p>The objective of the Nairobi work programme is to assist all Parties, in particular developing countries, including the least developed countries (LDCs) and small island developing States (SIDS), to:</p> <ul style="list-style-type: none"> x improve their understanding and assessment of impacts, vulnerabilities and adaptation to climate change; and x make informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability.
Objective of case study* <i>Describe the specific objective of case study.</i>	<p>The objective of this system is to propose a new paradigm for a decentralized wastewater and organic waste that could be integrated to the building landscape as green roof and green wall, increasing the green infrastructure in urban areas. This System can be applied to any commercial, residential or industrial building, creating independence to urban wastewater network and municipal organic waste collection. The crescent adoption of this system can substantially reduce air conditioning energy consumption, treated water use, wastewater infrastructure and energy, avoiding waste water plant construction, substantially reducing organic waste transport and waste land contamination. It also reuses wastewater and rain water in green roof and green wall evapotranspiration to reduce urban heat island effect and global warming. This system is especially useful in tropical and sub-tropical areas that have not developed wastewater treatment infrastructure in place. It requires low maintenance and allows the reuse of water and nutrients avoiding pollution of rivers, lakes and sea.. Municipal government can also benefit from the scaled use of this system as there would be reduced need for wastewater infrastructure and organic waste transport. The system uses new vermifiltro technology to process organic waste as well wastewater. After filtering the waste, the water goes to the green roof laminar system and then to the green wall or green façade cooling and refreshing the building by evapotranspiration.</p>
Actions* <i>Describe the activities to meet the case study objective, highlighting organizations, communities and/or experts to be engaged.</i>	<p>From a technical prospective the system is very simple and easy to operate with relatively low cost compared with conventional systems. However awareness and incentives through national, state and municipal policy are needed to obtain scaled gains.</p>
Expected results* <i>Describe the envisaged outputs/benefits of the case study/</i>	<p>The outcomes of the adoption of this system by communities are less pollution, less energy consumption, less global warming, more resilience to face energy shortage in the future. It will also enhance social welfare for communities and enhance visual attractiveness of the facade.</p>
Indicators of achievement* <i>Describe any quantitative and/or qualitative indicator to show that the objective of the case study has</i>	<p>The prototype of the system has been implemented and analysis of effluent showed that the system has successfully processed organic waste and wastewater for a 15 persons building making it independent from the city sewage infrastructure and organic waste collection as well</p>

<i>been achieved.</i>	as cooling down the interior and exterior of the building. Low maintenance and no residual sludge indicate that the system could be applied to large buildings.
Region(s) relevant to case study*	<ul style="list-style-type: none"> All regions <input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Arab States <input checked="" type="checkbox"/> Asia <input checked="" type="checkbox"/> Caribbean <input checked="" type="checkbox"/> Central America <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Least Developed Countries <input checked="" type="checkbox"/> North America <input checked="" type="checkbox"/> Pacific <input type="checkbox"/> Polar regions <input checked="" type="checkbox"/> Small Island Developing States <input checked="" type="checkbox"/> South America
Country(ies) relevant to case study	Brasil
Business sector of the organization(s)*	<ul style="list-style-type: none"> <input type="checkbox"/> Intergovernmental organization <input type="checkbox"/> National/regional programme/initiative <input type="checkbox"/> Non-governmental organization <input checked="" type="checkbox"/> Private sector entity <input type="checkbox"/> Research institute <input type="checkbox"/> UN organization/agency
Adaptation sector relevant to case study*	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Capacity building, education and training <input checked="" type="checkbox"/> Energy <input type="checkbox"/> Finance and insurance <input checked="" type="checkbox"/> Food, agriculture, forestry and fisheries <input checked="" type="checkbox"/> Human health <input checked="" type="checkbox"/> Oceans and coastal areas <input type="checkbox"/> Science, assessment, monitoring and early warning <input type="checkbox"/> Technology and Information & Communications Technology (ICT) <input checked="" type="checkbox"/> Terrestrial ecosystems <input checked="" type="checkbox"/> Tourism <input checked="" type="checkbox"/> Transport, infrastructure and human settlements <input checked="" type="checkbox"/> Water resources
Adaptation activity delivered by case study*	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Capacity building <input checked="" type="checkbox"/> Climate-resilient development planning <input type="checkbox"/> Communications and awareness-raising <input checked="" type="checkbox"/> Disaster risk reduction <input type="checkbox"/> Early warning systems <input checked="" type="checkbox"/> Education <input type="checkbox"/> Financial support <input type="checkbox"/> Humanitarian assistance <input type="checkbox"/> Knowledge management <input type="checkbox"/> Monitoring and evaluation <input type="checkbox"/> Pilot adaptation programmes/projects <input type="checkbox"/> Risk/vulnerability mapping <input type="checkbox"/> Training

* Mandatory fields

¹ More information on the Nairobi work programme work areas is available at: <<http://unfccc.int/nwp>>

Disclaimer: These business cases have been cited to raise awareness about the engagement of the private sector in climate change adaptation. The information in the business cases has been provided either directly by the organization or obtained from a public source. The UNFCCC Secretariat has not verified the information and takes no responsibility for it. Users are therefore advised to verify the information before they take any action relying on the information provided in the business cases.

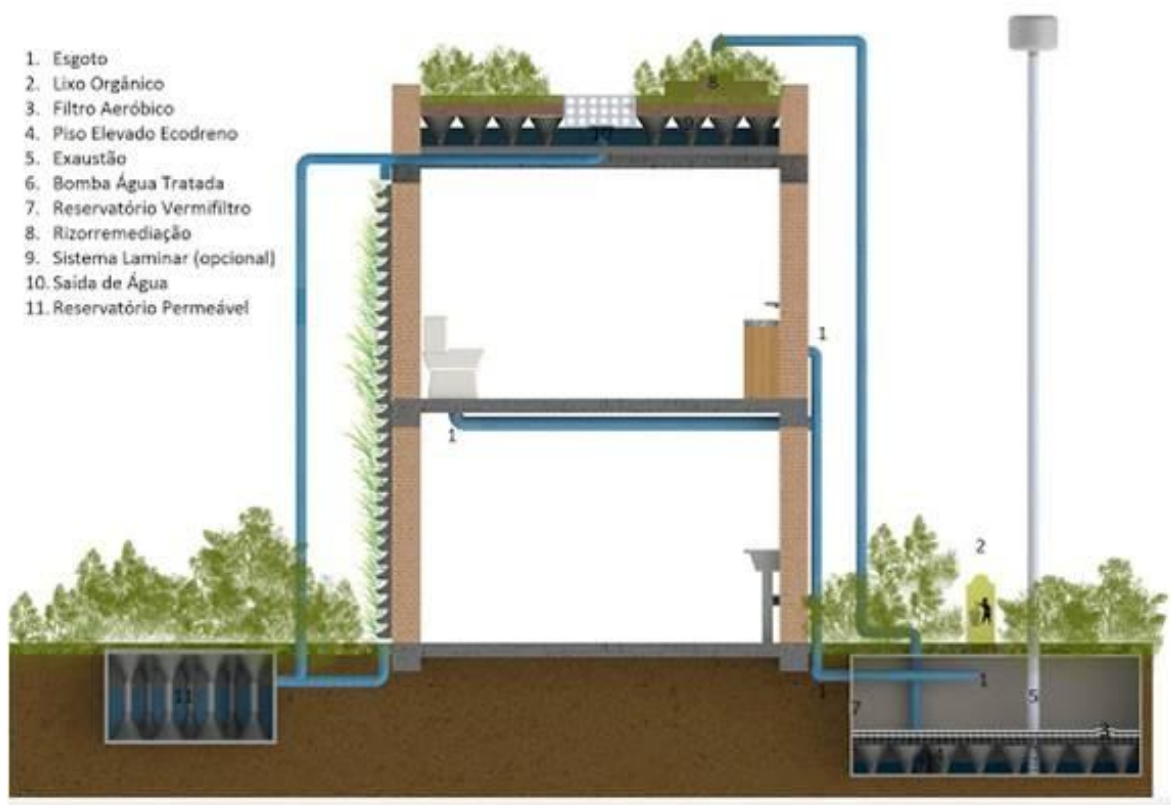
<p>Work areas of the NWP*¹ <i>Select among the nine work areas of the NWP that apply to the case study.</i></p>	<ul style="list-style-type: none"> x Adaptation planning and practices <input type="checkbox"/> Climate modelling, scenarios and downscaling <input type="checkbox"/> Climate-related risks and extreme events <input type="checkbox"/> Data and observations <input type="checkbox"/> Economic diversification <input type="checkbox"/> Methods and tools <input type="checkbox"/> Research <input type="checkbox"/> Socio-economic information x Technologies for adaptation
<p>Target group*</p>	<ul style="list-style-type: none"> x Academics <input type="checkbox"/> Children x Communities x Policy makers <input type="checkbox"/> Practitioners <input type="checkbox"/> Private sector <input type="checkbox"/> Women
<p>Link <i>Further information on relevant websites.</i></p>	<p>http://www.ecotelhado.com.br/Eng/ecoegoto/default.aspx</p>
<p>Picture to illustrate case study <i>Provide high resolution image (*.jpg or *.png)</i></p>	<p>Please, attach your picture to the email</p>
<p>Description <i>Provide a title and brief description of the picture and of the case study. This information will appear with your image on the homepage of the NWP.</i></p>	<p>Green Infrastructure, Waste Water Recycling and Organic Waste Integrated Treatment System The waste water as well organic waste live the building heading to the vermifiltro were earthworms and beneficial bacteria digest sewage and the residual water and castings are pumped to the flat roof were laminar green roof systems promote evapotranspiration to cool the building as the plant roots symbioses with facultative bacteria to better cleaning. The water than goes to green wall were more cooling occurs. Residual water can be used to flush toilet or infiltrate to subsoil already clean.</p>
<p>Credits <i>Provide the name of the photographer or the copyright references.</i></p>	<p>João Manuel Linck Feijó</p>

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Sistema Ecoesgoto Vermifiltro



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