## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome Message</td>
<td>4</td>
<td>A Message From CityNet’s Director of Programs</td>
<td>Youngmin Chang</td>
</tr>
<tr>
<td>Interview</td>
<td>6</td>
<td>The Impact of Smart Technologies on Municipal Finances</td>
<td>Katharine Thoday</td>
</tr>
<tr>
<td>Special feature</td>
<td>10</td>
<td>Clean Air Certification, Supporting and Recognizing City Action</td>
<td>Premakumara Jagath Dickella Gamaralalage</td>
</tr>
<tr>
<td>Best practices</td>
<td>14</td>
<td>Environmental Education and Learning Materials for a Smart and Green Mandalay City</td>
<td>Gary Llamas &amp; Ethel Roxanne Salvador-Gemeniano</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Single Window Transaction - Modified Business One-Stop Shop (SWIT-MBOSS)</td>
<td>Pipin Kurniawaty</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>Mobile App for Sidoarjo Regency Citizens’ Participation Launched</td>
<td>Sayel Cortes</td>
</tr>
<tr>
<td>Member in Focus</td>
<td>24</td>
<td>Building a Sustainable Future - the Makati Experience: Evaluating Development Impacts Using GIS Technology</td>
<td>Merlina G. Panganiban</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Autumn/Winter Highlights</td>
<td>Sayel Cortes &amp; Cresti Eka Fitriana</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>The 30th and 31st KLRTC Workshops</td>
<td>Stefan Sjöström</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>Habitat III and the Role of the New Urban Agenda for Asian Cities</td>
<td>Sayel Cortes</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>Why Are Some Cities More Cheerful than Others?</td>
<td>Stefan Sjöström</td>
</tr>
</tbody>
</table>
The City of Mandalay, Myanmar’s last royal capital and its second largest city with 1.25 million people, has experienced rapid urbanization and population growth in the recent past. To promote itself as a smart green city, the Mandalay City Development Committee (MCDC) and the Department of Human Settlement and Housing Development (DHSHD) prepared their first major 25 year urban development plan.

The Asian Development Bank (ADB) and the French Agency for Development (AFD) are providing technical and financial support to help the city achieve its vision through the Mandalay Urban Services Improvement Project, which aims to improve the city’s water supply system, wastewater treatment and solid waste management.

In addition, the International Environmental Technology Centre (IETC) of the United Nations Environment Programme (UNEP) has also been providing technical assistance for developing a waste management strategy to help the city achieve a zero waste, zero emissions and resource-efficient society.

All these programs recognize that smart planning, basic urban infrastructure investment, and a radical transition towards a more sustainable lifestyle are requisite steps necessary for ensuring that Mandalay becomes a smart and green city.

Environmental Education and Learning Materials for a Smart and Green Mandalay City

Mandalay City Development Committee (MCDC) is responsible for local administration, planning and implementation of urban services. Photo: by author, 2015

Mandalay City has been facing considerable challenges in addressing environmental issues. Through a city-to-city cooperation, the Institute for Global Environmental Strategies collaborated with Kitakyushu City to develop a comprehensive environmental education program to increase Mandalay citizens’ environmental stewardship.

Mandalay City Development Committee (MCDC) is responsible for local administration, planning and implementation of urban services. Photo: by author, 2015

Rapid urban growth, industrialization and lifestyles changes have led to significant challenges in managing solid waste and other basic services. Photo: by author, 2016
IGES AND KITAKYUShU CITY INTERVENTION
Against this background, the Institute for Global Environmental Strategies (IGES) has been collaborating with Kitakyushu City since 2014, sharing the city’s experience with MCDC to help develop a new environmental education (EE) program for junior schools in Mandalay City.

Kitakyushu City, one of the leading environmentally sustainable cities in Japan, has had a remarkable journey, transforming itself from a “Grey (polluted) City” to a “Green City”, through an environmental education program that raised citizens’ awareness about sustainable development. Kitakyushu City gave particular attention to youth education and built partnerships among different urban stakeholders to overcome environmental pollution in the 1960s.

Meanwhile, IGES has applied a Participatory Action Research (PAR) method, which includes a series of consultations and focus group workshops with local key stakeholders, to develop Mandalay City’s new EE program and learning materials.

The project started with an understanding of the existing situation. The initial survey results acknowledged that the existing EE programs (both formal and non-formal) implemented by MCDC and other groups in the city merely focused on raising awareness on environmental issues.

Through a random survey conducted at one of Mandalay’s environmental model schools, IGES found that instruction focused mainly on ecology and that students typically receive only incidental exposure to environmental issues. About 90% of the students answered that they were well aware of the environmental impacts of bad waste management practices and that they were responsible for protecting the environment. However, none of them knew what happens to waste after collection, and only 17% of them were involved in some kind of waste separation or reduction activities at home or school.

ECOLOGY NOTE
As a result, based on Kitakyushu City’s EE experience, IGES developed Ecology Note, a new environmental learning program, and is implementing it in three model schools in Mandalay. Ecology Note offers a new, more innovative approach, combining the three learning domains—knowledge, skills and attitudes (KSA)—to encourage students active contributors to solving environmental issues, rather than just being passive listeners.

Ecology Note includes contents related to:
(i) Awareness and Sensitivity: to provide sufficient knowledge for developing a conceptual awareness of how individual and collective actions may influence the relationship between quality of life and the environment;
(ii) Investigation and Evaluation: to provide sufficient skills to investigate environmental issues and evaluate alternative ways to solve problems; and
(iii) Action Skills: to develop the skills to take positive actions to achieve environmental improvements.

By fostering sustainable lifestyles, Ecology Note—the new learning program—can help Mandalay City achieve its goal of transforming into a smart and green city. Through mainstreaming EE in formal and non-formal education, and mobilizing and empowering youth to pursue sustainable lifestyles, Mandalay City can establish a new norm that saves energy, uses resources efficiently, and minimizes environmental impacts.

The project builds the capacity of teachers, other individuals and organizations to incorporate the proposed principles into concrete learning and actions based on cultural values and traditional social practices. However, it is vitally important to develop a sustainable system for introducing this learning material into the current education system. Additionally, the networks among related organizations must be expanded and partnership to facilitate mutual learning and resource sharing must be created.

MCDC, the Department of Basic Education, Ministry of Education in the Mandalay Region and other key stakeholders, including local non-governmental organizations are implementing the new EE program in 18 model schools in 2016 and will gradually bring it to all 250 schools in the city. To help integrate the learning materials into the school curriculum and support the teachers and other organizations that will implement them, the IGES staff together with experienced teachers from Kitakyushu City conducted a series of trainer training workshops.

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The Single Window Transaction—Modified Business One-Stop Shop (SWiT-MBOSS) is a simplified system implemented by the Business Permits and Licensing Office (BPLO) for processing new business permit applications and renewals. SWiT-MBOSS consists of just three simple steps, all of which are done during the taxpayer's interface with a single BPLO staff, from the start to the end of the transaction.

The MBOSS is by far the most streamlined version of the Business One-Stop Shop (BOSS), which Muntinlupa City Government adapted in the late 1990s. From the earlier scheme, which featured fourteen steps, the system was simplified into twelve steps, before eventually it was reduced by half to just six steps. This shortened the processing time by a substantial margin.

The City Government of Muntinlupa rolled out an initiative to implement more efficient governance by creating one-stop-shop access for the delivery of public services, which has been modified and simplified over time. SWiT-MBOSS provides simpler, quicker public service delivery and has resulted in a better, more business-friendly environment.

Endnote:
1 Mandalay City Development Committee (2015): Solid Waste Management in Mandalay City, a presentation made at the 4th Green Economy Green Growth (GEGG) Forum in Mandalay 5 February 2015, MCDC.
4 IETC, MCDC, and IGES (2016): Draft City Waste Management Strategy for Mandalay, MCDC, Myanmar
6 A random survey carried out by the IGES selecting 41 students from the grade 5 classes at the BEHS No.4 school in August 2016