

**Seventh Regional 3R Forum in Asia and the Pacific**

*“Advancing 3R and Resource Efficiency for the 2030 Agenda for Sustainable Development”*

Adelaide, SA, Australia, 2-4 November 2016

# **City Report**

**(Draft)**

**< Phitsanulok >**

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This city report was prepared by Phitsanulok as an input for the Seventh Regional 3R Forum in Asia and the Pacific. The views expressed herein do not necessarily reflect the views of the United Nations.

Q	
1	<p>The roles of local government is to act regarding to Municipal and public health act of legislation in order to manage solid waste and promote public participation in solid waste management.</p> <p>The present government policy is to promote solid waste management from starting point under the concept of '3R' by setting a national agenda.</p>
Q	<p>2</p> <p><b><u>VISION</u></b> Efficiently unified solid waste management and reduction of air pollution from solid waste management.</p> <p><b><u>GOALS</u></b></p> <ol style="list-style-type: none"> <li>1. Organizing 12 years master plan (2017-2029) on reduction of air pollution substances from solid waste management aiming to reduce 20 % compared to 2016.</li> <li>2. Reduction of solid waste before entering the stage of disposal at least 5% in 2017 as compared to 2016.</li> <li>3. A city generating under whole '3R' concept.</li> </ol> <p><b><u>Lesson Learned</u></b></p> <ol style="list-style-type: none"> <li>1. Phitsanulok Municipality in coordination with government of federal republic of Germany along with GTZ (Germany technical cooperation agency) organized 'Phitsanulok model' which is a unified solid waste management programme. Aims to promote public participation in solid waste management under the concept of '3R' which resulted in reduction of solid waste from 142 tons per day in the year 2009 to 80 tons in 2016. Development of "Community based solid waste management" (CBM) course as well as CBM lecturer course published</li> </ol>

by ministry of natural resources and environment to all local government in Thailand and ASEAN region creating a network of environment operation in the region.

2. Development of solid waste treatment system in a process called mechanical biological waste treatment (MBT). This process uses a mechanical process to shred wastes and biodegradability process which resulted in reduction of 50% of actual disposed waste. This process extend the life expand of landfill waste. Transformation of waste to energy which aim at generating zero landfill.
3. Participating in the climate & Clean air coalition (CCAC) programme striving to become a city that has reduced emission of short-lived pollutants from waste management process of phitsanulok municipality by working with the Institute for global Environment Strategies (IGES) and Dr. Walter Scholl foundation.

### **Major Achievement**

1. Generating a clear policy.
2. Continuous development of personnel and team
3. Development of database
4. Educational Research
5. Promoting participation
6. building network of operation



Workshop on testing tools that calculate the emission of GREENHOUSE GAS from solid waste management at Phitsanulok province



## Composing organic fertilizer



## Promoting city under '3R' concept



Mechanical

biological

waste

treatment

Transformation of waste to energy



Q		
3	Financial constraints:	Financial constraint is not a major problem in '3R' operation. Community based waste management system does not required much financial support with the use of infrastructure and social capital in the community helped to solve the problem in the community. Also it has the potential to be a starting point in applying to other activities In the manner of a community foundation.
	Institutional/governance challenges	Government stated a clear policy on solid waste management under '3R' concept.
	Policy Gaps	Government policy in accordance with electronics wastes is not yet clear.
	Other Challenges	There are certain restrictions in managing electronic waste due to unclear policy. And the potential of the local government alone is not enough to handle this issue.
Q 4	There is a joint operation with private sector which is an important mechanism of recycled waste and some electronics waste. The role of municipality is to screen and distribute wastes to private sector.	

**Q**  
**5** Participating in climate & clear air coalition (CCAC) in order to strive to become a city with reduction of short-lived pollutants from waste management process. By working with the institute for global Environmental strategies (IGES) and Dr. Walter Scholl foundation. There are 8 implementation plans under this project.

1. Action Plan to promote the 3Rs concept of waste management by communities and municipalities to reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).

2. Action plan to improve waste collection and disposal and storage to reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).

3. Action plan to increase waste and waste utilization to reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).

4. Action plan to increase the use of waste through MBT processes to achieve zero waste to landfill and reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).

5. Action plan to promote refrain of burning waste in the open air to reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).

6. Action Plan to produce biogas leachate for energy to reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).

7. Action plan to improve the system of data storage and reporting practices to reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).

8. Prepare to become a learning center on reducing emissions of air



pollutants that are short-lived. (Greenhouse gases and black soot).

Processing time October 2016 – October 2017

Goals

- ๑. The implementation of the Action Plan in 2016 and 2017, striving to reduce the city's air pollution emissions of short-lived waste.
- ๒. The 12-year master plan (2017-2028) to reduce emissions of air pollutants from the short-lived solid waste management. The goal is to reduce by 20 percent by 2017 compared to the year 2016.
- ๓. Promoting a city wait 3R concept.



Inauguration ceremony of the emissions short-lived climate pollutant from solid waste management of Phitsanulok municipality.

Q 6 Even if your city doesn't have any dedicated 3R policies/programmes/activities, what future prospects or opportunities does your city have in 3R areas?

	We already possess many dedicated 3R programmes		
Q 7	What type of 3R infrastructure and facilities your city is equipped with? Please tick the appropriate		
	Types of 3R infrastructure and facilities	Adequate/Significant	Not-Adequate/Non-significant
	<input type="checkbox"/> waste collection facility <input type="checkbox"/> waste segregation facility <input type="checkbox"/> waste storage facility <input type="checkbox"/> waste processing & treatment facility <input type="checkbox"/> resource recovery facility <input type="checkbox"/> waste recycling facility <input type="checkbox"/> waste to energy facility <input type="checkbox"/> eco-industrial zones <input type="checkbox"/> science parks/theme parks relevant to 3R <input type="checkbox"/> others (please specify: )	/	/
Q 8	Kindly provide the important 3R policies/programmes/projects/master plans that your City Government plants to undertake within next five years (2016-2021)		
	<p><b><u>Policy</u></b> Phitsanulok “ A city of 3R”</p> <p><b><u>Programmes</u></b> Significant implementation plan are as follow:</p> <ol style="list-style-type: none"> <li>1. Organizing 12 years master plan (2017-2029) to promote 3R</li> <li>2. Reduction of solid waste before entering the stage of disposal at least 5% in 2017 as compared to 2016</li> <li>3. Action Plan to promote the 3Rs concept of waste management by</li> </ol>		

	<p>communities and municipalities to reduce emissions of air pollutants that are short-lived. (Greenhouse gases and black soot).</p> <ol style="list-style-type: none"> <li>a. Promoting 3R in the communities</li> <li>b. Promoting 3R in the educational institution</li> <li>c. Promoting 3R in Hotels</li> <li>d. Promoting 3R in the in Phitsanulok municipality office</li> <li>e. Promoting 3R in the Markets.</li> <li>f. Promoting 3R in temples</li> <li>e. Promoting 3R in food establishment</li> </ol> <ol style="list-style-type: none"> <li>4. Promote the fermentation of organic waste as fertilizer</li> <li>5. Management of hazardous waste</li> <li>6. Promoting transformation of waste to energy</li> <li>7. Promote consumer-friendly environment.</li> </ol>
<p>Q 9</p>	<p>Phitsanulok Municipality has a clear policy on solid waste management. Organizing 12 years master plan (2017-2029) to promote 3R and emission of short-lived substances from solid waste management. By aiming a reduction of 20% as compared to 2016 which will be adopted by November 2016.</p> <ol style="list-style-type: none"> <li>1. Promoting 3Rs to strive to be a waste-free community.</li> <li>2. Developing solid waste management courses by communities.</li> <li>3. Developing solid waste management courses by Education Institution</li> <li>4. Promote the use of bio-waste. And composting of bio-waste as fertilizer.</li> <li>5. Develop a storage system. And transportation of solid waste</li> <li>6. Switching to natural energy instead of fossil fuel.</li> </ol>

	7. Disposal of solid waste to strive to Zero Landfill 8. Promoting consumer-friendly environment.

Thank you for your kind cooperation.