

ALTERNATIVES TO POLYSTYRENE TAKEAWAY BOXES IN SEYCHELLES

THE ISSUE

- The process of polystyrene production causes air pollution, and creates large amounts of liquid and solid waste, and the polystyrene itself is estimated to take hundreds to thousands of years to biodegrade. Polystyrene's total ecological impact (from cradle to grave) is estimated to be exceeded only by aluminium.
- Some types of combined polystyrene/starch products have been developed to improve the biodegradability of polystyrene boxes – the starch breaks down but minute particles of polystyrene remain in the environment causing invisible pollution.
- In Seychelles, there are 155 licensed and active takeaways – every day the public uses and discards an estimated 100 polystyrene boxes from each establishment – that adds up to about 4 million take away boxes per year!
- Many takeaways, importers and consumers in Seychelles have expressed an interest in trying out biodegradable alternatives to polystyrene boxes, if the price is in a similar range to the current boxes in use (SR1).
- There are biodegradable containers available on the global and regional markets - S4S is about to launch a trial of 10,000 sugarcane fibre takeaway boxes imported from South Africa (about SR2 each cost price).



RESEARCH FINDINGS

- In 2011 the US government listed styrene (a building block of polystyrene which is used in a variety of products including food containers) as a *potentially carcinogenic* substance, based on research done by the Department of Health and Human Services.
- Polystyrene containers leach styrene when they come into contact with warm, oily or acidic food or drink.
- Polystyrene takeaway boxes have been banned in several cities globally, such as Oxford (UK), San Francisco, NYC, Seattle and Portland (USA), Paris (France), Fujairah (UAE), Muntinlupa (Philippines), Toronto (Canada)
- A modeling study done on the Pacific garbage patch showed that limiting polystyrene boxes could significantly reduce the amount of plastic debris in the ocean

POLICY IMPLICATIONS

- The Government of Seychelles should consider a ban on polystyrene boxes for food and drinks. The environmental and health research provides adequate evidence to justify this and there are many precedents in other countries.
- The Government of Seychelles should consider waiving import and other taxes on biodegradable food and drink packaging which meets agreed health and environmental

standards, in order to create a more economically enabling environment to support a shift away from polystyrene.

- Local industries fabricating biodegradable containers for food and drinks that meet environmental and health standards should be encouraged.

FURTHER READING

Barnes, M. et al. (2011). Consumer Preference and Willingness to Pay for Non-Plastic Food Containers in Honolulu, *USA Journal of Environmental Protection*, 2011, 2, pp. 1264-1273

Chemical and Engineering News (June 2011). Available at

<http://cen.gext.acs.org/articles/89/i25/Formaldehyde-Styrene-Cancer-Warning.html>

Y. Zhang, et al. (2010), Reduce the Plastic Debris: A Model Research on the Great Pacific Ocean Garbage Patch, *Advanced Materials Research*, Vols 113-116, pp. 59-63.

List of countries that have banned Styrofoam. http://www.ehow.com/list_7686702_countries-banned-styrofoam.html

Polystyrene Fact Sheet. (2008) Available at:

<http://isites.harvard.edu/fs/docs/icb.topic967858.files/PolystyreneFactSheets.pdf>

Styrene and Styrofoam 101: <http://saferchemicals.org/2014/05/26/styrene-and-styrofoam-101-2/>