

Humpty Dumpty went to the loo....



Sustainability of hand cleaning systems

What is the best way to clean your hands in the restroom? Purchasing Services UoG were considering new hand cleaning systems, accounting the university sustainability policy. A challenge to the Department of Environmental Sciences: apparently ordinary products matter when it comes to sustainability. Master student Raveen Johnson took up the towel.

Life cycle: From land use to landfill

Sustainability impacts of commodities are determined by Life Cycle Analysis (LCA), in a cradle to grave approach. What resources do you need to produce hand cleaning systems, including land, energy, water, auxiliaries and transport? What are the materials recycling loops, where do they end up as waste? How to interpret this all into environmental impact? A simple towel covers complex models and calculations.

Clean hands

Raveen Johnson selected three ways to wash your hands: foam hand wash and water, alcohol sanitizer and alcohol wipes. To dry your hands after foam washing, he selected three options: paper towels, cotton towel rolls or an electric hand dryer. Beside analyzing the environmental impacts by LCA, Raveen also considered costs and consumer preferences.

Simply the best

And the winner is... the electrical hand dryer. That's not a surprise. The application of a modern hand dryer only needs a minor amount of power. No dregging with towels, laundry and waste is needed, nor the demanding production of paper or cotton.

Purchasing Services preferred bio-cotton towel rolls. Raveen could not confirm that choice. The yield of conventional cotton (per hectare) is much higher. The additional need of land, water and auxiliaries to grow bio-cotton does not outweigh the advantage of pesticide reduction. Several LCA studies confirm this trade-off: "bio" is not naturally better.

