BACKGROUND NOTE SESSION 2

On track to a circular economy: Rethinking quality infrastructure for waste management

Addressing the environmental impacts of infrastructure, highlighted in the G7 Ise-shima principles and confirmed in the G20 Hangzhou Summit, is critical for quality infrastructure investment (see Session 1 discussion). Session 2 will discuss how infrastructure can help attain environmental sustainability goals.

The growing consumption of resources and its associated generation of waste is a major challenge facing all countries. The Sustainable Development Goals recognise the importance of ensuring sustainable consumption and production patterns (Goal 12) and include targets for reducing waste generation through prevention, reduction, recycling and reuse.

The challenge is particularly acute in Asia, which has experienced the fastest growth in waste, driven by the region's rapid industrialisation and urbanisation. Asian countries generate 1 million tonnes of municipal solid waste per day, a figure that is projected to nearly double by 2050 (Hoornweg, D. and P. Bhada-Tata, 2012).

The concept of the circular economy is gaining ground as a solution to this challenge. Rather than a 'take, make, dispose' model, the circular economy implements the principles of the "3Rs" to Reduce, Reuse and Recycle. The circular economy aims to eradicate waste by using as few resources as possible in the first place, designing sustainability into products, and reusing and recycling products at the end of the process so that one industry's waste becomes another's raw materials.

Yet today most Asian towns and cities use open dumps and only 10% of solid waste ends up in properly managed landfill sites. Landfill is still the most commonly used system Asia even though organic products and paper constitutes the majority of its waste stream. These are materials that could be treated to produce compost, bio-gas and other types of energy or recycled, forging the transition to the circular economy.

Policy issues

Incentivising long-term investment

Long-term investment in waste management facilities needs to follow the circular economy rationale and be anchored in the 3Rs. Public policy should provide incentives in this direction, for example, phasing out public support for disposal strategies that are not in line with the 3Rs and putting in place market-based instruments or financial supports (e.g. landfill and incineration taxes, grant programmes for 3R projects, Feed-in Tariffs) and regulations to provide price signals for investors.

Finding the funds

Financing is very often an issue when investing in waste management facilities that have a long life and that typically take longer than 10 years to pay off. The challenge for developing and emerging

economies is how to shift from a situation where only a small amount of public money is allocated to waste management to the situation where sufficient money is sustainably secured to maintain waste management systems. Financing waste management operations through household waste fees alone is rarely viable, particularly in low and middle income countries given the limited levels of household income. Alternative financing arrangements or innovative approaches need to be explored, including through using tax revenues from national or regional-level administrations and by drawing on international funds for climate change.

Managing multi-level governance

Multi-level governance issues can arise when trying to reconcile long-term national resource efficiency policies aimed at fostering a circular economy with local or regional level investment choices for waste management infrastructure. The transition towards a circular economy involves looking at a several decades long timeframe, and it is important to consider the resilience of waste management systems when investment decisions – often taken at the local level – are being made.

Questions for discussion

- What are some of the good practices of infrastructure initiatives that are contributing to the circular economy?
- How can public policies support the transition to the circular economy?
- What are the barriers to shifting to a circular economy? What are the financing needs?
- How should the circular economy concept be interpreted and implemented in the context of Asia?
- How can regional co-operation accelerate the movement towards the circular economy?