**Medical waste management in Bhutan**

**Goals and Objectives**

The goal of this case study is to illustrate the protection of human health and the environment by sound management of medical waste in Bhutan.

The objectives of the case study are to:

- create legal and practical frameworks for medical waste management;
- unify the policies and practices across the public and private health sectors;
- support health-care workers and improve their knowledge of medical waste management;
- create a national waste reporting system; and
- engage in multisectoral cooperation for waste management led by the Ministry of Health.

**Project Overview**

**Context**

The Infection Control and Medical Waste Management Programme of Bhutan – previously known as the Health-care Waste Management Programme – was implemented in 1994 and funded by the Danish International Development Agency (DANIDA) after the first HIV case was detected in the country. The Programme has evolved since then, with policies and acts guiding the current practice of medical waste management in Bhutan.

**Approach**

The National Environment Commission is the lead agency for developing guidance and monitoring regulations dealing with waste management in Bhutan. It enacted the country’s first Waste Management and Prevention Act in 2009, followed by the Waste Management and Prevention Regulation in 2012, Solid Waste Management Act in 2014, and an Amendment to the Regulation in 2016. Various agencies implement and monitor these regulations for the effective management of different types of waste at all point sources and/or points of origin. The Ministry of Health oversees management of the country’s medical waste, the Drug Regulatory Agency manages expired drugs, and the Narcotics Control Agency manages expired drugs. The Royal Bhutan Police assists the implementing agencies in achieving compliance.
Results

Bhutan currently has 50 hospitals and 186 basic health units spread across the country. To varying degrees, waste management is practised across all the units. Guidelines have been distributed to all facilities and staff has been trained in segregation of waste at source. Phuentsholing Hospital is the model for medical waste management in Bhutan and its practices are being replicated in other facilities across the country. Early on in its practice of health-care waste management, Bhutan established a reporting system. Efforts are underway to transition from data collection at individual hospitals by the Ministry of Health to a waste reporting system in the Health Information System to allow all health facilities to directly input information regarding their waste generation into the system for efficient tracking. The focus of Bhutan’s waste management is the 3Rs – reduce, reuse, recycle – which helps to reduce the amount of waste going to landfills, a necessary step towards protecting the environment.

Lessons Learned

Waste segregation, storage and disposal remain a challenge in Bhutan. Without proper storage facilities, waste segregation is moot. To overcome this challenge, all new medical facilities will have a waste storage house. Different methods for disposal have been tried, including burial pits, autoclaving, encapsulation and incineration. Limited waste disposal facilities across the country necessitates waste transportation. The Asian Development Bank is providing support to construct waste storage houses and deep burial pits, and to procure necessary equipment for medical waste management in eight districts across the country.

Bhutan’s experience suggests that for effective waste management, a multisectoral policy approach with a lead monitoring agency and defined roles and responsibilities of individual sectors works best. One guideline should direct waste management of both private and public health-care facilities to be reported to the Ministry of Health for tracking.

The case study was authored by the Ministry of Health. The named authors alone are responsible for the views expressed in this publication.