Circular Economy Webinar
Session 12 Summary: NUTEC Plastic - NUclear TEchnology for Controlling Plastic Pollution

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NUTEC is a large initiative under the International Atomic Energy Agency (IAEA) aimed at using nuclear technology to control plastic pollution based in Vienna, Austria. NUTEC, short for "Nuclear Technology for Controlling Plastic Pollution," was launched in 2020 alongside two other initiatives which aim to increase the share of recycled petroleum-based plastics and understand the fate of plastics that are not recycled, particularly in marine environments.

Key Takeaways

1. **NUTEC is divided into two components: upstream and downstream.** The upstream component focuses on plastic recycling using radiation technology. The downstream component involves marine monitoring of microplastics using isotopic tracing techniques.

2. **Their activities in Asia and the Pacific region are crucial due to the significant contribution of global industries and plastic leakage in this area.** The focus on Asia and the Pacific is because a large share of plastics enters the ocean from this region, and it is home to important industrial sectors and many island states. The solutions developed in this region can impact global efforts to address marine plastic pollution.

3. **Ongoing efforts include upgrading environmental monitoring laboratory capabilities and providing standardized sampling materials for basic analysis in member states.** The project aims to improve the capacity of laboratories to collect and analyze data related to marine plastic pollution. Training activities, such as regional courses, help build human resource capacity in member states for efficient monitoring programs.

4. **Collaboration with partner institutions and stakeholders at national, regional, and global levels, including the United Nations, maximizes resources and avoids duplication.** NUTEC's strategic approach in Asia and the Pacific consists of four main stages, including the development of harmonized protocols and capacity building.

5. **Ten countries (Bangladesh, People's Republic of China, Indonesia, Malaysia, Myanmar, Pakistan, Philippines, Sri Lanka, Thailand, and Viet Nam) in Asia and the Pacific,** are participating in the initiative, with four pilot countries (the Philippines, Indonesia, Malaysia, and Thailand) leading the way, deploying and combining different approaches to polymer recycling**.**

6. **Malaysia is implementing two sub-projects within the plastic recycling initiative, namely the recycling of PFAS (per- and polyfluoroalkyl substances) and plastic radiation paralyzing. Malaysia has shown strong commitment and progress in both sub-projects.**

7. **Indonesia aims to reach technology readiness level 3 by 3rd quarter of 2023 for the development of wood plastic composites.** The project focuses on developing a compatibility user for wood plastic composites made of recycled polyethylene for construction purposes. The project in Indonesia also includes the production of recycled HDPE (high-density polyethylene) pellets from discarded fishing nets.

Watch the Recording here.