according to the specific need and social conventions for information dissemination. As there are no formal procedures to evaluate environmental and health issues, this group suggested to set up an information network to develop and sustain cooperation in the region. The suggested name was "Middle-East Environmental Risk Assessment and Management: Developing a Sustainable Cooperative Network" (MEERA-NET). This group discussed the importance to have an objective database and justify the establishment of MEERA-NET with financial support from an international organization. Furthermore this group concluded the necessity to include a scale of measuring its usefulness. Selected topics of interest as well as the tools and methods to be used were discussed.

EARLY RESULTS UTILIZING HIGH-ENERGY FISSION PRODUCT GAMMA RAYS TO DETECT FISSIONABLE MATERIAL IN CARGO

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A concept for detecting the presence of special nuclear material (^{235}U or ^{239}Pu) concealed in intermodal cargo containers is described. It is based on interrogation with a pulsed beam of 6-8 MeV neutrons and fission events are identified between beam pulses by their β-delayed neutron emission or β-delayed high-energy γ-radiation. The high-energy γ-ray signature is being employed for the first time. Fission product γ-rays above 3 MeV are distinct from natural radioactivity and from nearly all of the induced activity in a normal cargo. High-energy γ-radiation is nearly 10X more abundant than the delayed neutrons and penetrates even thick cargos readily. The concept employs two large (8x20 ft) arrays of liquid scintillation detectors that have high efficiency for the detection of both delayed neutrons and delayed γ-radiation. Detector backgrounds and potential interferences with the fission signature radiation have been identified and quantified. This information, together with predicted signature strength, has been applied to the estimation of detection probability for the nuclear material and estimation of false alarm rates.

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