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Shared facilities for storage and disposal of radioactive wastes: the Asian context

Charles McCombie[1], Neil Chapman[1] and Ian McKinley[2]
[1]*Association for Regional and Underground Storage (ARIUS), Switzerland*
[2]*McKinley Consulting, Switzerland*

Disposal of toxic wastes produced by industrialised societies is an increasing challenging global problem. The goal must be to find solutions that are safe, protect the environment, are affordable and are acceptable to the public. For radioactive wastes, the acceptance challenges are even greater than for other toxic substances, nd because of the highly polarised political and public views on nuclear power technology, which produces most radioactive wastes. There are, however, some largely unacknowledged advantages when dealing with radioactive wastes. They are almost always produced under confined and controlled conditions, the volumes are very small compared with many other wastes and radioactive decay with time implies that isolation of these wastes for a sufficiently long period may be, in practice, a permanent solution to the problem. For long lived radioactive wastes, this isolation is usually planned in secure engineered interim storage facilities and ultimately in deep geological repositories. Problems arise in that storage facilities and deep repositories are expensive and have proven difficult to site in many countries. These problems are greatest in countries with dense populations, complex geology and/or limited financial resources. Some or all of these conditions apply to various countries in Asia – especially when one considers that even non-nuclear-power countries require access to safe storage and disposal for radioactive wastes from medicine, industry and research. One obvious answer to these challenges could be the development of **shared facilities for storage and/or disposal**. There are various regions of the world where cooperation between nations requiring access to storage or disposal facilities would be an obvious benefit. These include Europe, South America, Africa and Asia. In the small nuclear power nations, particularly in Central and Eastern Europe, the needs are predominantly for spent fuel disposal facilities. This is because the countries involved have realised that implementing expensive national disposal facilities lies in the far future and have mostly already prepared for long-term storage of their spent fuel. Storage is running short mostly in larger nuclear programmes, not because of funding problems but because their needs are greater and they are experiencing difficulties in siting new stores. Clear examples are Japan and Taiwan