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Effect of State-specific Factors on Acquisition Path Ranking

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The "directed graph analysis"has been shown to be a promising methodology to implement acquisition path analysis by the IAEA to support the State evaluation process. Based on this methodology a material flow network model has been developed under the Hungarian Support Programme to the IAEA, in which materials in different chemical and physical form can flow through pipes representing declared processes, material transports, diversions or undeclared processes [1,2,3]. The ranking of the resulting acquisition paths of the analysis is a key step to facilitate the determination of technical objectives and the planning of safeguards implementation on State-level. These are determined by the attributes of the processes included into the graph and different state-specific factors. In this paper different set of attributes, State-specific factors and their functional combination will be tested for hypothetical case studies.

Keywords: acquisition path analysis; material flow model; State level approach; State-specific factors

[1] József Huszti, András Németh, Árpád Vincze, Applicability of the Directed Graph Methodology ESARDA BULLETIN, Page 72-79, Number 47, June 2012 (ISSN 0392-3029)

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[3] Árpád Vincze, Anett Lukács, András Németh, Akos Pető: Acquisition Path Analysis Based on Material Flow Directed Graph Methodology, ESARDA Symposium 2013, 27-30 May, Brugge, Belgium

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