

Title of Research:

12_PT01-02

Development of a user-friendly risk assessment tool for voluntary environmental risk assessment and management

Principal Investigator:

Bin-Le Lin (Research Institute of Science for Safety and Sustainability, National Institute of Advanced Industrial Science and Technology). 16-1 Onogawa Tsukuba-shi, Ibaraki, 305-8569 Japan. (tel) +81-29861 8844, (e-mail) binle-lin@aist.go.jp

Collaborators:

Masashi Kamo (ditto). (tel) +81-29861 8029, (e-mail) masashi-kamo@aist.go.jp; **Wataru Naito** (ditto). (tel) +81-29861 8299, (e-mail) w-naito@aist.go.jp

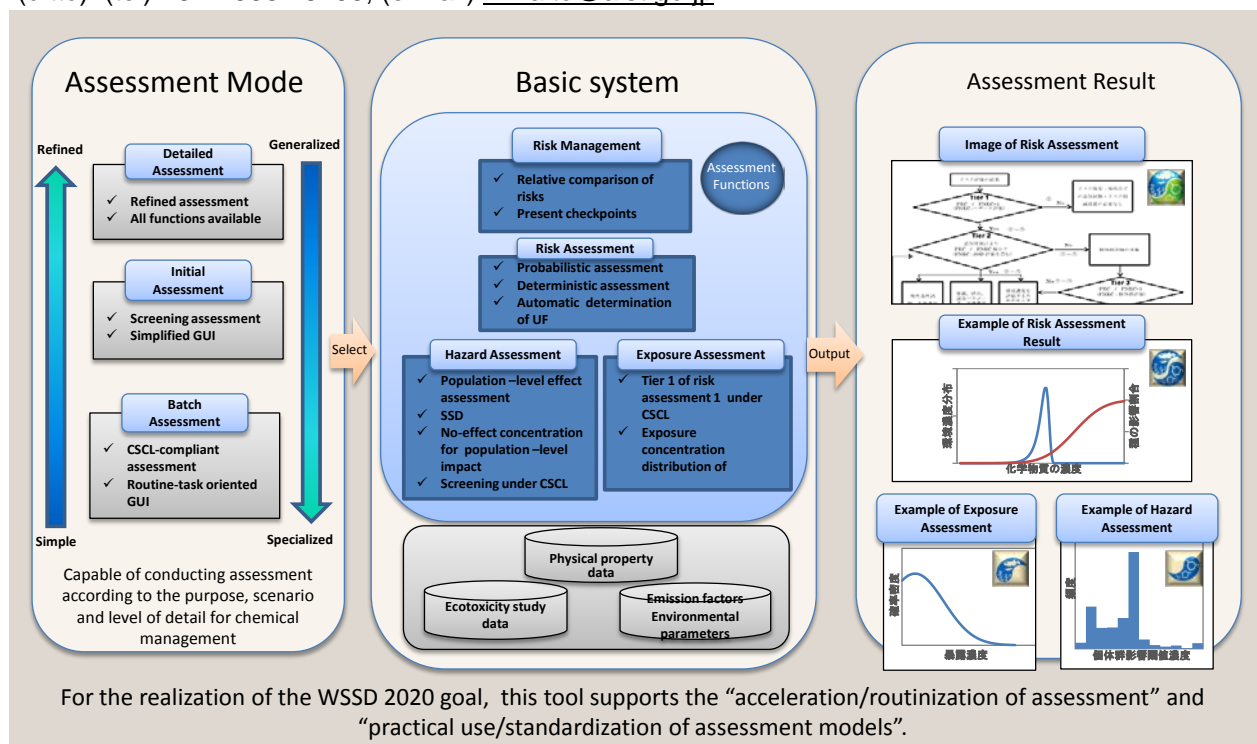


Figure 1. Features and Functions of AIST-MeRAM

Summary of Research:

In the midst of the growing social needs for environmental risk assessment to address new national/international regulations, this study has been promoting the development of the Multi-purpose Ecological Risk Assessment and Management Tool (AIST-MeRAM) that allows business operators to select an assessment model on their own, and to perform a variety of assessments easily and efficiently in order to meet their purpose.(Fig.1)

During the first term of New LRI, we made some improvements to the algorithm and interface, based on the hearings from the industry and government, and undertook the development of a standalone application. As a result, we released the standalone version of AIST-MeRAM (Japanese version: 0.9.12) that contains large amounts of toxicity data and is capable of conducting many different types of ecological risk assessments as well as *Kashinhou*-compliant screening assessment.

Timeline: November 1, 2012 –

Publications:

- 1) Newspaper coverage: “New LRI’: JCIA started taking actions. 130,000 ecotoxicity data”, *The Chemical Daily*, 26 February 2013, p.10 (section of environment).
- 2) Newspaper coverage: “Development of a user-friendly tool for ecological risk assessment”, *Business Line*, 26 April 2013, p.27.
- 3) Newspaper coverage: “AIST’s green innovation for future sustainable society: Ecological risk assessment and management of chemicals – AIST-MeRAM”, *Business Line*, 25 July 2013, p.30.
- 4) AIST-RISS Newsletter No.18. “AIST-MeRAM: Industry-academia-government needs adaptive tool for ecological risk assessment and management”.
- 5) Lin, Naito and Kamo (October 2013) AIST OpenLab 2013: “AIST-MeRAM: Tool for dissemination, optimization and standardization of ecological risk assessment of chemicals.
- 6) Lin, Hirata, Naito, Kamo (June 2013). “AIST-MeRAM: an easy-to-use tool for aquatic environmental risk assessment and management of chemicals”, Water and Environment Technology Conference, June 15-16 2013, Kaganei Campus TUAT.
- 7) Lin, Kamo and Naito (August 2013). Lecture and poster presentation at the 2nd Annual Meeting of New LRI. “AIST-MeRAM: Development of an industry needs adaptive tool for risk assessment and management”.