

Title of Research:

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Development of the platform to manage the monitoring data of chemicals in environment, ChemTHEATRE

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Summary of Research:

We have launched a web platform to register and visualize the monitoring data of environmental contaminants, named 'ChemTHEATRE' (Chemicals in the THEATRE: Tractable and Heuristic E-Archive for Traceability and Responsible-care Engagement) at <https://chem-theatre.com/>. So far, the data of 83 projects have been registered to the database. The chemical concentration data in environmental and biological specimens can be found by sample type, chemical name, sampling date and location, or other metadata. Users can export the query results for further analyses.

The registered data to ChemTHEATRE are also available at the websites of National Bioscience Database Center, as follows,

Integbio Database Catalog: <https://integbio.jp/dbcatalog/>

Life Science Database Cross Search: <https://biosciencedbc.jp/dbsearch/>

Life Science Database Archive: <https://dbarchive.biosciencedbc.jp/en/chemtheatre/desc.html>

Timeline:

March 1, 2018 – February 28, 2019

Topics:

Our research was presented at 2018 JCIA LRI Annual Meeting (August 31, 2018).

"Development of the platform to manage the monitoring data of chemicals in environment, ChemTHEATRE."

Publications:

Seiichi Uno, Machi Kawano, Tomohiko Isobe, Itsuki C Handoh, Nobuaki Ohno, Tatsuya Kunisue, Kei Nakayama. "Monitoring of PAHs in shellfish after oil spill from the Sanchi tanker; comparison of polluted conditions with other spill accident using ChemTHEATRE." SETAC North America 39th Annual Meeting, Sacramento, CA, USA, November 4–8, 2018.

Itsuki C Handoh, Toru Kawai, Tomohiko Isobe, Nobuaki Ohno, Seiichi Uno, Tatsuya Kunisue, Kei Nakayama. "Bayesian uncertainties analysis of modelled chemical exposure of global fish community: How can ChemTHEATRE improve the performance of FATE?" SETAC North America 39th Annual Meeting, Sacramento, CA, USA, November 4–8, 2018.

Kei Nakayama, Binle Lin, Tomohiko Isobe, Seiichi Uno, Itsuki C Handoh, Nobuaki Ohno, Tatsuya Kunisue. "ChemTHEATRE, a platform to browse the published or public data of environmental monitoring and its use for risk assessment." SETAC North America 39th Annual Meeting, Sacramento, CA, USA, November 4–8, 2018.



Assessment on the effects on ecosystems and the environment

Tomohiko Isobe, Kei Nakayama, Seiichi Uno, Itsuki C Handoh, Nobuaki Ohno, Tatsuya Kunisue. "ChemTHEATRE: Opendata platform for environmental monitoring of POPs and other contaminants." 11th SETAC Asia-Pacific Meeting, Daegu, South Korea, September 16–19, 2018.

Tatsuya Kunisue, Kana Egashira, Tomohiko Isobe, Kei Nakayama, Takashi Matsuishi, Yuko Tajima, Tadasu K Yamada, Shinsuke Tanabe. "Temporal trend analyses of POPs in three toothed whale species stranded along the Japanese coastal waters: importance of samples and data stored in es-BANK and ChemTHEATRE." 38th International Symposium on Halogenated Persistent Organic Pollutants & 10th International PCB Workshop: DIOXIN 2018, Kraków, Poland, August 26–31, 2018.

Kei Nakayama, Tomohiko Isobe, Seiichi Uno, Itsuki C Handoh, Nobuaki Ohno, Tatsuya Kunisue. "Introduction to ChemTHEATRE: a platform to utilize the published or public data of environmental monitoring." Water and Environment Technology Conference 2018 (WET2018), Matsuyama, Japan, July 14–15, 2018.