



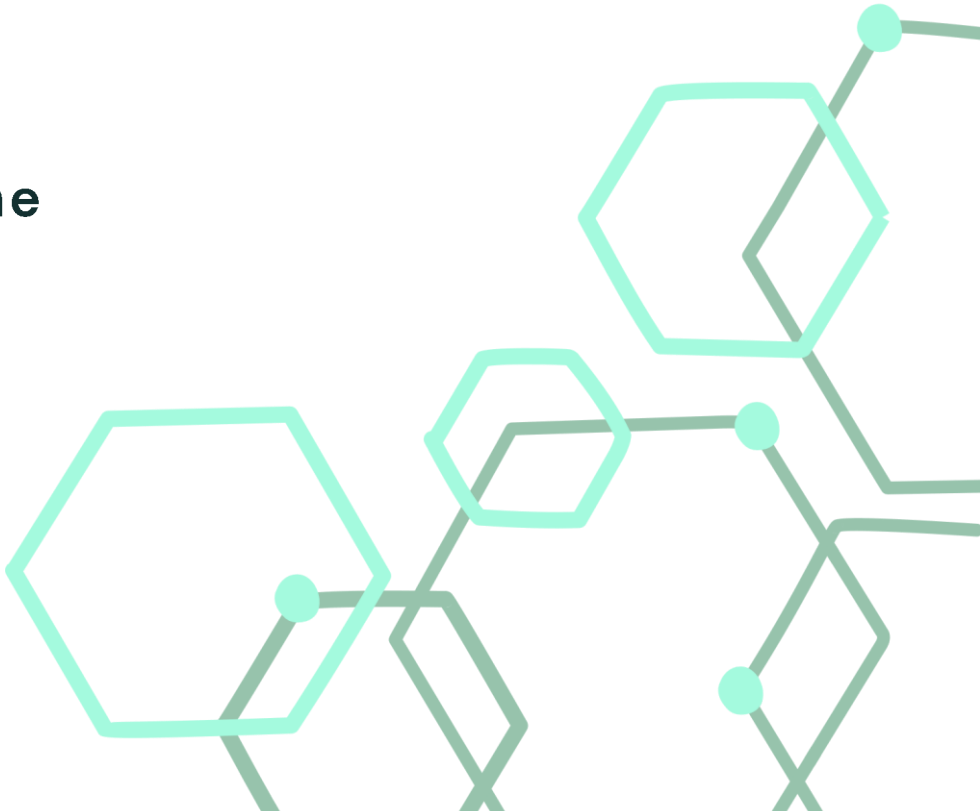
8 July 2026



ECETOC Chronic Fish Toxicity Case Studies

Presentation at EPAA NAM User Forum 2026

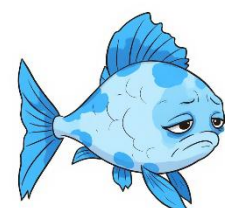
Heike Laue (Givaudan and Chair of ECETOC Chronic Fish Case Studies Advisory Panel) - Online



Chronic Fish Toxicity – Why and Why Now?

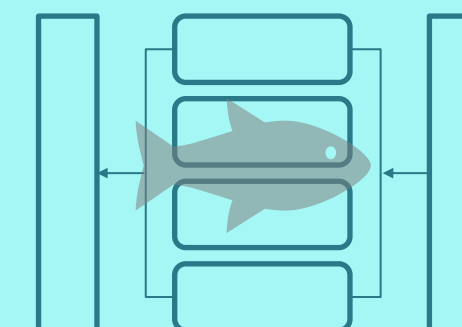
CONTEXT

- Tiered testing frameworks and integrated testing strategies (ITS) exist for assessing fish toxicity.
- In vitro methods for chronic fish toxicity under development.
- Many methods/NAMs available, but integration for chronic toxicity is still limited.
- An Integrated Approach to Testing and Assessment (IATA) lacking.

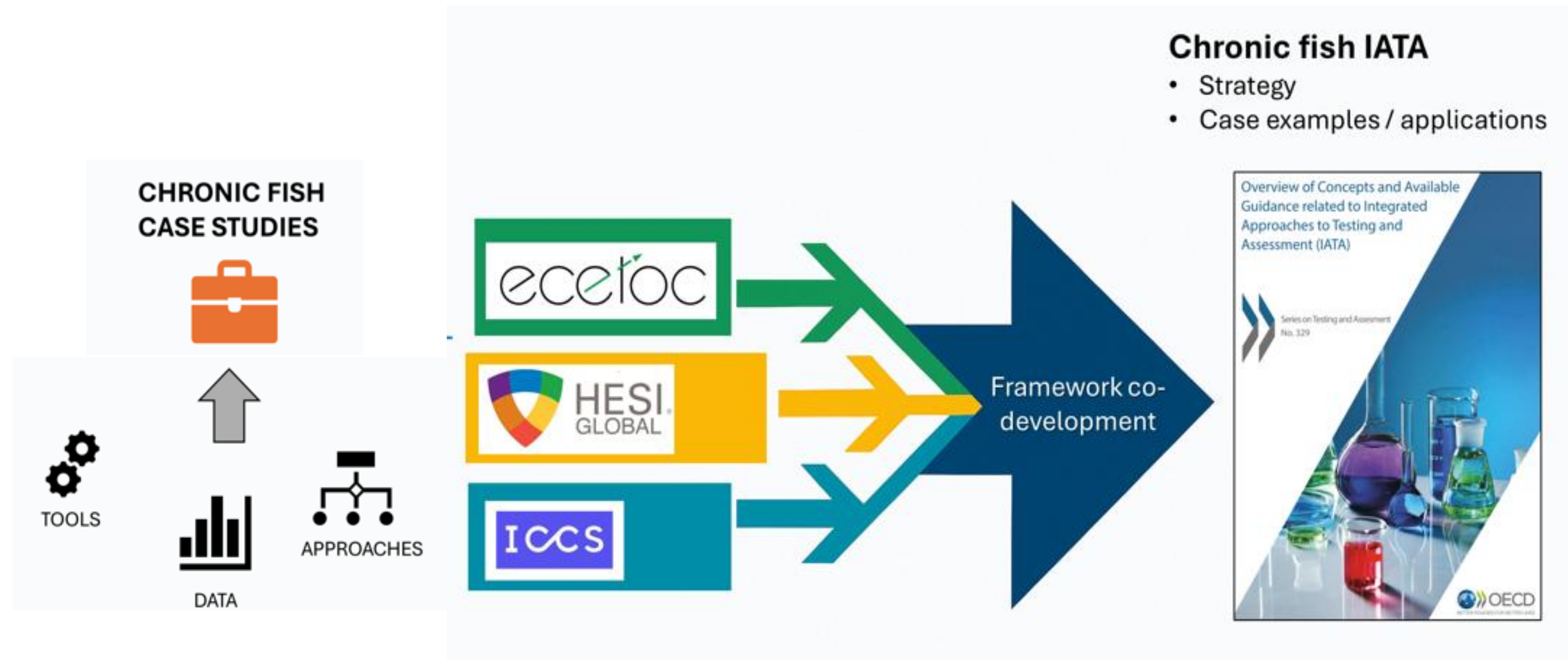


DESIRED OUTCOME

- Develop case studies to inform integrative strategies for predicting chronic effects.
- Illustrate methods for intelligent, fit-for-purpose, testing strategies
- Provide guidance on leveraging NAMs in chemical hazard and risk assessment.
- Support future IATA development for assessment of chronic fish toxicity.



A Combined Effort



- EPAA Environmental Safety Assessment Team, including [EPAA Partners Forum 2023](#)
- ‘[CRACK IT Challenge SAFE](#)’ (NC3Rs)
- Commission [Roadmap](#)
- RIFM data generation

ECETOC Case Studies

OBJECTIVES:

- Develop case studies to inform a future IATA for chronic fish toxicity.
- Case studies to integrate multiple lines of evidence to conclude on chronic fish toxicity.

ECETOC Advisory Panel

[27 experts - industry, academia, regulatory, policy & NGOs]

- Select case studies
- Review draft MS



Consultant

[ECT Oekotoxikologie]

- Develop case studies
- Peer-reviewed manuscript

Case Studies

Four case studies to be selected

- Different mode of action (ED MoA excluded).
- Different species sensitivity, different levels of toxicity
- *In vivo* data as cross-comparison of WoE outcome

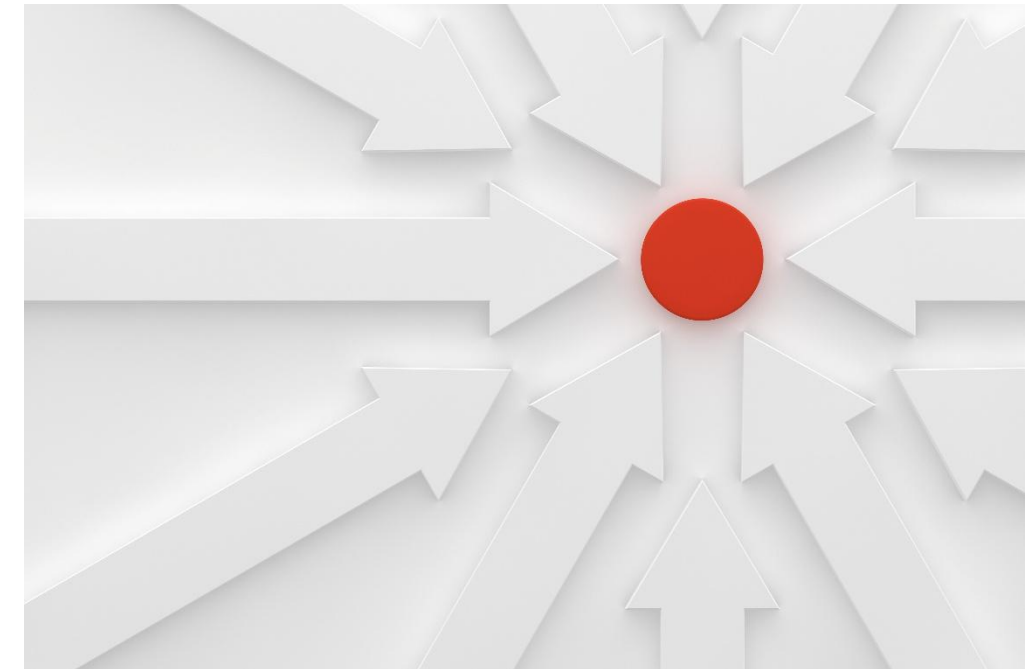
Specific MoA
PPP: • Fungicide; CYP P450 inhibition • Insecticide (pyrethroid); Neurotox • Insecticide, incl veterinary applications; Neurotox • Herbicide

Specific MoA
Pharma: • Immunosuppressant • Antihistamine

Narcotic MoA
REACH Chemicals: • Fuel ether • Fragrance ingredient • Chelating agent

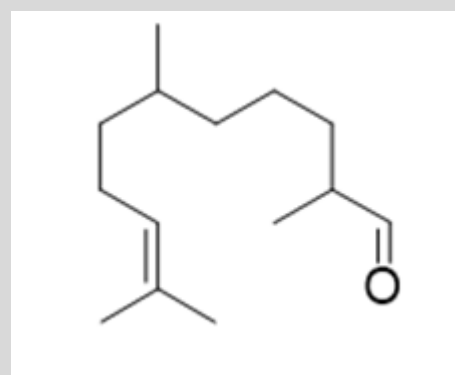
Case studies – Lines of evidence

- *In silico*/QSAR data
- Read-across
- Available acute fish toxicity data (*in vivo*, *in vitro*)
- Available invertebrate toxicity data (*in vivo*)
- Available fish chronic toxicity data (*in vivo*, *in vitro*)
- *in vivo* data as cross-comparison of WoE outcome
- Available mammalian data (*in vivo*, *in vitro*)
- etc.



Case Study 1 – REACH Chemical

- 2,6,10-trimethylundec-9-enal
- CAS No: 141-13-9
- EC No: 205-460-8
- REACH ANNEX X
- Use: Fragrance
- Log Kow 5.4 - ca. 6.2
- Water solubility (OECD 105) 0.67 mg/



OECD TG



301F



203 /
210



202 /
211



201



OECD TG



249/
236



QSARs

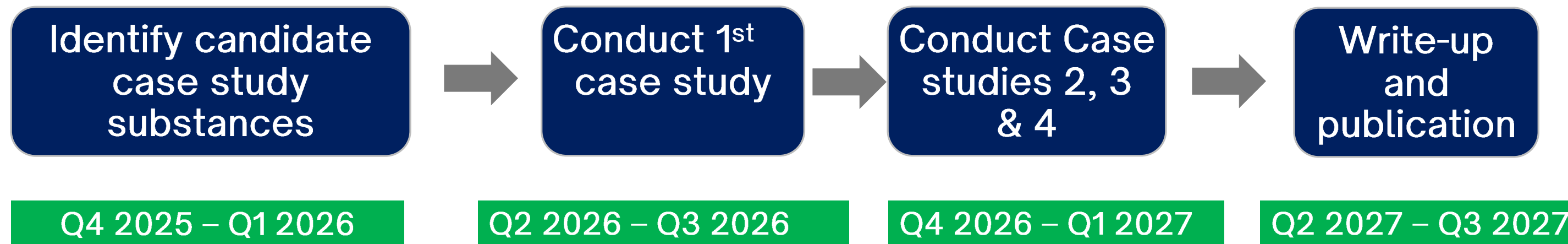


RA



Expected MoA: narcotic
Driver of chronic: similar (Daphnia/fish)

Case studies – Timeline and deliverables



CONCLUSIONS

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WE ARE THE CENTRE FOR CHEMICAL SAFETY ASSESSMENT

Lucy Wilmot, Heike Laue



HESI
GLOBAL

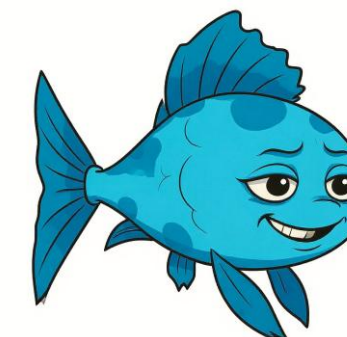
Michelle Embry, Julie Krzykwa

ICCS

Amelie Ott/Ryan Heisler,
Adriana Wigh

Case studies:

- REACH chemicals
incl. cosmetic ingredients
- Plant Protection Products
- Pharmaceuticals



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Chronic fish IATA



For different regulatory
frameworks



Thank you

FOR MORE INFORMATION PLEASE VISIT WWW.ECETOC.ORG

