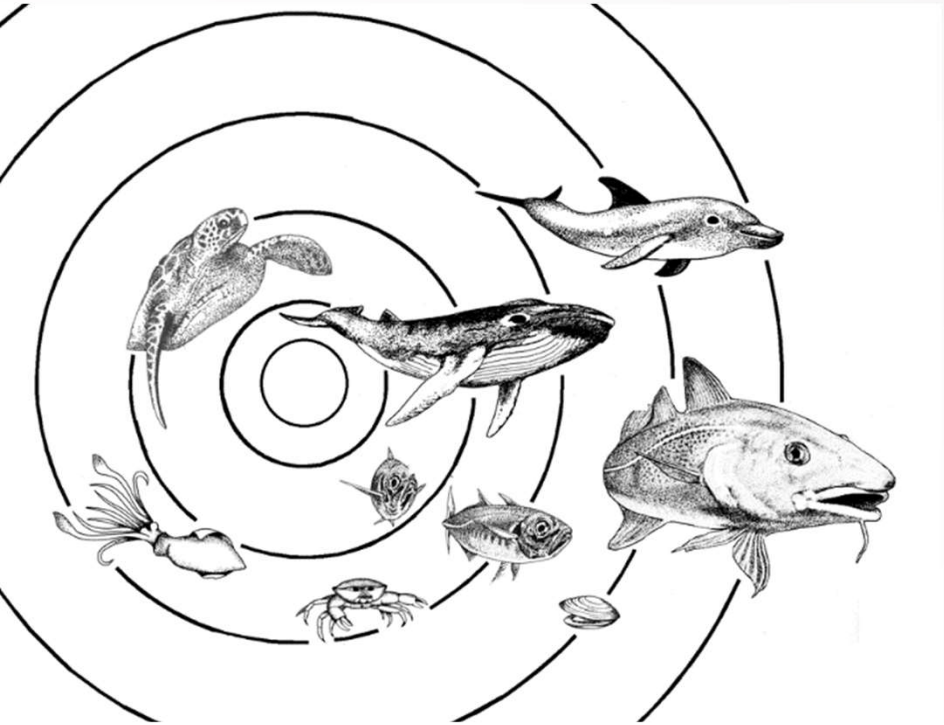
GloNoise

Conceptual model of the URN risk assessment toolkit

Frank Thomsen

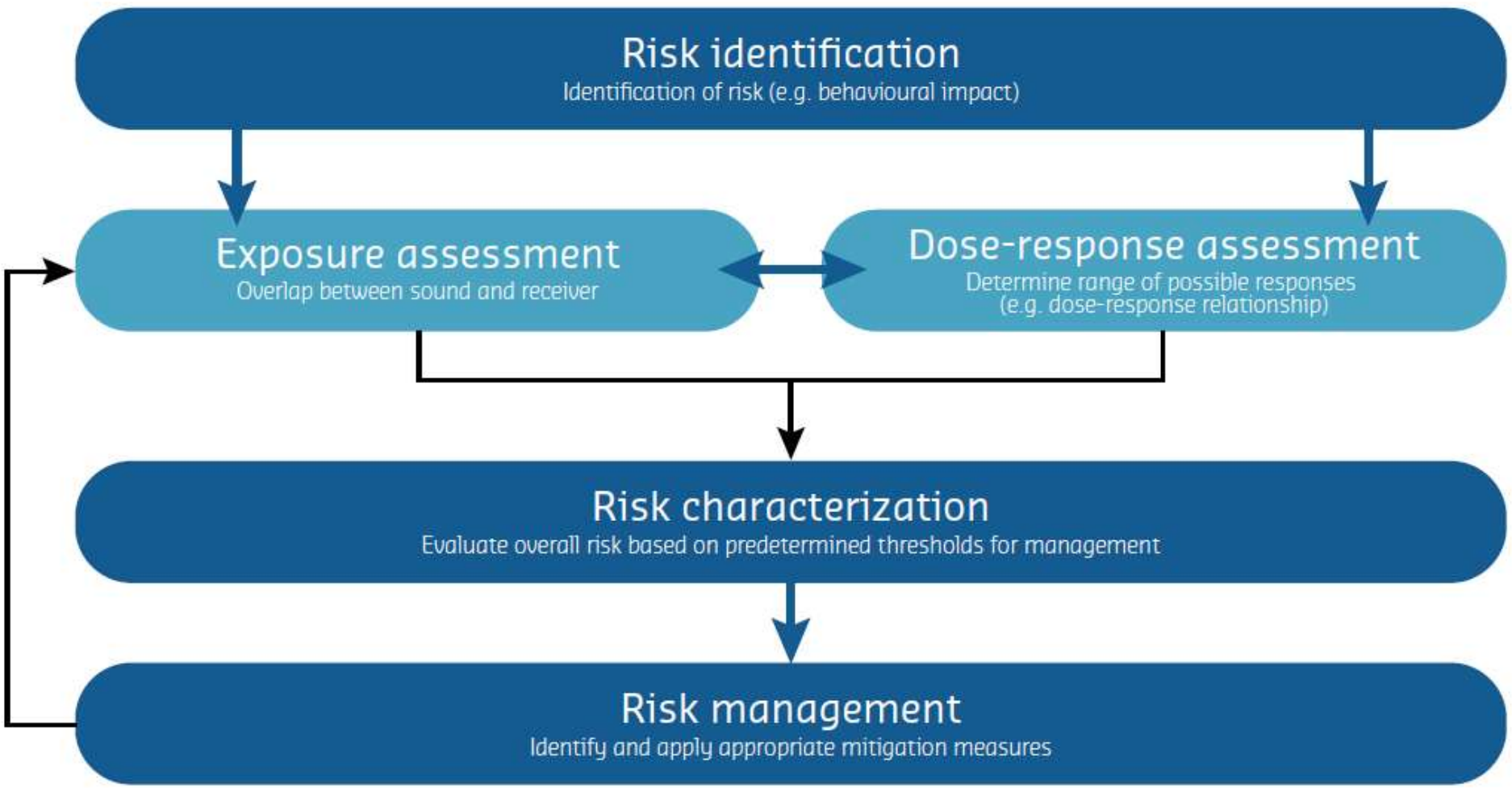
CONTENTS



Component 1: Global toolkit development and policy analysis

Outcome 1: Global capacities on assessing and mitigating the impact of underwater noise from shipping enhanced through roll-out of advanced assessment methodologies and analysis of policy directions

Output 1.1: Shipping underwater noise assessment toolkit for baseline analysis and environmental risk and impact assessment.


Risk identification
Identification of risk (e.g. behavioural impact)
Exposure assessment
Overlap between sound and receiver
Dose-response assessment
Determine range of possible responses
(e.g. dose-response relationship)
Risk characterization
Evaluate overall risk based on predetermined thresholds for management
Risk management
Identify and apply appropriate mitigation measures

UNDP Social and Environmental Standards

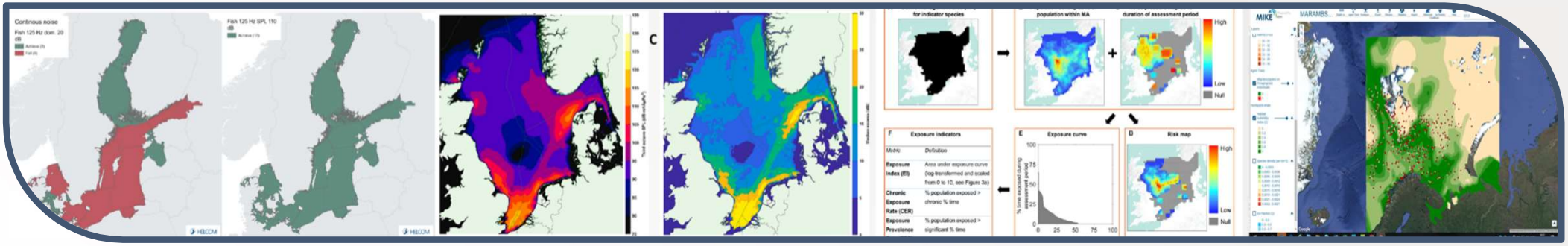
Programming principles

- Leave No One Behind
- Human Rights
- Gender Equality and Women's Empowerment
- Sustainability and Resilience
- Accountability

Risk Assessment For Everyone

BASIC MODULE

ADVANCED MODULE



Analysis of Frameworks / methodologies

- 24 frameworks / methodologies analyzed
- Detailed project description along generic URN RA framework
- Analysis of Strengths and Weaknesses
- Identification of best practice

Identification of best practices

URN-RA Step	Advanced	Basic
Exposure Assessment	Usage of AIS data in the production of shipping noise maps Sound propagation modelling (e.g. Parabolic equation) Abundance and distribution of marine animals in the assessment area	Usage of AIS data in the production of overview shipping noise maps Collaboration with local partners (NGO's, communities) Citizen Science
Dose-Response Assessment	Combination of spatial and acoustic criteria such as LOBE, Excess Level and % of assessment area affected Specific noise criteria for TTS, PTS and behavioral response	Combination of simplified spatial and acoustic criteria based on LOBE, Excess Level and % of assessment area affected
Risk management	Based on IMO 2023 depending on local situation	

Risk Assessment For Everyone

Solution is to produce both guidance and tools

BASIC MODULE

ADVANCED MODULE

Toolkit -principles

Easy to use online platform

Following the URN generic RA framework

Applying the best-practice identified in analysis

Toolkit – Conceptual Module

Module (e.g. BASIC)

Component of RA
(e.g. Exposure assessment)

Identified Best Practice
(e.g. Usage of AIS data in the production of overview shipping noise maps)

- Overview
- Detailed step-by-step guide
- Online resources databases
- Case studies

Considerations

- Feedback and valuable input much appreciated!
- The general concept to have guidelines, resources and case study in one toolkit could add value to the existing RA frameworks and the whole shipping noise community
- The case study section could add a lot of value if it's used as an information tool on what is going on in the LPC’s
- Software implementation probably easy. But comprehensive effort needed to get information into toolkit.

Time plan

31 May – Draft table of content – concept, management, work plan roles ✓

15 June – Final table of content – Start of core work ✓

31 July - Review of existing methods ✓

30 September – Conceptual model ✓

31 October – Draft final report

30 November – Final report

Thanks!

Frank Thomsen
frth@dhigroup.com