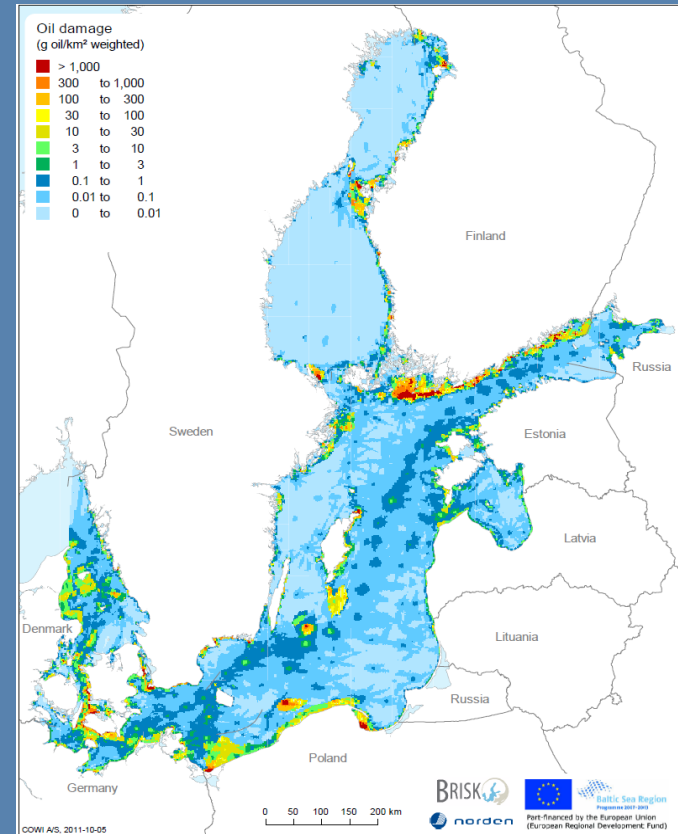# BE-AWARE II Project Seminar
Trondheim (Norway): 26-28 January 2015

- ## Task H: Oil Risk Impact Assessment
  - Proposed assessment and expected outcomes

- ## Sub-region wise integration

Introduction to the process

- Impact measures / result types
  BRISK:

1) Spilled amount of oil $(t/m^2/year)$

2) Spilled amount on shore $(t/m/year)$

3) Environmental damage (surface) $(t\ weighted/m^2/year)$
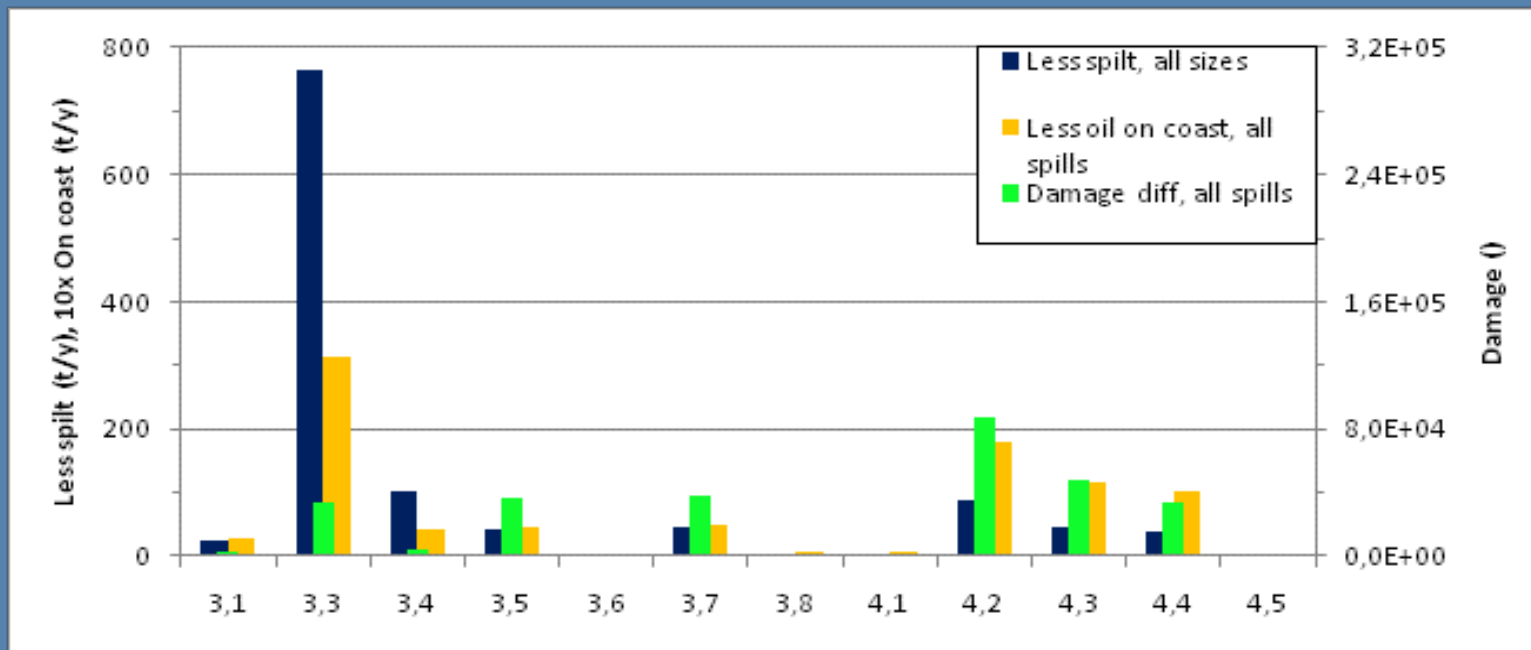4) Environmental damage (HNS) $(t\ weighted/m^2/year)$

will be aggregated for all oil types, all seasons, spill sizes, accident types, ship types, surface/ disp/soceco.....

and per Sub-Region

Introduction to the process

- ## Impact measures / result types BRISK:

3.1 Pilotage	3.6 Double hull cargo tank <5000BRT	4.1 Relocation
3.3 VTS	3.7 Double hull bunker tank (add.)	4.2 Add. booms and skimmers, as requested.
3.4 TSS	3.8 Escort towing	4.3 50% more booms and skimmers
3.5 ECDIS		4.4 Night visibility
		4.5 Recovery from ice

Introduction to the process

- ## Impact measures / result types BEAWARE

1) Spilled amount of oil   (t/m²/year)

2) Spilled amount on shore   (t/m/year)

3) Environmental damage (surface, chem disp)   (t weighted/m²/year)

4) Soc-econ damage (surface, chem disp)   (t weighted/m²/year)

5) Total = (Environmental + soc-econ) damage   (t weighted/m²/year)

Giving equal weight to impact and sensitivity

- Distributions:
  - Impact
    How many cells with certain impact range (color codes)
  - Sensitivity
    How many cells with certain sensitivity range (color codes)

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Giving equal weight to impact and sensitivity

- Distribution of Impact varies typically over 7 decades (kg oil/m²/year)

- Distribution of Sensitivity varies typically over 1½ decade (integrated index)

Giving equal weight to impact and sensitivity

- Statistical requirement for transformation of distributions: Normalisation
  - same volume under frequency curve
  - Same variance
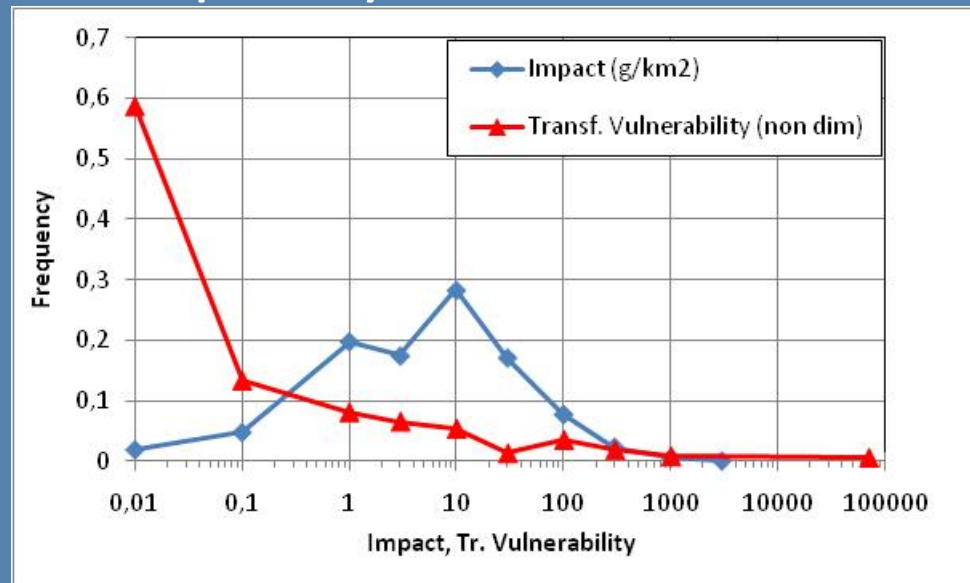
Giving equal weight to impact and sensitivity

- After normalisation process the normalized values for impact and sensitivity are multiplied

- For calculation purpose the product is transformed back to the "environmental damage" index

- For illustration purpose the "environmental damage" index is classified into five color codes