SARINOR WP7:
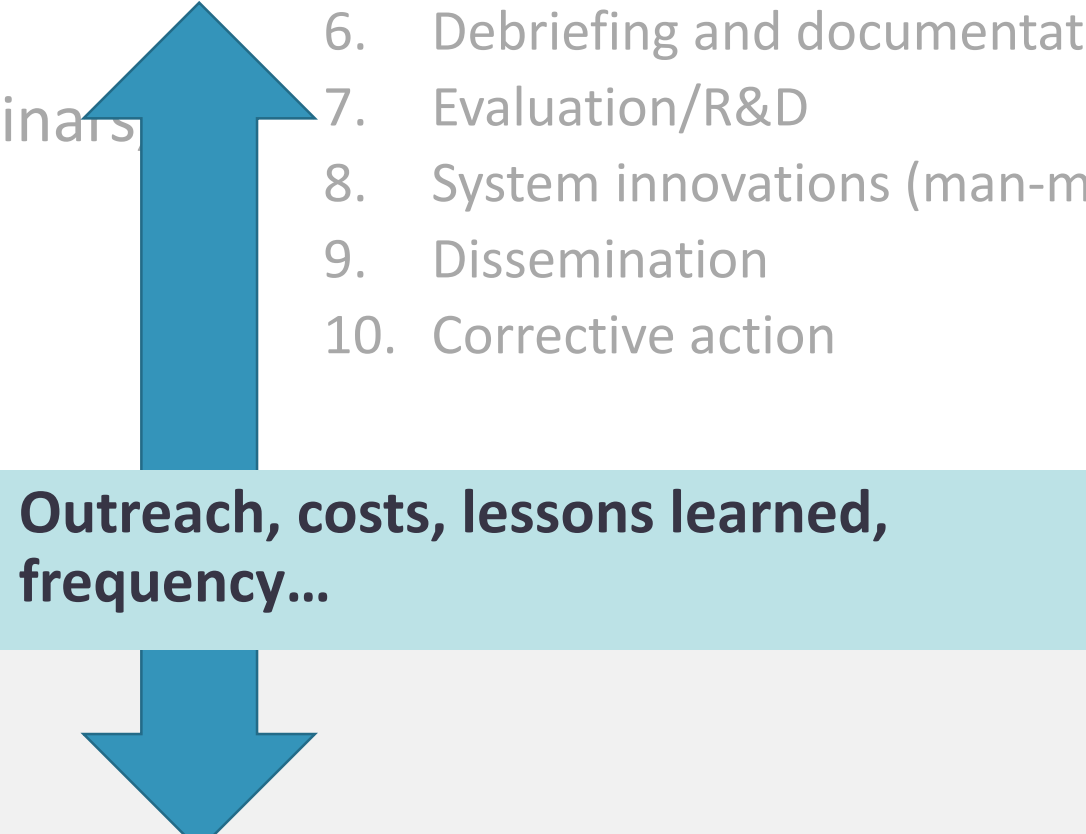# Joint exercises - a useful tool for training and capacity building in maritime operations in the North

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(by Johannes Schmied, SARINOR seminar Bodø, 08.06.2016)

Exercises within the competence value chain

1. Basic education
2. Specialized courses, seminars, workshops
3. Training
   a) Games
   b) Simulations
   c) Drills
4. **Exercises**
   a) **TTX**
   b) **Functional**
   c) **Full-scale**
5. Incidents

6. Debriefing and documentation
7. Evaluation/R&D
8. System innovations (man-machine)
9. Dissemination
10. Corrective action

Outreach, costs, lessons learned, frequency…

Exercises

Pros

- Unite different stakeholders

- Create trust

- Practical approach

- Learn from other institutions

- Understand and feel cooperation-paths

- Show up weaknesses

- Create alertness

- High joint learning effect

- Testing of new approaches and equipment

- Create awareness

- Testing of new potential risks (eg. Northern Sea route, Cruise industry…)

Cons

- Expensive tool

- Time consuming

- Difficult to unite all relevant stakeholders

- Low reach outside of exercise-group

TTX – table top exercise

- Participants may be in different rooms

- Or round table and discussion character

- Cross-institutional networking

- More on a strategic level

- Potential test-round for a Full Scale exercise

- Lower resource-input

- Higher flexibility of scenario (eg. Samaritan vessels, other resources, etc.)

Full scale exercise

- Higher learning and reproductive character

- Learning effect of organizing institution

- Provides essential trainings

- Shows up weaknesses

- Situational awareness and adaptability of leaders and groups

- Testing of resources and equipment

- Testing in real conditions

- May train whole SAR value-chain at once

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Functional exercise

- Not full SAR-value chain necessary

- Training character

- Helps focusing on chosen aspects
  - Institution
  - Timeline
  - Etc.

- May require less planning

- Also in combination with TTX possible

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Before the exercise: Profound briefing

- Exercise logistics
  - What are the main goals we want to reach?
  - Who is target group?
  - What competences will be tested/trained?
  - Detailed explanation of topics to participants – Yes/No?
  - Main steps of exercise (organizers, «passengers», SAR-personnel)
  - Plan safety measures
- Risk assessment
  - Are there uncertainties
  - Are there points of unease
  - What may happen?

Exercises – Cross-institutional learning

- Use and development of common standards
- Rehearsal of common procedures and responsibilities
  - Contingency plans
  - SAR procedures and orders
  - Captains-OSC-ACO-JRCC-Police-Military-Coastguard-Fire brigade-host nation
- Comparing and uniting systems used
- Pinpointing gaps and bottlenecks
- Trust-building
- Exercises and competence development with military and coastguard headquarters
- Train «outside of the usual»-incidents
- Handling of passengers and passenger data
- Land-/Water-/Air coordination

Exercises –Across-border learning

- Cultural differences: When do I send distress signal?
- Understand communication pathways
- Train and elaborate standardized communication means
- Trust-building
- Learn about resources and preparedness
- Testing the reach of sending out distress signals+first communication
  - →Standardization and train
  - →Decrease potential for network delay

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Exercises – Training key personnel

- Realistic reaction times
- Learn about cultural differences
  - When do I send distress signal?
- Pre-incident preparation
  - →PWOM-»homework»
  - →Vessel safety manual
- Train responsibilities within the contingency management
  - →Decrease potential for network delay
- Train «Outside of the usual»-incidents
- Train new rules and regulations
- Testing of application of new life saving equipment

Exercises –
Training communication and processes within an institution

- Realistic reaction times
- Create efficiency for real case situation
- Create trust
- Learn about cultural differences
  - When do I send distress signal?
- Train responsibilities within the contingency management
  → Decrease potential for network delay
- Train «Outside of the usual»-incidents
- Role of ship management
- Train technically highly difficult aspects (eg. Air-Paramedic…)

Exercises – Create experience based learning

- Test gaps from incidents
  - Eg. Evacuation, samaritan vessel scenario
- Test new standards, regulations and recommendations on their implications
  - Eg. Polar Code (see SARex)
- Testing of new life saving equipment
- Testing of new potential scenarios (see AECO)

After the exercise - debriefing

Follow Up:

- Lessons learned

- Coordination between all parties at the end/after an exercise to learn

- Rating and assessment of value of training/exercise

- Was design suitable?

- Discovered Gaps

- Follow up events recommended?

- Lessons learned per situation, key personnel, institution, incident etc

- etc

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Example exercise – Survivaltraining

Exercise SARex (POLAR CODE - participation of Coastguard, Research institutions, Industry, Norwegian Public Authorities)

- *"Adequate thermal protection shall be provided for all persons on board, taking into account the intended voyage, the anticipated weather conditions (cold and wind), and the potential for immersion in polar water, where applicable."*

- *"Passengers shall be instructed in the use of the personal survival equipment and the action to take in an emergency; and*

- *The crew shall be trained in the use of the personal survival equipment and group survival equipment."*

? *Education/training on Survival?*

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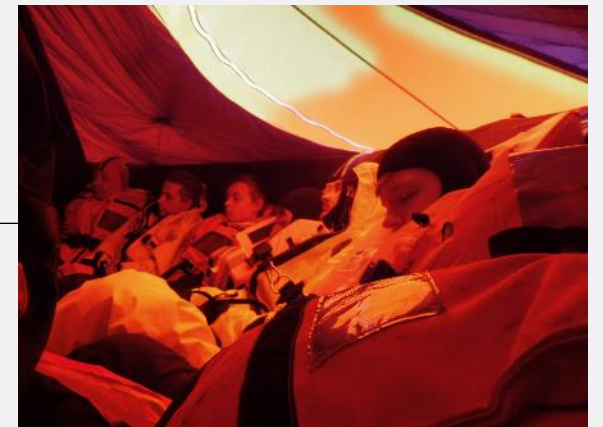
Example exercise – TTX on Cruise Ship scenario

Exercise AECO Joint Arctic SAR (Expedition Cruisers, Icelandic Coast Guard, Hurtigruten AS, etc.)

- Planning the trip: Higher coordination need between SAR-responders and operators

- Scenarios:
  - with high impact low SAR-resources
  - More focus on Vessels of opportunity

- On an emergency plan, the Captain should not be assigned to particular tasks, enabling him/her to monitor the whole situation at all times.

- Unforseen incidents
  - Flipping of life raft
  - Fire
  - People reaction (maybe use people with real life experience)

- Focus scenarios on coordination issues (JRCC, OSC, Captain, Shipping company, Emergency response service, etc.)

Arctic SAR workshop and TTX 2016
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Joint Cruise Industry and Search- and Rescue Responders

Arctic SAR workshop and TTX 2016

Reykjavik, April 6 & 7, 2016

Example exercise –
Gaps and findings on the basis of Arctic SAR TTX

- Table top exercise on META level

- Scenario on basis of SARiNOR-movie

Summary - Weaknesses and room for improvement

- Higher emphasis on joint debriefings and lessons learned (Arctic SAR TTX)
  - Canadian Transportation Safety Board
  - Knowledge Management Centers

- More exercises across borders and across institution (Barents Exercise; Exercise Nord)

- Focus on High impact – low resources scenarios (SARex)

- Exercises are too often too scripted (Interviews)
  - go outside of the box (AECO, Interviews)
  - Make more challenging (Exercise Nord)
  - More flexible scenarios (Interviews)

- Need to be more realistic (AECO, Arctic SAR TTX)
  - Availability of resources
  - Alternative solutions

- More on implications of Standards (SARex)

- Provide more resources for Full Scale exercises (interviews, exercise discussions,…)

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Conclusions and recommendations

- Focus on High impact – low resources scenarios
  - Perform Triage (eg. 2 MOB boats vs. 10-20 life boats)
  - How will role of OSC be

- Higher take up of Cruise ship scenarios on Full scale exercises
  - Include the large cruise ships

- Matching up regular trainings so they are united in a functional exercise (including cross institutional)

- Create a more sophisticated / accessible database

- Further exercises and studies on implications of POLAR CODE and other standards
  - Survival training
  - Rescue equipment performance under safe conditions (5 days)
  - Where applicable – role of Arctic pilots etc.

- Focus on coordination between Sea – Land

- Outside of the usual scenarios (eg. Terror)

- More scenarios which connect: Captains-OSC-ACO-JRCC-Police-Military-Coastguard-Fire brigade-host nation-etc.

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