Technology for Counter Piracy

NAAG Counter Piracy Workshop, 4-Jun-09

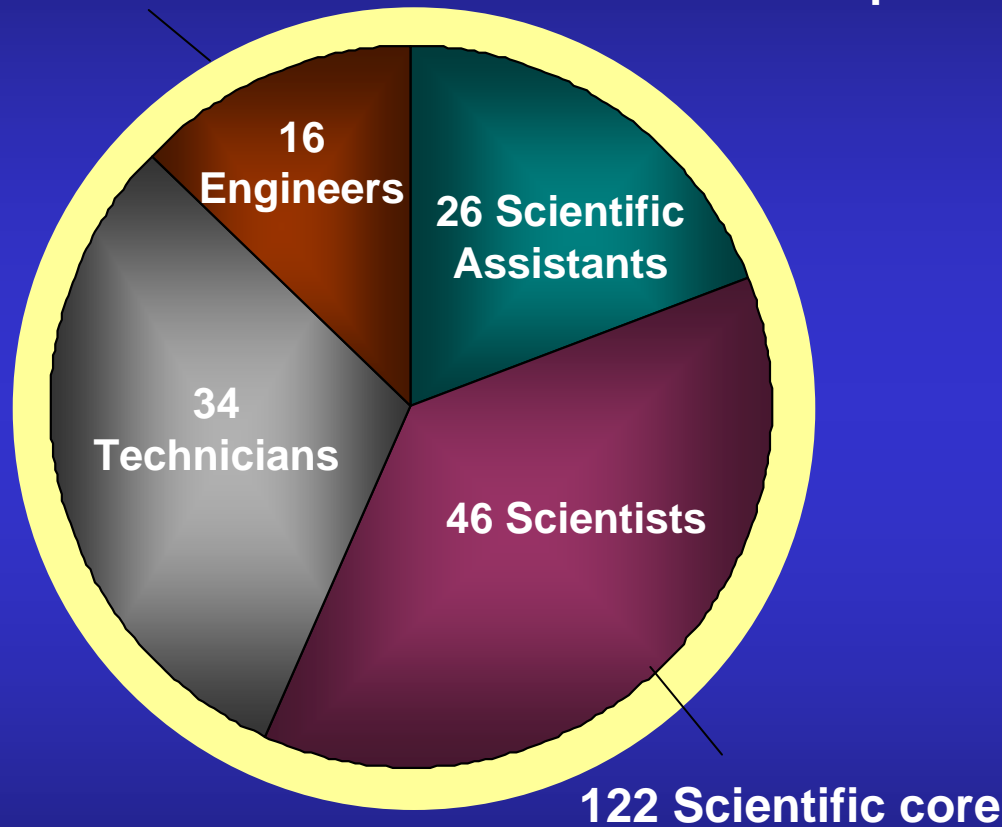Ronald Kessel (kessel@nurc.nato.int)

NATO Undersea Research Centre

NURC

- skilled professionals, 50 years sea-going experience, science and engineering
- 46 scientists recruited from 26 nations
- research, development, military experimentation

NURC

9 Military, 58 Support staff

Composition of Scientists by Nation since 1959

16 Engineers

26 Scientific Assistants

34 Technicians

46 Scientists

122 Scientific core

92% of Scientists & Engineers have advanced degrees
-Scientists in rotational positions
-Avg. scientific tenure ~ 5 – 6 yrs

Home Nation	Total scientists to date	Total scientist man years (1959-2006)
Belgium	13	104
Canada	28	114
Denmark	19	158
France	29	180
Germany	31	133
Greece	8	35
Italy	34	273
Netherlands	27	140
Norway	28	103
Portugal	5	18
Spain	2	3
Turkey	2	38
UK	60	353
USA	113	428
Total	399	2085

SECTRONIC Project

- European Commission Funding
  - Security Research Programme
  - 4.6M over 3 years
- 6 R&D Partners, 6 User Partners
- reduce vulnerability through proactive security technologies
- Includes counter terrorism and counter piracy
- NURC lead on non-lethal response technologies: survey and validation of high-readiness candidate technologies

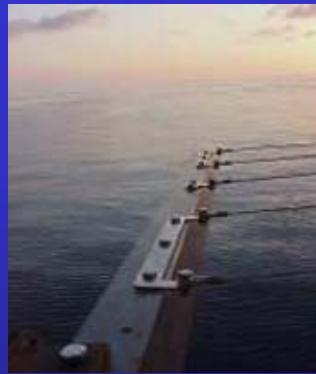SecTronic Security System for Maritime Infrastructures, Ports and Coastal zones

Counter Piracy

- **Policing Operations**
  - Deterrence
  - Disruption
  - Interdiction and capture
- **Merchant Ship Self Protection**
  - Anti-boarding mission
  - Deterrence
  - Delay
  - Repel

Anti-Boarding Mission

- Response beyond a show of vigilance may be advisable only:
  - before the attackers get on board
  - defensive fortress-like advantage of the ship exists
  - help is nearby and underway
- And only if response measures:
  - Are likely to be successful in preventing boarding,
  - Are unlikely to incite attackers to violent revenge should the measures fail,
  - Do not prompt targeting of individual security providers

Pirate Attack
(Seabourn Spirit Nov 2005)

Loud Hailers
-- not Non-Lethal Weapons

Additional Requirements for Technology

- Maritime situation awareness
  - Localize pirate mother ships; avoidance, interception, disruption
  - Discriminating pirate vessels from fishing
- Interoperability for multinational forces
  - Beyond NATO
  - Communications, self-organization, efficient coverage

Way Ahead

- Maritime Situation Awareness
- Interoperability
- Merchant Ship Self Protection

- Collaborative Approach Possible
  - NATO, European Commission, National Efforts
  - NURC, NC3A, NIAG, ACT EPOW, NATO Non-Lethal Capabilities
  - Operations SMEs and intelligence