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**NATO NAVAL ARMAMENTS GROUP (NNAG)**

**SHIP DESIGN CAPABILITY GROUP (SDCG)**

**INVITATION FOR INDUSTRY PARTICIPATION**

**SDCG INDUSTRY SYMPOSIUM – 28 & 29 November 2023**

1. The NATO Ship Design Capability Group (SDCG) is seeking industry participation during their forthcoming Symposium in Ostende, Belgium, to inform and widen the interest and debate in specialist ship design and construction topics, stimulate discussion on NATO standards, policy and tools leading towards a refined focus for the SDCG programme(s) of work. In addition to the opportunity to share information, another benefit to industry might be a follow-up NIAG study proposal, sponsored by the SDCG that investigates a technology's benefit to adapt Naval Ship design in order to meet national and international environmental policy requirements. National Armament Directors Representatives (NADREPs) are encouraged to participate.

**Symposium Theme**

2. The topical area under consideration is:

**“Impact of New Environmental Requirements on Naval Ship Design”**

3. In particular, the impact of national and international environmental policies and regulations on Naval Ship design. This includes but is not limited to prohibitions or reductions in Green House Gases (GHG), discharge standards, and materials prohibitions. For GHG considerations, topics interest include methods in the following areas and discussion of the associated Naval Ship design impacts:

Reductions in CO2 exhaust

- Future fuels
- Engine improvements
- Exhaust control systems
- Alternate drive systems
- Ship energy efficiency improvements

Air Conditioning and Refrigerant technologies

- Kigali Amendment to the Montreal protocol

- Elimination of per- and polyfluoroalkyl substances (PFAS) prohibitions
- Energy efficiency
- High flash point refrigerants

4. Trends in discharge requirements are of interest, particularly as National Governments and International Organisations expect Naval Ships to meet all international conventions in the future. These include:

- Updates for MARPOL discharge standards
- Ballast water management and treatment

5. Current and future material restrictions and prohibitions are also of interest:

- Per- and polyfluoroalkyl substances (PFAS) prohibitions, restrictions and replacements
- New regulations affecting coatings, lubricants and solvents

### **Background to SDCG**

6. The meeting is part of the Conference of National Armaments Directors (CNAD) substructure. The NATO SDCG is one of the four groups that sit under the NATO Naval Main Armament Group (NNAG), representing each of the main maritime capability areas, the others being the Underwater Warfare Capability Group, the Above Water Warfare Capability group and the Joint Capability group on Unmanned Air Systems. Together this substructure controls and directs the NATO work (often done within further sub groups and specialist teams) to drive collaborative projects, oversee and shepherd new and existing NATO Standards and Recommendations (STANAGs and STANRECS) that underpin NATO interoperability.

7. The SDCG is formed from the Senior Naval Architect and Naval Engineering community of all of the major NATO maritime nations.

### **Recognition of a need for greater industry participation**

8. In recent meetings of all the Naval groups, including the NATO Naval armaments group itself, there have been discussions recognising the advantages of greater industry participation in NNAG and its sub groups.

9. The background to the themed topic symposiums stems not only from the previous SDCG discussions, but also from discussions at the last NNAG surrounding how the NATO Industrial Advisory Group (NIAG) in particular and industry more broadly could play a role in the both the sharing of important topical information at one end of the spectrum and direct involvement in the definition of interoperability standards at the other.

10. The 2023 Symposium is building upon a highly successful symposiums held by the SDCG on Marine Engineering and Naval Architecture related topics, in Germany in 2022 and Washington in 2021.

### **Symposium Structure**

11. This meeting will be held at Naval Academy, Ostende, Belgium. The Industry engagement will take place on the 28<sup>th</sup> and 29<sup>th</sup> Nov, which is essentially Days 2&3 of the 5 Day SDCG.

12. Industry is invited to express their interest in attending, with any specific requests, for example over timings of their slot or specific IT support, through their national NIAG representatives to the Naval Armaments team in the NATO HQ by 31 October 2022.

13. Please direct any enquiries to the Action Officers.

14. Full Administrative Instructions regarding the venue, recommended hotels etc. for the meeting will follow receipt of intention to attend.

(Signed) James HARRISON  
Ship Design Capability Group Chair

Annex 1: Industry  
Registration Form

Action Officers: Sean Trevethan  
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**NORTH ATLANTIC TREATY ORGANISATION  
NATO NAVAL ARMAMENTS GROUP  
Ship Design Capability group**



**SDCG Industry Seminar Registration Form**  
(please read the below instructions carefully prior to filling out the form)

**PERIOD: 28-29 November 2023**

**PERSONAL INFORMATION**

Full Name	
Title	
Company Represented	
Gender	
Nationality	
Date of Birth	
Type of ID (Passport preferred)	
ID Number	
Date of Birth	
Tel:	
E-mail:	
Accommodation in Ostend if known	
Special facilities requested	

**COMMENTS / REMARKS**

Attending the Social Events if any: YES/NO

*If yes any Special Dietary needs ?*

**This form must be completed in capital letters and be submitted to:**

**This form must be completed in capital letters and be submitted to Belgium POC: Lore Viane**  
[lore.viane@mil.be](mailto:lore.viane@mil.be)

**copy to:**

[Trevethan.sean@hq.nato.int](mailto:Trevethan.sean@hq.nato.int)

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