The impact on maritime transport of health threats due to biological, chemical and radiological agents, including communicable diseases

**Work Plan**

**Short Version**

**Work Package 01:**

Coordination

**Work Package Leader:**

University of Thessaly, Larissa, Greece

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Associated Partners

1. Laboratory of Hygiene and Epidemiology, University of Thessaly, Larissa, Greece, UTH-EL (Leader for Work packages 1, 2, 5, 7)
2. Regional Health Inspection, Burgas, Bulgaria, RHI-Burgas-BG
3. Regional Health Inspection, Varna, Bulgaria, RHI-Varna-BG
4. National School of Public Health, Athens, Greece, NSPH-EL
5. Universitaetsklinikum Hamburg Eppendorf, Hamburg, Germany, UKE-DE (Leader for Work package 9)
6. Robert Koch-Institut, Berlin, Germany, RKI-DE
7. Directorate of Health, Reykjavik, Iceland, DOH-IS
8. Health Service Executive, Naas, Ireland, HSE-IE
9. Ministry of Health, Rome, Italy, MOH-IT (Leader for Work package 3)
10. Klaipeda Public Health Centre, Klaipeda, Lithuania, KPHCLIT-LT
11. National Institute of Public Health, Ljubljana, Slovenia, NIPH-SI (Leader for Work package 8)
13. Association of Port Health Authorities, London, United Kingdom, APHA-UK
14. Health Protection Agency, Chilton, United Kingdom, HPA-UK (Leader for Work package 6)

Collaborating Partners

1. Ministry of Health, Vienna, Austria
2. Federal Public Service of Health, Food Chain Safety and Environment, Brussels, Belgium
3. Ministry of Health, Public Health Services of the Medical and Public Health Services, Nicosia, Cyprus
4. Health Board, Health Care Department, Tallinn, Estonia
5. Ministry of Labour, Employment and Health, Paris, France
6. Minister for Health, the Elderly and Community Care, Valetta, Malta
7. Norwegian Directorate of Health, Oslo, Norway
8. Ministry of Health, social services and equality, Madrid, Spain
9. Ministry of Health - Department public health, Bucharest, Romania
10. Ministry of Transport, Construction and Regional Development of the Slovak Republic, Department of Chief Public Health Officer, Bratislava, Slovakia
11. Ministry of Health and Social Welfare, Directorate of Sanitary Inspection, Zagreb, Croatia
12. Municipal Health Services Rotterdam, Rijnmond, Netherlands
13. National Center for Hygiene and Safety (LCHV), National Institute for Health and the Environment (RIVM), Amsterdam, Netherlands
14. Ministry of Health, Lisbon, Portugal
15. Medical University of Gdansk, Interdepartmental Institute of Maritime and Tropical Medicine, Gdansk, Poland
16. World Health Organization, Geneva, Switzerland
17. Centre for Diseases Control and Prevention, Vessel Sanitation Program, Atlanta, Georgia, United States of America
**Work package 1: Coordination of the Joint Action**

**Objectives**

- To plan the Joint Action activities.
- To provide guidance to the partnership.
- To monitor progress and implementation of activities and make decisions.
- To coordinate cooperation between the partners, in order to ensure:
  - smooth progress of the project activities,
  - efficient handling of problems,
  - risk management,
  - effective communication.
- To support the relationship among the partnership, the European Commission and other external stakeholders.

**Deliverables**

1. Integrated operations plan for the permanent implementation of Joint Action activities. It will include the legal documents/agreements and will define the standard operating procedures for the permanent implementation of the Joint Action activities including an analysis of the costs and possible income that will be generated by actions.

2. Interim and final technical and financial reports (M18-M39). They will describe activities of the partnership in relation to the Joint Action objectives: Partners and countries involved, all the activities conducted, manpower for the execution of the activities, achievement of the objectives, financial report.

A coordination strategy will be developed to manage/monitor/intervene if necessary. A Joint Action handbook will describe:

a) the Joint Action scope, objectives, methods,
b) the work plan with step-by-step instructions for constructing deliverables/reaching outcomes,
c) the payment strategy, agreements for confidentiality, dissemination, ownership, authorship and use of results, management of partners conflicts,
d) schedules, risks, communication strategy, progress monitoring, reporting,
e) quality and staffing needs, organization chart, tasks, roles and responsibilities of partners, possible sponsors, target groups representatives, experts. It will define mandates and information sharing with the maritime sector.

Work package leaders will report work progress every month to the manager and send financial statements to financial manager every 3 months. Clarifications and guidance will be asked when needed to the manager.

A **Coordination Team** will be established lead by coordinator with members: the manager, financial manager, work package leaders, meeting bimonthly in person or by teleconference. The manager will produce bimonthly management reports (previous month’s progress, delays, problems, planning for next months’/budget consumption) and after reviewing with the Coordination Team will send to all associated partners.

A **General Assembly (GA)** with representatives of associated and collaborative partners (Member States Health Ministries will assign GA members) and work package leaders including industry representatives (ad hoc) will have the role to decide on recommendations derived from the sustainability working group. The GA will decide based on vote 2/3 or unanimously.

The **sustainability working group** will be established to prepare legal documents, explore and define operation procedures for sustainable implementation of Joint Action activities including analysis of costs and potential income and then present to the GA, which is the Joint Action decision body.

The **Advisory board** will be composed by the EC DG SANCO,MOVE,ENV,EMPL, relevant EU agencies, like ECDC, EMSA, OSHA, ECHA, VSP CDC, and WHO.

A **Ferry Working Group** with representatives from Interferry, ECSA and the PSA will be established representing the ferry industry in the JA.
Work package 2: Dissemination of the Joint Action

Objectives

- To make the results and deliverables of a project available to the stakeholders and to the wider audience.
- To ensure that the project results will be taken up and embedded in the community.
- To ensure visibility of the project outputs and outcomes.
- To explore and ensure how the Joint Action outputs can be sustained.

Deliverables

Dissemination activities report including exit/sustainability plan and website. It will describe: stakeholder analysis, messages to be disseminated, audience/purpose/methods/timing. The Exit/sustainability strategy will focus on models/scenarios, outlining what should happen to the Joint Action outputs and exploring how they can be sustained.

The dissemination strategy will be based on actor/stakeholder analysis identifying who will implement Joint Action outputs, assessing their responsibilities and interest to sustainably implement Joint Action activities.

The dissemination strategy will define the target audience through EC DGs, Health Ministries, Public health institutes, EWRS, IHR NFP, professional associations, cargo, ferry and ship associations, through DG MOVE, ensuring guidelines and activities adoption. All partners will provide target groups contact details in their countries. More than 700 stakeholders/actors have already been involved in SHIPSAN projects and they will be expanded. In Figure 1 the components of the dissemination strategy are presented.

A dissemination plan will define the strategy purpose: raising awareness, engaging and getting input/feedback from the community, promoting or selling Joint Action products, outputs, results, informing and educating the community and making the outputs sustainable. It will describe target groups, dissemination of content and means. It will define the purpose, message, audience, methods and timing of communication. Means to be used are presented in Figure 2. A website will be developed based on SHIPSAN projects experience, posting highlights, news, newsletter, publications and deliverables. Forums and wiki use will facilitate online sharing and editing documents.

An exit/sustainability plan will be developed in collaboration with WP leaders to ensure sustainable dissemination of Joint Action outputs. It will contribute to inform and create links with the policy makers, explore and agree on adoption of guidelines/activities, the legal basis for the Joint Action outputs permanent operation and maintenance.
Work package 3: Evaluation of the Joint Action

Objectives
- To monitor the implementation process.
- To improve the work in progress and increase the likelihood that the project will be successful.
- To verify if the project objectives have been achieved.

Deliverables
Interim and final evaluation reports (M18 - M39). They will describe evaluation results of activities conducted. They will identify whether the Joint Action resulted in the desired outcomes, if indicators have been reached and the impact in the target groups taking into consideration stakeholders’ views.

An evaluation strategy will assess if the outcomes meet the target groups’/stakeholders’ needs and if objectives have been achieved. Internal and external evaluation will take place. An evaluation plan will describe methodology for formative/summative evaluation for all WPs, in collaboration with partners responsible for corresponding milestones. Process, output and outcome indicators have been defined referring specific target values (decreased trends in inspections deficiencies per ship, trends in reported outbreaks of food borne and waterborne diseases, expected numbers of users). Figure 3 presents the components of the evaluation.

Evaluation teams will be established including the WP leader, coordinator, manager, industry representative and experts depending on the activity: occupational health, hygiene and inspections, infectious diseases, chemical and radiological agents, information technology, dissemination and training. All work package activities will be evaluated including table top exercises. An External evaluator will be invited to evaluate the processes, outcomes and impact. The tools for the evaluation strategy are presented in Figure 4.

![Figure 3: Components of the Evaluation](image)

![Figure 4: Evaluation strategy tools](image)
Work Package 4: State of the art covering sea and inland water vessels

**Objectives**

To produce a report describing evidence for events and consequences due to chemical, biological and radiological agents in all types of ships; training needs for core capacities under IHR and practices related to fishing vessels and inland waterways in at least 18 EUMS, by month 24.

**Deliverables**

State of the art report. It will describe burden from chemical, biological and radiological incidents on ships based on survey/literature review/MS practices, legal frame, past events authorities confronted; contingency plans practices for fishing vessels; core capacity training needs; inland waterways practices.

A report will be produced describing what is already available in EU agencies and Member States. It will be divided into five main parts.

**Part A: Literature review on infectious diseases on all types of ships**

i) update of literature review conducted by SHIPSAN project (addressing solely passenger ships and infectious diseases) and cover infectious diseases on all types of ships, including inland vessels and

ii) exploring of datasets and methods for examining the disease burden related to passengers and employees in all ship types.

**Part B: Bibliographic review and survey on chemical and radiological incidents in maritime transport**

i) bibliographic review for chemical or radiological incidents in all types of ships and at ports,

ii) the findings of a survey based on 2 questionnaires:

iii) 1st questionnaire will identify the competent authorities for chemical and radiological incidents in each Member State; 2nd questionnaire will be sent to competent authorities to collect information on the current situation in EU regarding practices, legal frame related to chemical/radiological incidents on ships and at ports, events that authorities confronted in the past and the contingency plan that they use. The IMO annex listing of authorities responsible in case of chemical incidents per country, as well as existing work of DG ENV will be reviewed.

**Part C: Survey on hygiene inspection practices regarding fishing vessels in European Union**

Practices regarding fishing vessels (reporting requirements, inspection practices, and standards).

**Part D: Survey on training needs related to core capacities at the points of entry-ports in European Union**

Identification of training needs related to core capacities at the points of entry (ports) in collaboration with WHO (all partners will be asked to declare training needs related to core capacities at the points of entry-ports).

**Part E: Survey on the practices and responsibilities of port health authorities along inland waterways in European Union**

- A survey will be conducted on the current practices and responsibilities of port health authorities along the inland waterways with a special focus on the rivers Danube and Rhine concerning notification requirements under IHR 2005, risk assessment and management of public health events on ships and practices on issuing of Ship Sanitation Certificates.
- A report will be produced describing the legal situation, organizational infrastructure and volume of passenger shipping along the inland waterways and especially the rivers Danube and Rhine, recommendations.
- Specific needs for training and communication for port health authorities along rivers will be identified and results will be used in the development of the training strategy.
Work package 5: Integrated inspection programme

**Objectives**

To improve quality of inspections and bring a consistent/proportionate approach to inspection of all ship types, by providing on the job training, issuing yearly inspection schedule, operating information tools for recording/sharing inspection results.

**Deliverables**

Report on the implementation of the SHIPSAN ACT integrated inspection programme for all types of ships. This report will describe inspection rules/guidelines, summary inspection results/SSCs, corrective actions, proposals for inspection process improvement and recommendations for grading system implementation, revision of the Manual.

- The EU SHIPSAN ACT Joint Action will operate information tools for inspection recording, sharing results and issuing SSC, implement control measures according to inspection results proportionate to the risk according to IHR and SHIPSAN Manual.
- Inspection rules/guidelines will be produced and agreed by all involved parties describing roles, responsibilities, rights, obligations, confidentiality of inspection results, dissemination of statistical data, use of results and dispute resolution.
- Appeal procedures to coordinating center will be defined.
- Where feasible inspections based on SHIPSAN Manual will be combined with issuance of SSCs and inspections for MLC 2006.

**Inspections in passenger ships**

**Standards:** SHIPSAN European Manual for hygiene standards and communicable diseases surveillance on passenger ships

**Tools:** SHIPSAN ACT Information System and SHIPSAN European Manual for hygiene standards and communicable diseases surveillance on passenger ships

- Inspections will be conducted based on a yearly schedule issued by the work package leader:
  - **2013-2014:** Announced inspections accompanied by a SHIPSAN ACT trainer
  - **2015:** Unannounced inspections by port health officers trained by SHIPSAN ACT

**Inspections in non passenger ships**

**Standards:** WHO Handbook for inspection of ships and issuance of Ship Sanitation Certificates

**Tools:** SHIPSAN ACT Information System for recording and issuing Ship Sanitation Certificates under the International Health Regulations 2005 for all types of ships sailing in EU.

All 602 EU MS authorized ports issuing SSCs will be invited to use the SIS for SSCs (based on WHO handbook) enabling the view of inspection history and information sharing.

The EU SHIPSAN ACT Joint Action partnership will further explore:

- A review of the legal frame of the transport sector and explore the legal basis for implementing the Manual.
- A MoU between EU Member States to use the manual for the inspection of passenger ships.
- The development of a risk based target factor for prioritizing inspections on ships.
- The update of the evidence base for the items included in the SHIPSAN Manual.
- A possible revision of the SHIPSAN Manual.
- A grading system (based on A, B, C, D score) will be pilot tested to explore permanent application.
Work package 6: Chemical and radiological incidents on ships risk assessment and management

**Objectives**
To develop guidance on risk assessment and response to chemical/radiological events (accidental/deliberate release) on ships, to be used as part of the IHR contingency planning at points of entry of European Union Member States.

**Deliverables**
Guidelines for dealing with chemical and radiological incidents on ships, table top exercise and training material: Practical guidance to competent authorities to conduct risk assessment and deal with chemical/radiological incidents on ship and training material will be developed. A table top exercise will be conducted to test guidance

This work package will produce:
- guidance on responding to chemical and radiological events due to accidental or deliberate release or outbreaks based on existing guidance (IMO);
- risk assessment and response measures to be implemented by Points of Entry;
- support IHR implementation related to contingency planning.

In particular, actions will focus on the development of:

a) guidance for competent authorities in support to their risk assessment and response to chemical and radiological incidents on ships while the ship is at port (with focus on the development of a general risk assessment tool, based on the use of syndromic surveillance principles for the risk assessment of acute health events and those threats caused by unknown agent, making the differential diagnosis of CBRN agents and focus on cargo ships.);

b) training material on chemical and radiological incidents and

c) a table top exercise.

Existing relevant guidance will be taken into consideration such as WHO (addressing incidents on land), IMO standards on code for the transport of dangerous goods by sea, IAEA regulations for the safe transport of radioactive materials, results of the ARCOPOL project, tool for unknown diseases and training material developed by ECDC and studies from HPA. Collaboration with IMO, EMSA unit for chemicals, DG ENV, EMCDDA, ECA, IAEA, the EU Standing WG on the safe transport of radioactive materials and EACA will take place.

It will target competent authorities at ports and shipping companies.

Likely sources of chemical/radiological exposure on ships will be identified.

Arrangements for notification and alerting (who, what, when and how), risk assessment, response and recovery will be considered.

It will produce guidelines based on multi-sectoral approach. The need to have preparedness plans at the Points of entry (PoE) considering the roles of different stakeholders will be addressed. A generic approach will be developed, followed by a few specific scenarios (up to 3).
Work package 7: SHIPSAN ACT information system (SIS)

**Objectives**
To maintain and update SHIPSAN information tools for MDH transmission, risk assessment/response to events, issuance of SSC and information communication and support establishment of the National Single Window (Directive 2010/65/EU) in relation to MDH.

**Deliverables**
SHIPSAN ACT information system (SIS). Information system for recording ship inspection results, issuing SSCs and enabling ship-to-port, port-to-national and port-to-port, authorities communicating data related to health threats, integrated/linked with existing mechanisms of EC.

**Activities under this work package include:**

- **Personal Data Protection:** All SHIPSAN tools will be maintained and modified to comply with EU/national legislation for personal data protection of users/passengers/crew.

- **Interoperability with existing Information Systems in EU:** The sustainability working group and the GA will propose options for links/incorporation to existing communication systems of EU such as EPIS in ECDC. The working group will explore possible links/interoperability/integration of SIS for SSC with existing systems in EU.

**Upgrade and run SIS consisting of:**

- **Communication Network platform** facilitating ship-to-port, port-to-port and port-to-national authority communication and electronic transmission of Maritime Declaration of Health.

- **Information system for recording and issuing Ship Sanitation Certificates** under the International Health Regulations 2005 for all types of ships sailing in European Union.

- **Database for recording inspections conducted against the European standards** as provided in the SHIPSAN Manual for Hygiene Standards and Communicable Diseases Surveillance on Passenger Ships.

**Optimization in communication route:** Through the SIS communication of port with National Authorities (NFP EWRS/IHR, Surveillance centers) will be improved by giving access to EWRS NFP to the SIS enabling them viewing response measures and updates of events progress.

**Implementation of Directive 2010/65/EU regarding the NSW in relation to MDH:** Representatives of JA WP7 will participate in the meetings of the subgroup of DG MOVE responsible for implementing Directive 2010/65/EU regarding the NSW in relation to MDH. Business rules as defined by the subgroup of DG MOVE responsible for implementing Directive 2010/65/EU regarding the NSW in relation to MDH will be tested and validated.

**Pilot testing:** Table top and operational exercises will be conducted in collaboration with EMSA.

**Site visits:** A visit to EMSA will be included in the SHIPSAN ACT JA with the purpose to explore potential linkage of the database for SSC with existing systems (THETIS) and collaboration with the EMSA Chemicals Unit.
Work package 8: Training

Objectives
To increase port health staff and crew competencies on prevention/risk assessment/response to CBRN threats by training more than 5 trainers within each EUMS and by e-learning courses available to staff in all EUMS and companies operating in EU.

Deliverables
Training material, training activities report and e-learning platform http://elearning.shipsan.eu/. The report will describe the pool of trainers’ selection methodology and experts CVs, training materials, training modules learning objectives, learning activities and assessment results.

Training material
Training material will be for water safety, reporting criteria to EWRS, SIS/ implementing Directive 2010/65/EU regarding the National Single Window and other training material based on the training needs identified related to core capacities at the points of entry (ports) in collaboration with WHO (all partners will be asked to declare training needs related to core capacities at the points of entry-ports).

- Existing training material for SHIPSAN Manual will be updated based on previous training courses experience and needs identified during pilot inspections.
- Specific needs for training and communication for port health authorities along rivers will be identified and results will be used in the development of the training strategy.
- Training material on dealing with chemical and radiological incidents on ships and WHO training toolkit for IHR SSCs will be used: http://extranet.who.int/ihr/training.
- The existing e-learning platform will be updated including WHO modules for SSCs providing pre-reading tools and self-assessment.
- Translations of materials by MS will be encouraged.

The aim is to provide training on hygiene, risk assessment, prevention, control and response to serious cross-border health threats.

Training courses and e-learning tools will be used to train large number of staff and crew. Train the trainer courses, support to subsequent national training courses and on the job training will allow practical use, reproducibility, transferability of knowledge gained by 300 persons who will be trained face to face. Training activities will include theoretical/practical aspects, exercises and case studies. Real scenarios, on the job and in the field training will be used.

National accreditation bodies will be contacted to integrate permanently SHIPSAN training activities for port health authorities and seafarers.

The SHIPSAN trainers
The SHIPSAN pool of 35 trainers will be expanded through the publishing of a new call. The SHIPSAN trainers are:
Internationally recognised subject-matter experts
SHIPSAN pool of trainers
Training specialists

Training courses for port health officers
Courses focused on SHIPSAN Manual and SHIPSAN ACT Information System
- 1 European introductory course on the SHIPSAN manual
- 2 Advanced European courses on water safety
- 3 National introductory courses on the SHIPSAN manual

Courses focused on the International Health Regulations (2005) and issuance of Ship Sanitation Certificate (SSC) by using the WHO Learning Programme
- European training course for lead inspectors
- National training courses on IHR and issuance of Ship Sanitation Certificates

Training Courses for ship operators, officers and crew
Courses focused on SHIPSAN Manual and SHIPSAN ACT Information System
- 1 introductory course on the SHIPSAN Manual
- 2 advanced focused training courses on water safety
Work package 9: Occupational health

The objectives of the Work Package will be:

a) to develop a risk assessment tool for occupational health risks per cargo ship type based on the Online interactive Risk Assessment (OiRA) tool developed by the European Agency for Safety and Health at Work (EU-OSHA).

b) to identify and promote links between port health and occupational health authorities. The possibility to develop a model of a Memorandum of Understanding between port state control and port health authorities of all EU MS on issues related to occupational health and ship inspections will be explored. The experience from the UK Memorandum of Understanding between APHA, HPA and MCA will be used as a model. The aim of this MoU will be to improve communication between all interested parties, to promote effective use of resources and expertise and avoid duplications and overlap of responsibilities by promoting awareness of the role of other stakeholders.

c) to identify public health risks of international concern according to the type of cargo ship. A risk analysis report will be developed including public health risks of international concern according to the type of cargo ship.

A working group will be established to design the study methodology.

EU DG EMPL, OSHA, ECSA, ETF and ILO will be invited to advise on hygiene and occupational health issues.

For further information please contact us:
Tel: 00302410565054  Fax: 00302410565051
Email: info@shipsan.eu
Website: www.shipsan.eu